

Dr. Van K. Tharp's

For
Investors
and Traders

DEVELOPING A WINNING INVESTING / TRADING SYSTEM THAT FITS YOU

Developing a Winning Investing/Trading System That Fits You

The Audio Tape Series

by

International Institute of Trading Mastery, Inc.

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with guest speaker Chuck LeBeau

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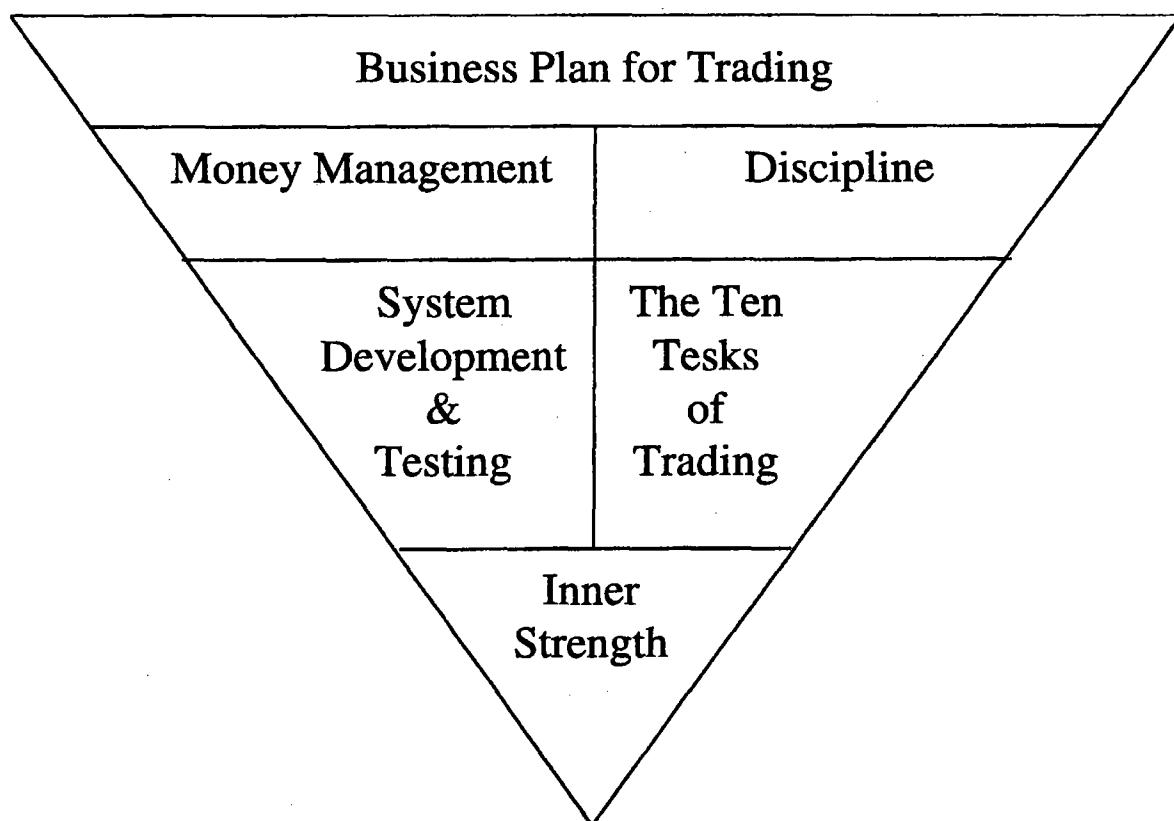
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Day 1

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Figure 1: Key Elements of a Successful Trading Model



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Section 1-1

Participant Introductions

The seminar begins with short introductions from the participants. This audio tapes series has been edited to provide the listener with a cross-section of the backgrounds of people in attendance at this seminar. Each participant was asked to provide the following information:

1. Name
2. Where They Are From
3. Background
 - In Trading
 - In Computers
 - In Math, Engineering, Statistics
 - In Creative Areas
4. Do They Currently Have A System?
If so, what is the concept upon which it is based?
(e.g., Gann, Elliot, Trend Following, Hedging, Band Trading, Seasonals, Options, Fundamentals, etc.)
5. What is Their Time Frame for Trading/Investing?
(i.e., Day Trading, Swing Trading, Long-Term Position Trading, etc.)
6. Why Are They Attending the Seminar?

Notes

Section 1-2

Why Trading Is So Difficult For Most People

Reason 1 - No Objectives or Business Plan

Trading is a business. Most businesses fail within the first five years because they do not have a sound business plan. Most traders have the same problem—they attempt to play the markets without a sound, organized business plan. A trading system, incidentally, is only a portion of a good business plan for traders. That plan should also include:

- Objectives (Very extensive, see later handouts)
- Elements of psychological control
- How the business itself is run
- Ongoing research
- Disaster control plan

Reason 2 - People Tend to be Conservative and Risky at the Wrong Times

People have tendency to follow their personal biases. The best way to illustrate this is through an example. Select either item A or item B in each of the following choices. Be totally honest with yourselves on the answers:

- First, you are down \$900 in a trade. Which would you prefer:
 - A) the sure loss of \$900 or
 - B) a 95% chance of a \$1000 loss plus a 5% chance of no loss at all.

What's your choice A or B? _____

- Second, you are up \$900 in a trade. Which would you prefer:
 - A) to take the sure gain of \$900 now or
 - B) to take a 95% chance of a \$1,000 gain, plus a 5% chance of no gain at all.

What's your choice A or B? _____

Reason 3 - People Don't Take Responsibility for Their Results.

Another major reason why most people have trouble trading successfully is that they have trouble accepting personal responsibility for their trading results. When they do poorly, they blame everyone except themselves. For example:

"If I could just get lucky, I'd make a fortune in the market. Unfortunately, my luck seems to be poor all the time."

"I always seem to get stuck with brokers who do a poor job of executing my orders. If I could just find the right broker, I'd probably make a lot of money in the markets."

"Somehow, just about the time I think I'm going to get a major break in my trading, they get me."

"I would have done very well in that trade, except that the government report came out just at the wrong time."

People can always find an excuse to explain their poor trading. However, excuses just mean that a person can continue to repeat the same mistakes. And traders continue to do so until they run out of money.

Professional trading is a lot like professional gambling. Those people who are successful determine where their edge is. They develop a plan to assess how that edge can be used most effectively for them to make money, and then follow that plan and manage their money well.

If you want to make money in the markets, then you must take the same approach. You must realize that you have natural biases that will keep you from making money in the market unless you develop a sound business plan for trading. Furthermore, you must realize that you are totally responsible for the results of trading that business plan. Once you come to that realization, you will understand that a mistake means not following your plan—even if you made money.

Unfortunately, the solution—developing a business plan around a sound trading system—is not always that easy. People have numerous psychological problems that keep them from developing a workable trading system, and various emotional issues that keep them from ever carrying out any plan that they might develop. These include giving overwhelming importance to the current trade; allowing the market to teach you the opposite of what it takes to be successful; internal conflict; and stored emotions.

Notes

Notes

Section 1-3

Trading Simulation: Game 1

The following trading simulation is designed as an interactive exercise whereby you will complete the table in real time along with the audio tape (as if you were actually in the seminar). This is an important exercise. Please take the time to go through the simulation along with the audio tape.

Instructions:

You begin this trade with \$100,000. During the simulation, you will have about 50 trades to make. You will be trading a system that's right 60% of the time and makes or loses the amount risked (i.e., the amount won and lost is equal to the risk size). The objective is to make as much money as possible without taking any more risk than they can afford to take.

For example, if you'd probably stop trading after you lost 40% then you should devise a strategy for controlling risk in which you don't lose more than 40%. **You must bet at least \$1 on every trial. If you go broke during the game, you're out and you must stop trading.**

Simulation Worksheet:

Trade No.	Equity	\$'s Risked	Win/Loss	New Equity	Amount of Drawdown	Peak to Trough Drawdown
1.	\$100,000					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

11.						
12.						
13.						
14.						
15.						
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17.						
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36.						
37.						
38.						
39.						
40.						
41.						
42.						
43.						
44.						
45.						
46.						
47.						
48.						
49.						
50.						
Final Total						

Simulation Results Summary:

- What was your return over 50 trials? _____ %
- Did you make money on a 60% system? _____
- What was your largest peak-to-trough drawdown? _____
- Could you have tolerated that drawdown with your own trading or would you have stopped and abandoned the system? _____
- What was your largest peak to trough drawdown as a percentage of the equity high prior to the drawdown? _____
- What was your reward to risk ratio? _____

Reward-to-Risk Ratio:

Divide your total return for the year as a percentage by the maximum peak to trough drawdown as a percentage.

$$\frac{\text{(total return)}}{\text{(max. drawdown)}} + \text{ = }$$

Notes

Why Trading Is So Difficult For Most People

(Continued from Section 1-2)

Reason 4 - Gambler's Fallacy / Being Unwilling to Go With the Flow

People have natural decision-making biases which make it difficult for them to win in the markets. One of the most disastrous biases is the natural tendency to think that current results are dependent upon past results.

This bias is known as the *gambler's fallacy*. For example, people think that in a random series, after a string of losses, a win becomes likely. The converse is also true after a string of wins, people believe that a loss is more likely. What happens is that they just keep on increasing their bet size during a string of losses and decreasing their bet size during a string of wins. This is called a *Martingale* betting strategy and the casinos love it.

Think about it. You double your bet size after each loss and you recycle to one after each win. After a string of losses you'll eventually win, so you'll always make money. Or will you? Casinos protect themselves against a *Martingale* strategy by putting a limit on the maximum bet you can place. The markets don't need such protection. Anyone doubling his or her risk after each loss will eventually find that his or her risk becomes much bigger than his or her equity.

Think about the trading simulation you just played in Section 1-3. Suppose you started out betting \$10,000 and you lost three times in a row. Now you've had three losses in a row and you're down to \$70,000. You decide, "It's time for a win," and you risk \$30,000. Sometimes, you'll win and get a new lease on life, but if you should lose, you'll probably have very little chance of getting even.

Ralph Vince tried an experiment using 50 Ph.D.'s who knew nothing about money management and who played a simulation game just like the one you just played for 100 trials. Guess how many made money? Only two of them (or 4%). And the 48 who lost money all did so because they gave in to some form of the *gambler's fallacy*.

Incidentally, what makes money in the markets (and in gambling) is always some form of anti-*Martingale* strategy. In other words, you decrease your risk during a losing streak and you increase your risk during a winning streak. We'll show you methods of doing that systematically in the money management section.

Reason 5 - Judgmental Biases

We must process an amazing amount of information every day, yet our conscious mind only has a capacity of 7 plus or minus 2 chunks of information. As a result, we solve this problem through generalizing, deleting, and distorting the information to which we are exposed. This, in turn, produces a number of biases in the way we think about information and in the way we develop systems. I've documented over 25 of these biases in my home study course, but the most important for system development are as follows:

Lotto bias — People assume that if they have some control over something (such as entry into the market; or picking the numbers in the lotto) that it somehow influences the outcome.

Reliability bias — People assume that our data is reliable, that it really represents what it is supposed to represent.

Conservatism bias — The human mind is quick to see the few outstanding examples of moves that work while avoiding or ignoring examples that don't work.

Representation bias — People assume that when something is assigned to represent something that it really represents that thing. Sometimes it even becomes the thing it represents in people's mind. (i.e., bar graph, indicator.)

Need-to-Understand bias — People need to know why things (such as the market) does what it does, so they invent explanations and then (through the conservatism bias) manage to see many examples that fit the explanations they just invented. This is why the media always wants to know why the market did what it did.

Degree-of-Freedom bias — People tend to want as many degrees of freedom as possible to explain their data (i.e., optimization) which only leads to poor reliability when its used in the future.

Post-dictive errors — People tend to use information in their testing that is only available after the fact. (i.e., testing with the closing price to decide what to do before the close).

Need-to-be-right bias — People need to be right (conditioned in the schools). Making money in the markets has to do with money management and playing the probabilities. It has nothing to do with being right.

Reason 6 - The current trade has to be a winner.

People have a strong tendency to give an overwhelming importance to making the current trade a winner rather than paying attention to the overall statistical probabilities of the system. Because they do this, all of the other problems occur.

"What really matters is the long-run distribution of outcomes from your trading techniques, systems, and procedures. But psychologically, what seems of paramount importance is whether the positions that you have right now are going to work. Current positions seem to be crucial beyond any statistical justification. It is quite tempting to bend your rules to make your current trades work, assuming that the favorability of your long-term statistics will take care of future profitability. Two of the cardinal sins of trading--giving losses too much rope and taking profits prematurely--are both attempts to make current positions more likely to succeed, to the severe detriment of long-term performance" — William Eckhardt

Notes

Section 1-4

Ongoing Psychological Problems with Trading

Reason 7 - Conflicts Between Parts.

Refer to Appendix IV, *Course Update* newsletter discussing **Parts & Self Esteem**

Reason 8 - Stored Emotions

Refer to Appendix V, *Course Update* newsletter discussing **Feelings**

Notes

Section 1-5

Psychological Issues in Developing a Trading System

Test Yourself:

Many people have psychological problems that totally prevent them from ever developing their own trading system. To determine to what extent you may have one or more of these problems, take the following mini-test. Read over each item and then give it a rating of 0 to 4, according to the following scale.

- 0** - Never applies to me
- 1** - Seldom applies to me
- 2** - Sometimes applies to me
- 3** - Often applies to me
- 4** - Definitely applies to me

1	Computers have a mind of their own, they always give me problems.	
2	When it comes to trading, average-sized profits will definitely be <u>unsatisfying</u> to me.	
3	Other people can design trading systems, but that's beyond me.	
4	I doubt if I'll ever understand all of these indicators.	
5	Developing a trading system to trade real money—that's too much work.	
6	When I think about developing a mechanical system, I just don't know where to begin.	
7	People tend to think less of me when I make a mistake.	
8	It's really hard to understand computers, trading systems, and how markets work.	
9	The longer a market trend lasts, the more I feel it is likely to turn around soon.	
10	I understand exactly how markets work and everything else is just a waste of time.	
11	Computers are more trouble than they are worth.	

12	A trading system that wins 60% of the time is not good enough for me.	
13	I've got too much to do to develop a trading system, but I'll get to it one day.	
14	I demand perfection out of my trading system. I want to it to do very well in all sorts of markets.	
15	Once I observe a strong relationship in the market a few times, I'm ready to trade it. I don't need to have a computer test it for me.	
16	I hate math problems and avoid them at all costs.	
17	There are aspects to developing a trading system that I know I have to do, but I just keep putting them off.	
18	To me trading indicators are real phenomena that I can trade.	
19	I really want to be a trader, but I find the task of developing a trading system to be very tedious.	
20	If I have to do one more thing with respect to developing a trading system, I feel like I might explode.	

The total score can range from 0 to 80. If you scored under 20, then you probably have no blocks to developing a trading system unless all of your scores fall in a particular area. Similarly, if you score 30 or less, you probably can design your own system well, but you may have problems in particular areas. If you score above 30, then I would guess that you might have some major psychological problems developing a trading system. To determine exactly what those problems might be, perform the calculations below and determine your individual scores.

CF SCORE:

To calculate your CF SCORE, total your score from questions 1, 8, 11 and 16, then divide by 16.

Q1	
Q8	
Q11	
Q16	
Total	
CF score	
Total / 16	

PR SCORE:

To calculate your PR SCORE, total your score from questions 5, 13, 16, 17 and 19, then divide by 20.

Q5	
Q13	
Q16	
Q17	
Q19	
Total	
PR score (Total / 20)	

OV SCORE:

To calculate your OV SCORE, total your score from questions 3, 4, 6, 8 and 20, then divide by 20.

Q3	
Q4	
Q6	
Q8	
Q20	
Total	
OV score (Total / 20)	

PF SCORE:

To calculate your PF SCORE, total your score from questions 2, 7, 10, 12 and 14, then divide by 20.

Q2	
Q7	
Q10	
Q12	
Q14	
Total	
PF score (Total / 20)	

JB SCORE:

To calculate your JB SCORE, total your score from questions 9, 10, 15, and 18, then divide by 16.

Q9	
Q10	
Q15	
Q18	
Total	
JB SCORE (Total / 20)	

Individual scores above 0.30 suggest that you need more work in those areas. All scores, except Judgmental Biases (JB Score) which has already been discussed, are covered in Section 1-6.

Section 1-6

Four Psychological Areas

Computer Phobia (CF score):

What to do about computer phobia? So you have computer phobia—computers, math, or perhaps even anything mechanical just terrifies you. So what do you do? You have several options. First, you can hire someone who is good with computers to work with you or for you. Your computer person need not even be familiar with standard market programs. Most of them are more complex than they need to be because they rely on the need of most traders to be visually tied to graphic charts of the market. If you can skip that option, then you'll find that it is much easier to do all your marketing programming in a common database language such as dBase™ or Foxpro™. And people who can program in these languages are plentiful and not that expensive.

Second, you can do everything by making all your calculations by hand. It's possible to both design and test a trading system by hand (it was done 20 years ago by almost everyone). However, the process is very time consuming and tedious. More importantly, the decision to do the task by hand might get you into another problem—procrastination or being overwhelmed. Also, people who do their analysis by computer will have a distinct advantage over you in terms of speed and how much they can do in a given period of time.

Your third option is to overcome your phobia. I suggest that you find someone trained in Neuro Linguistic Programming (NLP) to assist you. For most of you this would be about a half-day of consulting in my office, so, I'd be happy to work with you until you feel comfortable with computers.

Notes

Procrastination (PR score)

Procrastination. Everyone knows what it is, and many people even admit to being procrastinators. But, what is behind procrastination problems, particularly as they affect system design and development?

a) **Fear of Failure**

If you're uncertain of your ability to perform, either based on past experience or a general lack of self-confidence, you'll probably find it difficult to begin. And the greater your time pressure to perform, the more fear you will feel.

b) **Fear of Success**

This will produce the same result — continually postponing the development of a trading system.

c) **Lack of Interest** in the development portion of the task.

d) **Resentment:** you feel resentment toward someone or the task reminds you of someone you dislike.

e) **Leaving the Tough Jobs 'till Last** - you leave the toughest part of the job for that portion of the day when your energy is lowest or you are likely to make a lot of mistakes.

The most important part of developing a trading system is to develop the objectives for that system. Once you have the objectives down, then the task of developing a system really is fairly simply. Getting your objectives down is 50% of the task. Until you have your objectives written down, you have no way of knowing what you want or of knowing when you've got it. How can you even monitor your progress, a major factor in ongoing procrastination, until you know exactly what you want? In contrast, once you know what you want, you can set deadlines for each phase of the project.

How to Overcome Procrastination.

First - Realize that the procrastination comes from you and take control of the situation.

Second - Write down all of your objectives for your trading system.

Third - Divide the task of developing a trading system into steps. Rank the steps in terms of priority and then rank them in terms of your desire to do them. Set deadlines for completing each step and announce that deadline to the world. If you find that one particular subtask is particularly onerous, then break it into subtasks and give yourself a deadline for each subtask.

Forth - Begin the next step. Concentrate on taking each step and then begin. Lao Tse, the great Taoist teacher, once said, "*A journey of a 1000 miles begins with a single footprint.*"

Notes

Being Overwhelmed (OV score)

There are basically three aspects to being overwhelmed:

- 1) The concentration on details as opposed to the big picture;
- 2) Being out of balance in your life in some way so there is undue pressure on you;
- 3) The lack of a plan to get out of the mess.

Details

The average person has a processing capacity of 7 plus or minus 2 chunks of information. When people start concentrating on details, then that capacity is quickly exceeded. And when your focus on the details is uncomfortable, because of pressure from some source, the feeling of being overwhelmed really starts to set into the mind.

Conflict

When part of your life is out of balance—when conflict is created because part of your needs are not being met—the details take on a different meaning.

Planning

When people are overwhelmed it is because they lack a plan to get away from the details.

Getting Out of Being Overwhelmed

First - The first thing to do is take a break from the task that is giving you that feeling.

Second - Determine what aspect of your life is giving you so much pressure. Find out what part of you is responsible for that pressure. Once you know the part, you can negotiate with that part to meet its needs if it will agree to let you continue to develop the task of developing a trading system.

Third - You must develop an overall plan for developing your trading system. Work out your objectives in detail! Once your objectives have been written down, you can then develop a plan for meeting those objectives. Divide the plan into various tasks and set a deadline for meeting each of those tasks.

Notes

Perfectionism (PF score)

Must have a system that is correct 70% of the time and yet still may not be able to follow it because everything is not exactly perfect.....This is the fate of the perfectionists.

Production seems to go down in perfectionists. Perfectionist businessmen make less effective decisions, traders make less money, and athletes perform poorly—mostly because of the extremely lofty standards they set for themselves.

- Have **lofty standards** (usually because of the parents).
- Standards are tied into one's **self-esteem**. If you don't achieve them, you feel like less of a person.
- Perfectionist **cannot tolerate mistakes, distractions**
- Have **all-or-none thinking**

How Performance is Lowered:

- Perfectionist is own worst critic (if I do it my parents won't have to)
- Criticism drives him toward goals.
- Repeated failure of high standards, creates a wall around the issue.

Getting Out of the Perfectionist Trap

First - Make a list of the advantages and disadvantages of being a perfectionist. Notice how the advantages may not even be as great as the disadvantages.

Second - Spend a day investigating how well the world can be evaluated by such all-or-none standards. As you are doing this notice how distorted all-or-none thinking is and then think about your perfectionist standards.

Third - Keep a daily written record of self-critical statements that you make. Give yourself a reward for being able to write down at least 50 such thoughts in a day.

Fourth - Keep a record of the activities that you do. Before you undertake each activity, estimate how satisfying you think the activity will be. When you finish the activity, record how satisfying you felt it actually was and also record how effectively you performed.

Fifth - While you are developing a trading system, set behavioral standards that are about 10% of what you would normally expect of yourself.

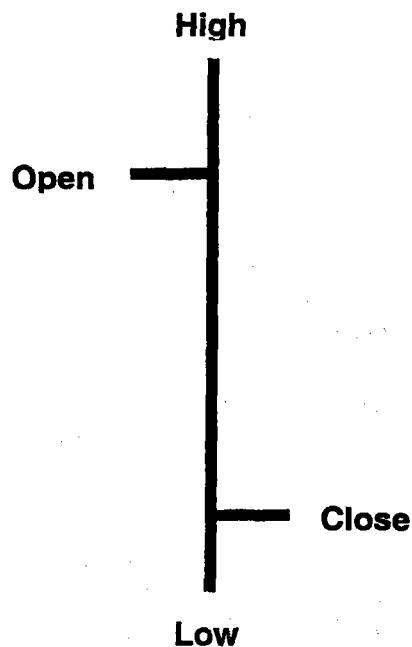
Notes

Section 1-7

Perception and Trading

Perception and Trading

Look at the figure below and notice what it means to you. Think about it and then write down what it means in the space beneath the figure.



What does this figure mean to you? Write your answers in the space below:

Interpretation: A bar chart, such as the one shown in the illustration, takes a period of time and summarizes it. That summary includes four primary pieces of information — the open, the close, the high, and the low. Japanese candlesticks make the information a little more obvious and give you a visual cue (color) as to whether or not the market moved up or down between the open and the close. Basically, the bar chart only shows you two things with respect to the market.

- 1) The range of prices that occurred throughout the time period.
- 2) How prices moves (i.e., they moved from the open to the close with a little bit of variation for the high and the low).

However, one point to consider is that even the open and close points on the bar are not accurate, because they tend to be ranges. The exchange simply sets a number that represents the opening and closing price within the range.

Unfortunately, most people believe that this bar chart represents the market. Yes, it is a gross representation, but it ignores a lot of information, including:

Activity as a function of time:

- 1) It does not show you how much activity occurred.
- 2) It does not show you when during the period of time various prices occurred or how much activity occurred at each price.

You can get this information by lowering your time frame, but the purpose of the bar chart is to reduce information flow — to summarize information in a way that it manageable.

Type of activity as a function of the trader or investor:

- 3) It doesn't show you whether most of the people were buying or selling?
- 4) It doesn't show you what kind of people were doing the buying and the selling. Were a handful of floor traders playing with the price or was there a lot of major outside speculators (or long term investors) participating?
- 5) It doesn't show you how much activity was in the form of a single unit (100 shares of stock or one commodity contract) or how much was in large units. Nor does it show you how much was bought by whom.

Who is in the market!

- 6) The market is not only represented by activity during a particular day, but it is also represented by who is in the market holding long or short positions. And the bar chart certainly does not give this information.

Statistical Probabilities:

- 7) The bar chart also does not give you statistical probabilities. Given that X happens, what is the probability of Y happening? And what if X or Y are not even contained in your data?

Fundamental Information about Supply and Demand

- 8) Some people believe that the market is driven by concepts such as supply and demand. These are nebulous concepts and the typical bar chart certainly doesn't say anything about that -- although some people can make interpretations about it based upon the evidence that is available.

Psychological Information

- 9) What is the strength of conviction of people with long and/or short positions? When would they be likely to liquidate and at what price? And how will they react to various changes in the market?
- 10) And how many people (with how much capital) are sitting on the side of the market?

Until now, you probably thought that a bar chart really was the market.

Remember, all that you are really looking at is a single line on a computer screen or some piece of paper. And the scary thing is that most people here have no intention this diagram is less likely to represent the market than anything else.

We'll be saying many times throughout this seminar that simple things are what works. Why do you think that is true?

Notes

Section 1-8

Perception and Indicators

Perception and Indicators

You could just trade bar charts, but most people want to do something with their data before they trade. As a result, they use indicators. Unfortunately, people do the same thing with indicators — assume they are reality. Yet any manipulation of price data (while it may help in making decisions) is less likely to really represent the markets.

Lotto Bias: People assume that because they do something with respect to the markets that they have some control over the outcome. That is, most people won't trade just the daily bars. Instead, they must manipulate the market data they have until they have enough confidence to trade.

In the lotto, people assume that because they get to pick the numbers, they somehow have more control over the outcome. As a result, when people play the market, they assume that:

- Manipulations they make somehow correlate with what the market does.
- The manipulations they make up front (on the entry) are especially important.

These manipulations, for traders and investors, are typically called indicators. Let's talk about a few of them and notice what they mean in terms of what the market is doing.

A Moving Average — basically this is an attempt to take the price over a number of days and represent it by one number. Basically, the philosophy is that if prices are above the moving average, it is a buy, whereas if the prices are below the moving average, it is a sell.

Other traders prefer to use two moving averages. Donchian's 5-20 day moving average system, for example, made a lot of money in the 1970's when markets tended to trade a lot. When the shorter term moving average moves above the longer term moving average, you buy. When the shorter term moving average moves above the longer term moving average, you sell. But how do you do that and how do you select which moving averages to use? And what if markets change?

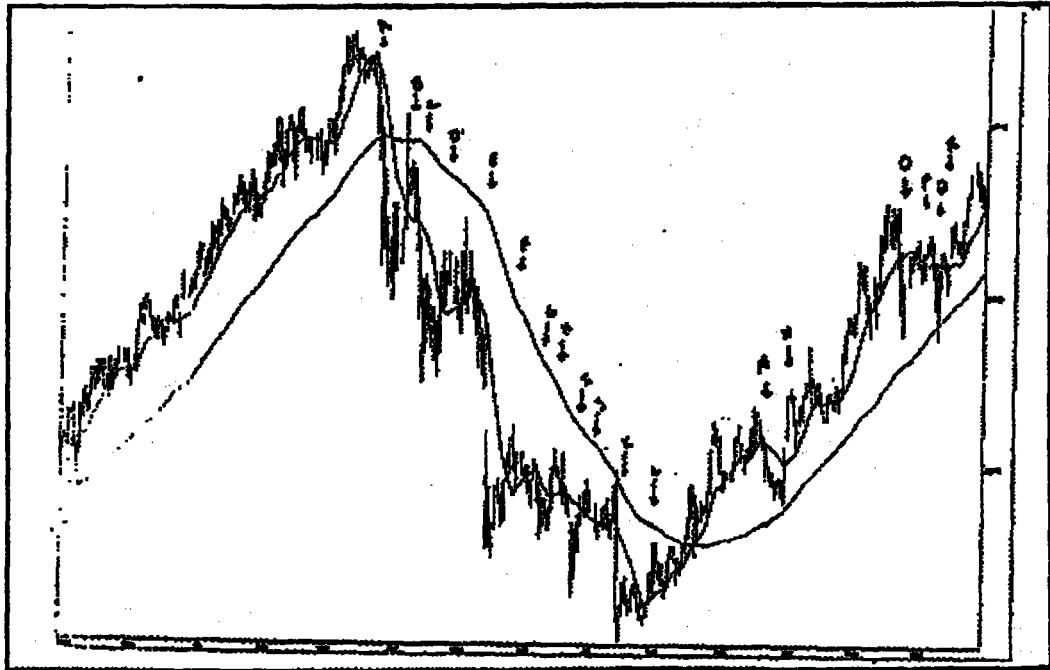
Notes

Look at the two figures that follow. The first shows a daily bar chart on the stock CSCO over the past year with 10 and 50 day moving averages. The averages seem to predict the prices really well.

- First, when prices fully drop below the 10 day moving average, you might consider that a sell signal. Points A and E, for example, are excellent sell signals. However, false signals (i.e., the price comes back and takes out the average) are given at C, G, K, M, O and Q.
- In addition, by the same criteria, excellent buy signals are given at L, N, and R. But false signals (price comes back and takes out the average) are given at B, D, F, H and J.

With the right stop placement, however, even this system which is right 33% of the time would make excellent profits because the gains are so spectacular.

Thus, you might decide to use the moving average crossover type of system. In the figure, it gives one sell signal (between A and B) and one buy signal (between L and M). Thus, it is right 100 percent with huge gains.

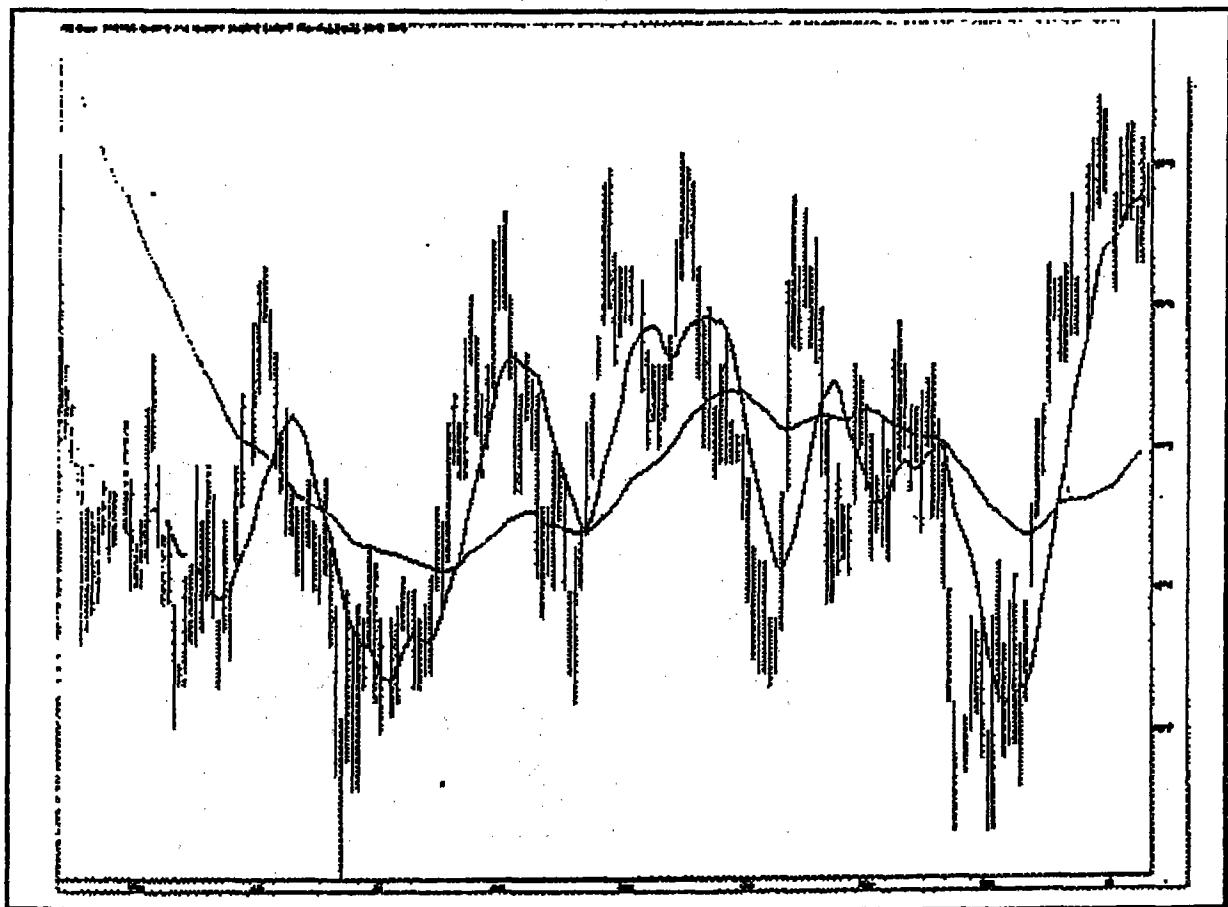


The key point is that an indicator (ANY INDICATOR), which is usually an attempt to develop a mathematical way of summarizing the data, will also distort the data so that it is even less likely to give you an accurate representation of the market.

The figure below shows the same 10-50 day moving averages with a different stock. In my opinion, the lines are totally meaningless. You could not profitably trade:

- 1) price crossing a line or
- 2) moving averages crossing each other.

Why? Because the **moving averages don't really represent the market.**



Wells Wilder's ADX (frequently used as a measure of trending) gives you another example of how an indicator summarizes data, but moves further and further from what the market actually represents.

Directional movement is the largest part of today's range that lies outside of yesterday's range. It might be positive or negative. The directional movement is then divided by the true range for the day. This value is called the *directional indicator*. The ADX is calculated by determining the absolute value of the difference between the positive directional index and the negative directional index over a number of days. This value is then divided by the sum of these two values and multiplied by 100 to produce an oscillator that goes from 0 - 100. The ADX is simply a moving average of this oscillator, using the same number of days.

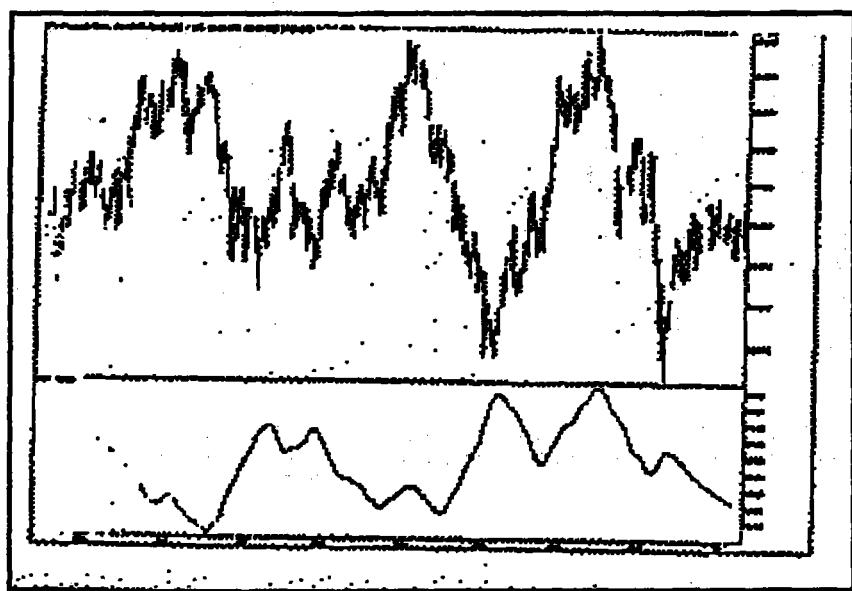
The result is a smoothed oscillator which suggests:

- 1) If ADX is rising, you have a trend.
- 2) The higher the number, the longer (and stronger the trend).
- 3) A falling ADX may simply mean the market is consolidating or moving in a trading range.

But the ADX has numerous problems:

- Any given value can mean a lot of different things with respect to the trend.
- With a longer-term market the ADX has trouble with spikes, where ADX may fail to recognize a change in trend.

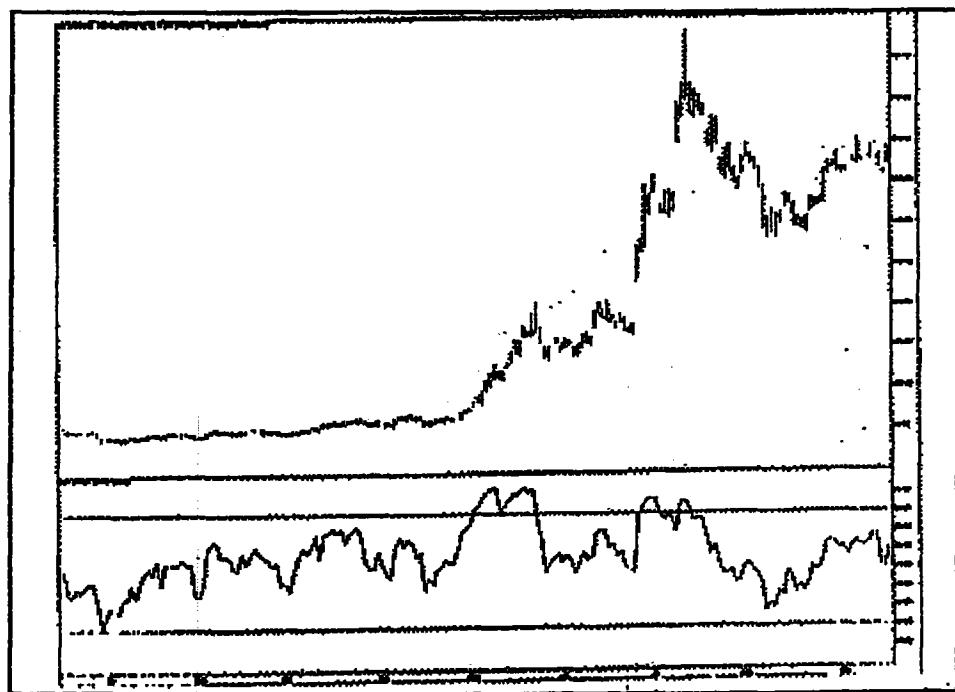
Notice the ADX in the figure below. The ADX certainly doesn't represent the market. It is simply a manipulation which may or may not represent your decision-making.



Another common indicator is the RSI or relative strength index. Stock traders should not confuse RSI with relative strength which compares one stock indicator with another. Such oscillators are used by counter-trend traders to determine when the market is "overbought" or when it is "oversold." Notice that the terms "overbought" and "oversold" seem to indicate that there is some reality to the meaning of high or low values of the indicator.

Basically, the calculations use only closing prices. It mathematically combines the differentials among up closes and down closes over the chosen time lengths. High values represent up movement and low values represent down movement. However, you must select some period to use in your RSI calculations. When you do so, you are making a big assumption that the period represents an underlying cycle in the market. The suggested value is 14, making the assumption that a market cycle is 28 days and that you are using a 1/2 cycle period. That is a big assumption.

Notice what happens, in the figure below when you apply RSI to a bar chart. Does the indicator in any way represent the market?



Section 1-9

System Definition

Systems Defined

A system consists of an input, a process, a hierarchy, and an output to achieve a desired goal. The goal is something to make certain events occur through devices.

There are two kinds of systems:

Rule-Based Systems -- typically these are systems in which one attempts to make the rules so good that you can allocate nearly all of your capital to one trade. Another version of it is that these are systems in which the rules are so complicated that the other type of system (money management) is impossible.

Rule based systems tend to be very human oriented and often discretionary.

Money Management Systems -- these are systems which assume that the markets are not that predictable. As a result, success depends upon the proper allocation of money across diversified portfolios.

We're going to talk about both types of systems in this seminar.

Low-Risk Ideas -- This is an idea with a positive expectancy stated at a level that will allow for little or no possible outcome in the short term while still allowing trading to continue so that you can realize the long-term expectancy.

Trading vs. Investing Discussion

This discussion can be heard on the audio tapes.

Notes

Section 1-10

Parts of a System

Ten Parts to a Good System

There are ten parts to a good system. We will be discussing the parts individually, but we wanted to go over them early in the seminar so that you could start thinking about them. Typically, if you do not consider all of these parts, your system may have some weaknesses.

- 1. Market Selection** – Answers the question, “Is this a market I want to trade?”
- 2. Market Direction** – What direction is the market moving, if any?
- 3. Setup** – What conditions must be present before you enter/exit?
- 4. Market Timing or Entry** – When should I open a position?
- 5. Protective Stop** – How will you know when to get out to preserve capital?
- 6. Re-entry** – How will I get back in if I’m stopped out of a good move?
- 7. Taking Profits** – Under what conditions will I take my profits?
- 8. Money Management** – Knowing that when I’m wrong I will lose X dollars, how big a position am I willing to take?
- 9. Portfolio Selection** – What kind of basket of commodities or stocks or other investments do I want to trade?
- 10. Multiple Systems** – In order to smooth my performance, do I want to trade multiple systems.

Notes

Section 1-11

Modeling a Trading System

Model for Learning How to Trade

- Find good models
- What do they do in common
- Determine Resources
- Mental States
- Mental Strategies
- Beliefs

The Model

Task 1: Take an Inventory

Task 2: Develop an Open Mind/ Creativity

Read/Discuss/Let Your Mind Wonder

Recommended reading:

- *Market Wizards* by Jack Schwager
- *The New Market Wizards* by Jack Schwager
- *Computer Analysis of the Futures Market* by Charles LeBeau and David Lucas
- Dr. Van Tharp's *Peak Performance Course for Traders and Investors*
- *Trading with the Odds* by Cynthia A. Kase
- *Business One Irwin Guide to Trading Systems* by B. Babcock

Does what you read match your inventory?

Write down all your beliefs about the market.

Task 3: Determine Your Objectives

Task 4: Determine Your Time Frame for Trading

- Advantages of longer time frame:
 - Lower reliability makes money due to transaction costs
 - Fewer Psychological Problems
 - Less Randomness
- Look at historical charts from an artistic perspective

Task 5: Determine the Best historical Moves within that Time Frame

- One of our clients suggested that this task come first. For example, 60 day channel breakout

Task 6: Determine what those moves have in common and how to trade or participate in each of them.

- What is the concept you are observing?
- Can you figure out a new, creative way to observe these markets?
- Can you use statistics and game theory to determine probabilities to use.

Task 7: Determine how to measure the concept with respect to the elements of the system you'll be using. Also predetermine your criteria for acceptability (in terms of % correct, avg. profit loss ratio, and acceptable drawdowns). System elements might include:

- 1) Selecting the markets
- 2) Determining your entry (includes initial risk)
- 3) Determining your exit
- 4) Apply money management overlay

Task 8: Test your ideas by eyeballing all markets for a long period of time. Estimate false positive rate.

- Estimate if risk reward parameters are acceptable.
- Simulate the results and see how it feels. If it feels good, then move on to the next result.

Tom Basso "*If you understand in great detail the philosophy and detail of what you are trying to do, then little testing is necessary. However, there is never enough data to test. Create other mental scenarios in your mind. The more imagination you've got, the less data you require.*"

Task 9: Computerize your ideas and do historical testing in a few markets with one contract per trade. What is reliability, drawdowns, and reward-to-risk ratio? If unacceptable, then go back to Task 5.

Tom Basso: "*Plug in money management and portfolio analysis and test all at once. Otherwise you might reject something that is perfectly fine.*"

Task 10: Plug in reliability and profit/loss ratio to money management formula to determine percent of equity to risk on each trade. See money management section of your notes for details.

Task 11: Add in money management plan and test over multiple markets to determine expected profit range each year and maximum drawdown. If unacceptable, go back to Tasks 5-8.

Criteria for Evaluating a System:

1. How many trades does it generate?
2. What's the reliability of the system (i.e., % winners)?
3. How big is the average profit compared to the average loss?
4. Item 2 and item 3 will give you the system's **expectancy** (see definition below)
5. Peak-to-trough drawdown.
6. Consecutive losses

Expectancy:

The three most important things you need to know about your system are:

- Your objectives with your system
- The **expectancy** of your system
- The money management algorithms that you'll need to achieve your objectives with that expectancy.

Most traders and investors ignore all three components.

$$\text{EXPECTANCY} = (P_{\text{win}} * \text{Amt. Win}) - (P_{\text{loss}} * \text{Amt. Loss})$$

where: P_{win} = probability of a win or the reliability of your system

P_{loss} = probability of a loss in your system

Amt. Win = the size of the average winning trade

Amt. Loss = the size of the average losing trade

When you have multiple probabilities (since expectancy is additive) you can use the following formula to determine your expectancy.

$$\text{EXPECTANCY} = [(P_{1\text{Win}} * P_{1\text{Amt. Win}}) + (P_{2\text{Win}} * P_{2\text{Amt. Win}}) + \dots + (P_{n\text{Win}} * P_{n\text{Amt. Win}})] - [(P_{1\text{Loss}} * P_{1\text{Amt. Loss}}) - (P_{2\text{Loss}} * P_{2\text{Amt. Loss}}) - \dots - (P_n * P_n * Amt. Loss)]$$

Let's look at some examples and then do some exercises:

Example 1: In our initial marble game (trading simulation), the probability of winning was 60% and the probability of losing was 40%. You won or lost the amount risked. What is the expectancy of this system?

Here $P_{\text{Win}} = 0.6$ and $P_{\text{Loss}} = 0.4$

Amt Win = 1

Amt Loss = 1

Therefore: Expectancy = $(0.60 * (1/1)) - 0.4 = 0.6 - 0.4 = 0.2$

Thus, for each dollar you risk in the marble game you should get your dollar back plus make 20 cents (on the average over many trials)

Example 2: We play another marble game in which there are five blue marbles which pay 5 to 1; ten green marbles which pay 2 to 1; and twenty five white marbles which result in a 1 to 1 loss. What is the expectancy?

Here we'll calculate expectancy using both formulas just so you can see an example of each:

Method 1: To calculate the probability of winning or losing, we determine the number of winning (losing) marbles and divide by the total number of marbles.

$$\begin{aligned} \text{Probability of Win} &= (5 + 10)/(5 + 10 + 25) = 15/40 = 0.375 \\ \text{Probability of Loss} &= 25/40 = 0.625 \end{aligned}$$

To determine the size of the average win we must multiple the number of winning marbles at each probability level by the amount won and sum that over the various probabilities. We must then divide the resulting sum by the total number of wins (winning marbles) to determine the average amount to be won. We then repeat the same procedure for the losing marbles.

$$\text{Average Win} = [(5*5) + (10*2)]/15 = (25+20)/15 = 45/15 = 3.0$$

$$\text{Average Loss} = [25*1]/25 = 25/25 = 1.0$$

$$\text{Average Win/Average Loss} = 3/1 = 3$$

Therefore, EXPECTANCY = $(0.375*3) - 0.625 = 1.125 - 0.625 = 0.5$
or 50 cents

Method 2: $P1 = 5/40 = 0.125$

$P2 = 10/40 = 0.250$

$P3$ (for losses) $= 25/40 = 0.625$

Therefore, Expectancy = $(0.125 * 5) + (0.25 * 2) - (0.625 * 1)$
 $= 0.625 + 0.50 - 0.625 = 0.50$ or 50 cents

Thus, both methods give us an expectancy of 50 cents. In other words, for each dollar risked, over many trials on the average, you would get back your dollar plus make 50 cents.

Now, here are some exercises for you to do as homework:

Note: One problem with calculating expectancy in a system is that you are typically risking more than a dollar. For example, you might have a system with a reliability of 50% in which your average win was \$900 and your average loss was \$300. Here the best procedure would be to calculate your expectancy and then divide that value by \$300 to determine the expectancy per dollar risked.

Thus, $\text{Expectancy} = (0.5 * \$900) - (0.5 * \$300) = \$450 - \$150 = \300 . If you divided the resulting expectancy by \$300 you get a value of \$1.00 which means that your expectancy is \$1.00 per dollar risked.

If you have the ratio of the amount won to the amount lost, you can use that instead of the amount won in the formula. If you do, then you should have a final figure expressed in terms of per dollar risked.

Notes

Expectancy Practice Exercises:

You have a system which generates the following winning trades:

\$1230; \$270; \$4950; \$460; \$2430; \$1780; \$540; \$130; \$10,900; \$1360

The system also generates the following losing trades:

\$690; \$420; \$1480; \$2110; \$390; \$60; \$840; \$1630; \$125; \$620;

\$1130; \$920; \$1270; \$520; \$1120; \$170; \$1820.

- *Based upon the information you have trading this system, what is its expectancy per dollar risked?*

- *What is the expectancy of flipping a fair coin, where heads pays three times what you risk and tails loses what you risk? Notice that this is equivalent to our last example on page 50.*

A system generates the following trades in a one week time period:

\$670; (\$2050); \$940; \$720; \$1230; \$1720; \$420; \$440; \$430; \$1020;

(\$4960); \$390; \$1120; \$530; \$640; \$40; \$310; \$140; \$180; \$210; \$40;

(\$6270); \$810; \$460 --- The losses are in parentheses.

- *What is the expectancy per dollar risked of this system?*

- A system has a reliability of 27%. The average win is 6.2 times the size of the average loss. *What is the expectancy of the system?*

- A trader has five different systems. Determine the expectancy per dollar risked of each. Also assume that our trader risks an average of \$1,000 per trade with each system. Assume only one position per trade and determine which system is the best in a month of trades. Assume 20 days in a month. *Why is this system best?*

1. System one generates 3 trades each day; is right 72% of the time.
The average loss is 1.4 times the size of the average gain.

2. System two generates six trades each month. It makes money on 34% of the trades. The average gain is 12.3 times as big as the average loss.
3. System three generates about 35 trades per week on the average. It is right 61% of the time with gains 2.3 times as large as the average loss.
4. System four generates four trades each week with a 46% reliability. Winning trades average \$3,210, while losing trades average out to \$1070.
5. System five generates one trade every three days. It loses money 47% of the time. The average gain is \$783 and the average loss is \$231.

Notes

Notes

SKILLS AND ABILITY

9. What are your computer skills? What skills do you need before you begin this trading venture? _____

10. What do you know about statistics, especially non-parametric statistics?

11. How would you rate your market knowledge? Here you should include knowledge of trading mechanics, what moves the markets, how to execute orders effectively at low cost, any trading indicators you might need, etc.

12. What are your psychological strengths and weakness? In terms of trading system development? _____

In terms of personal discipline? _____

In your personal assessment, be sure to note if you tend to be compulsive (get caught up in the excitement of trading), have personal conflicts (i.e., with your family, job, parents, or past trading history) or have emotional issues that continually crop up (fear, anger). _____

Based upon your personal inventory, what do you need to learn, accomplish, or solve (in terms of personal discipline) prior to beginning trading. How will you do that? _____

easily have 10 losses in a row. Your system is still working as expected, but you could have 10 losses or more in a row. Could you tolerate that?

In summary, what do you expect to make each year (state as a percentage of your trading capital) from _____% to _____%? Also, what risk level are you willing to tolerate each year? What is the largest peak to trough drawdown that you are willing to tolerate each year (_____% of equity)? What is largest drawdown in your trading capital that you are willing to tolerate (_____% of equity)? Here you are making a basic statement about your trading.

How will you know that your trading plan is working and how will you know that it is not working? What do you expect from your system in various kinds of markets? Trending? Consolidation? Highly volatile?

What are your strengths and weakness?

How much time do you have? Do you have any time commitments? Do you have the time to trade short term?

What are your skills? Do you have good programming skills? If not, could you hire someone to program for you or use something like System Writer that requires limited programming ability?

Do you tend to be compulsive? If so, you would be much better off with a long term mechanical approach.

How much social contact do you need? Can you work by yourself day after day? Do you need one or two other people around? Do you need to be around a lot of other people? How much do those other people influence you?

Do you have any deadlines to meet in your trading?

Objectives for Money Managers:

What kind of clients do you want? Retail clients? A few good friends? Several pool operators placing money with you? Very sophisticated traders?

What are your clients like? What are their goals? What kind of service do you want to provide for them? For example, are they, by putting money with you, attempting a special type of diversification?

Since you'll be trading your client's money, how much risk can they tolerate? Or, for that matter, how much gain can they tolerate before they begin to get too excited? What kind of drawdown will your clients tolerate? When would they be likely to withdraw their money?

What kinds of fees will you be charging? In other words, what is the total amount extracted from the client's account each quarter/month? What kinds of returns will you have to make in order to be able to satisfy a client who is subject to those fees?

What will your trading capacity be? How do you expect to achieve it? What do you expect to do when (before) you achieve it? How will that change your trading?

What's the worst thing that can happen in terms of your client relationship? How can you prepare for that so that it will not occur? How will you handle a large infusion of new capital? A large withdrawal? What will you do when you get your first million and you must show a large profit (and no drawdowns) in order to keep it?

Trading Ideas: (Both Individuals and Money Managers)

What kind of markets do you want to trade? Is it appropriate for you to specialize? Do you only want to trade liquid markets? Are there some illiquid markets you'd like to trade?

Based on the questions above, what will your capacity be?

What beliefs do you have about entering the market? How important do you believe your entry to be? Write down any beliefs you may have about entry?

Given your goals (rate of return and tolerable drawdowns), what kind of initial risk stop do you want? If it's close, will your entry be able to get you right back into the market so that you will not miss a move?

How do you plan to take profits? Reversal stops? Trailing stops? Technical stops? Price objectives? Think about multiple exits. Contrary to popular opinion, much of your emphasis should be in the area of stops and exits.

What do you want to do in terms of money management? Write down any specific ideas you may have here.

Notes

Section 1-14

Low Risk Ideas

Homework: Low-Risk Idea Teams

Seminar attendees played a trading simulation game on the second and third morning of the seminar. The game consisted of 60 simulated trades. Although you will not be playing in the game, think about what sort of strategy you might employ. On any given trial, you may be long or short.

Order	Color	Results
55/101	Solid Blue	Lose what you risked/Win what risked if short.
20/101	Solid White w/Color	Lose double what you risked/Win double what you risked if short. <i>You'll lose (win if short) 74% of the time in this game if enough trials were played.</i>
12/101	Solid Black	Win 3 times what you risked/Lose 3 times what you risked if short.
8/101	Light Blue Center	Win 5 times what you risked/Lose 5 times what you risked if short.
5/101	Dark Blue Center	Win 10 times what you risked/Lose 10 times what you risked if short.
1/101	Solid Green	Win 20 times what you risked/Lose 20 times what you risked if short. <i>You'll lose (win if short) 25.7% of the time in this game if enough trials were played.</i>

1. Each group was given \$500,000 to play with. The goal of each group was to make as much money as they could. It cost each group \$15 to enter the game.
2. Each group elected a group manager who collected and distributed the money. The manager approved the group strategy. Managers could 'fire' group traders if they perform poorly or 'fine' them or whatever they thought was appropriate to

maintain the group performance — get a bonus. The group manager had total control over how the group plays the game, who is allocated how much capital, and the collection and distribution of real money according to one's contribution, etc. Each group was warned to elect that person carefully.

3. At the end of every ten trades, the winning group (i.e., the group having the largest % gain over those 10 trades) received \$10 to divide among its members. Losing groups contributed another \$10.
4. Thirty trials were played on day 2 and another 30 trials were played on day 3.
5. At the end of the game, the winning group for the last 10 trials got the \$10. The group with the best reward (total percent gain) to risk (peak to trough drawdown) got the balance of the funds in the pot.
6. Groups had the first night to develop their strategies plus time to refine them on the second night.
7. Dr. Tharp's only role in the game was to act as the market and a market regulator. As such, he sometimes change the rules to protect the public.

Write down your group members in the space below:

Day 2

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Section 2-1

Trading Simulation: Game 2, Part 1

These worksheets and instructions are for the Trading Simulation Game that is played during the seminar. The simulation was designed as a group exercise that takes place over a 2-day period, with 30 trades placed per day. The "market" consisted of a set of marbles, with each colored marble representing a win or loss and a multiplier value. Each game included a 20:1 loss marble. Participants drew one marble at a time, the results were determined, then they got 2 minutes to decide on their next trade. Every 10 trades, the results were tabulated. Due to the way the game is structured, it was not practical to include this simulation on the Audio Cassette Series. For those of you with access to the internet, you can participate in a similar simulation on the **Virtual Trading Exchange** at www.iitm.com.

Game Sheets / Trading Game

New Equity	Amount Risked	Amount Won/Lost	Peak to Trough Drawdown
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
<i>Group Results:</i>		<i>1st 10 trades</i>	
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
<i>Group Results:</i>		<i>2nd 10 trades</i>	

New Equity	Amount Risked	Amount Won/Lost	Peak to Trough Drawdown
21.			
22.			
23.			
24.			
25.			
26.			
27.			
28.			
29.			
30.			
	<i>Group Results:</i>	<i>3rd 10 trades</i>	

Notes

Section 2-2

Concepts Behind A System & Entry Techniques

Why Markets Exist!

What's important is not what the small traders are doing — it's what the big traders are doing. What are John Henry, Monroe Trout, Paul Tudor Jones, Mint, Turtles, Ed Seykota, George Soros, Phillip Brothers, Peters Capital, etc...doing? — they control much of the market.

CONCEPTS

1. Trend Following

The distribution of price change tends to have an infinite variance.
There would be no need for markets if trends didn't exist.

Trend Following Entry Ideas

1. Breakout from a narrow range

If the market had it's narrowest range in the last 7 days (an inside day is preferable, but not necessary), then you can trade whenever it moves beyond the range of that bar. This is even a fairly good reverse system.

2. Extreme of last X days/channel breakout

If the market reaches the lowest low/highest high of the last 20 days, enter at the market.

3. Pattern technique

a) Technical (head and shoulders)

b) Made up of open, high, low, close (key reversal, three extreme closes)

c) Curtiss Arnold uses patterns in his trend following system as triggers.

4. Directional Movement – (must calculate to 2 decimals) Wells Wilder

For example, the ADX has a 1 point move in a 2 day period.

The ADX is higher today than it was five days ago.

The DI+ is greater than DI- by a certain amount.

5. Open-Close Indicator (Sum of "open" minus "close" over "x" days)

Buy if open-close indicator is above 50

Sell if the open-close indicator is below -50

6. Trendline Breakout

7. Momentum -- 2nd degree of price movement

Rate of change = division of prices (see Appendix III)

Close today/close x days ago

If above some level, buy

If below some level, sell

Momentum = difference of prices

Close today less close x days ago

If above some level, buy

If below some level, sell

8. Other -- moving average crossover

Donchian's first popularized this idea many years ago with his 10/20 moving average crossover system

When the 10 crosses the 20 going up, buy

When the 10 crosses the 20 going down, sell

More moving averages would be better. It would tell you when to get out of the market, instead of just allowing for a reversal system.

9. Efficiency Index

2. There's an order to the world -- and I have some insights

Seekers of the Holy Grail: It's human nature to want some insights.

Gann

Fibonacci

Elliot Wave

LeBeau Waves

Delta Theory

Entry Techniques: These techniques work if you use them with the proper parts of a trading methodology.

Gann, Elliot Wave, Fibonacci, Delta, Astrology

Your secret gives you reason to expect a move will start at this time, so your setup is the occurrence of a particular time period.

Your trigger for entry should be a market move in your direction such as a volatility breakout or move to a significant level on the chart (prior

resistance or support)

3. Cycles/Seasonality

Cycles — idea that the market repeats itself; statistical analyses of the market have shown that there are no underlying cycles. But people still insist that there are cycles.

Real reasons for seasonality versus using a computer to generate some ideas.
(i.e., eggs versus 10 year interest rate cycle)

For entry, see the oscillator comments under counter-trend trading/swing trading

Some cycles may not have much meaning, so you have to decide their utility.

Stocks – usually rally on Mondays, and Wednesdays and sell off on Fridays.
Bonds are usually down on Mondays, up on Tuesdays
Pork Bellies usually rally on Thursdays

The Super Bowl winner is better than 90% at picking whether or not the stock market goes up or down as a whole. If it's an old NFC team, the market goes up. If it's an old AFC team, the market goes down. This year (1996) we knew what the market would do way ahead of time, because the AFC and NFC championship games both included two old NFC teams.

4. Expert Systems

Feed the computer expert information

5. Neural Networks

You can train a mouse to run a maze until he's got it down. Unfortunately, when you show the mouse to the public — it's got a new maze.

Most people are training these computers to predict tomorrow's price. The average person couldn't make money on that even if they knew it.

Notes

6. Counter-Trend Trading & Swing Trading

Makes the assumption that prices return to some normal level — “if it gets 2 standard deviations from the moving average, I reverse.”

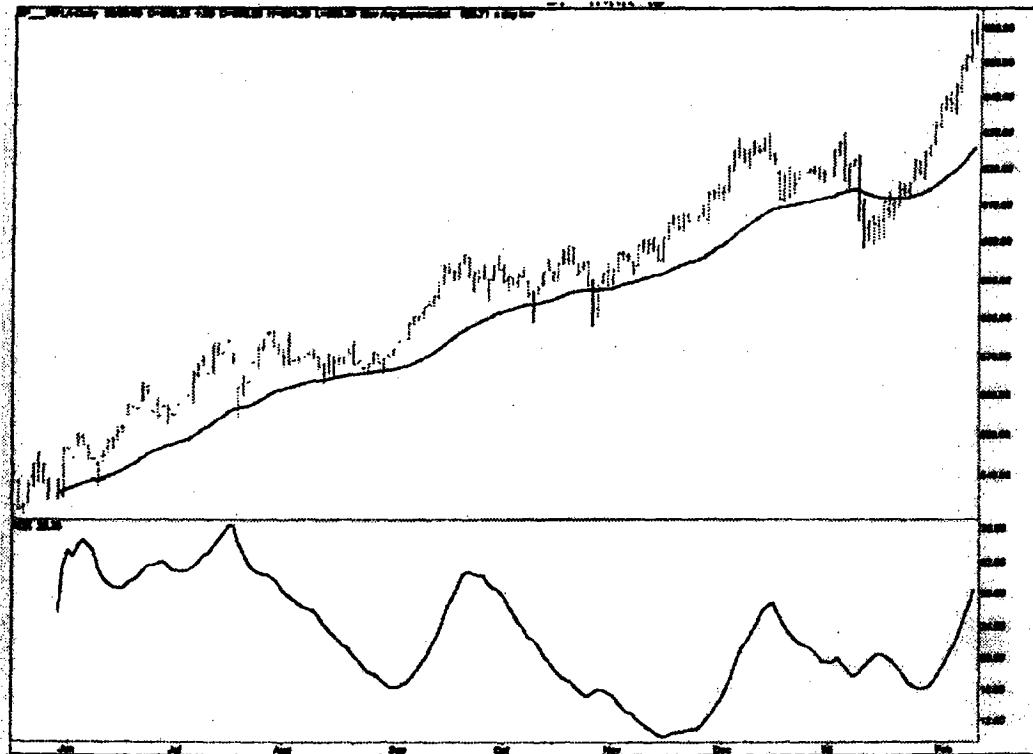
Testing for sideways markets and then using a different system might make sense. In this sort of trading, profits are low and costs are high. However, swing trading can also mean short term trading in the direction of the major trend.

Entry Techniques:

Basically, these amount to high probability setups plus a trigger

Example: False Breakout Entry Long Positions (Short positions, use high instead of low). Notice what this is the *opposite of*....

- 1) Today makes a 20-day low
- 2) The previous low must not have been within the last 5 days
- 3) Place an entry buy stop, just 8 ticks above the previous 20-day low
(Good today only)
- 4) If the buy stop is filled, place a GTC sell stop loss just under today's low.
- 5) Some trades will last 2 to 3 hours, others will last days.
- 6) Re-enter — may do so at original price on day 1 or 2 only



Oscillators typically filter out cycles that are less than twice its length, so you set your oscillator to a period of 1/2 the cycle you're trying to trade.

Trade oscillators by waiting until they get overbought or oversold and then waiting for a retracement.

Example of Oscillator Entry: Uses the one day rate of change (i.e., momentum) of closing prices and calculates a three period RSI of this rate of change.

$$\text{RSI} = \{\text{Up(average)} / [\text{Up(average)} + \text{Down(average)}]\} * 100$$

Buy Setup

- 1) Plot the 3-period RSI of the one day momentum
- 2) Day 1 starts when the RSI is below 30
- 3) On day 2 place a buy stop above the high of the first hour's trading.
- 4) When filled, place a resting stop at the low of the first hour's trading
- 5) Re entry = buy stop at original price
- 6) If trade closes with a profit, carry it overnight.

Sell Setup

- 1) Day 1 starts when the RSI is above 70.
- 2) Place a sell stop (on day 2) below the low of 1st hour's trading
- 3) When filled place a sell stop at the high of the 1st hour's trading
- 4) If trade closes with a profit, carry it overnight.

7. Market Profile

This is just another method that you can use to find setups for very short term trading.

8. Fundamental Analysis/Value Trading

Basically you're evaluating whether to expect a big or small profit.

Demand markets are the big ones (supply doesn't really seem to make that much difference). Everyone agrees on supply figures. Recent cotton market — supply was at one of it's highest ever. But we still had high prices because of world wide demand.

Agricultural products — the new crop and the old crop tend to be separate products.

Must look at supply and demand on a global basis.

Weather markets are difficult because weather is really a supply side factor.

Mention the role of the news.

Good "NEWS" entry technique for equities/commodities that works well:

1. Look for an extraordinary event to occur which causes a market to move dramatically. (Union Carbide plant fire in India kills hundreds)
2. Identify the market's last closing price before the event.
3. Place a resting price to enter the market at this previous closing level.
4. If the market can digest the radical event and come back to the closing price level, we want to participate in the reversing move.
5. Risk, with a resting stop, the lowest level the stock reached after a sell off.

This is a long term strategy.....

9. Mental Scenarios.... what do all the pieces mean

Jim Rogers once said, "How can you possibly think about investing in U.S. Steel if you don't know what rubber is doing in Malaysia?"

A lot of really good currency traders play out all sorts of scenarios in their mind about what the international political picture is. What is influencing what? And when they have that in their mind, they then develop a good idea about what the market should do. In other words, mental scenarios is an extreme version of fundamental trading.

Equity Markets or Indices

Use information not available to other people

Volume, Advance - Decline (The Tick, Arms Index)

What individual stocks are doing

What are S&P 500 stocks doing?

What are Dow 30 stocks doing?

What are other stock averages doing?

What options are doing

Equity indexes difficult for trend following (except '95 and '96)

But you can do excellent trend following in individual stocks.

Value Based Systems

Know when you're wrong, when your concept of value no longer applies. Divide equity into 5 - 10 equal parts and diversify. When a better investment comes along, find the weakest part, sell it and buy the new one.

Commercials or “professionals” versus the Public

Commodity Trend service publishes a chart that shows the commercial positions and the public sentiment. When the commercials are long and the public shows very little bullish sentiment, chances are the market will go up.

10. Market Making (Whether a local on-floor or doing so for a bank)

You need to know what your edge is. Most market makers don't make money trading, they make it following their edge. Your edge is getting the ‘bid-ask’ spread.

For example, I've been asked to find traders whose job it is to make a market in the NASDAQ. They trade 1,000 shares at a time and their cost for that is about \$54 (in and out). If they make an 1/8th of a point — which they should since they get the spread — they basically make \$71. If they can do that 100 times each day, they make \$7,100.

The risk here is “how fast” can I turn it around.

11. Hedging

If you need to protect your product against adverse price swings (or lock in a guaranteed profit), then you hedge in the market. Similarly, if you need to purchase some product in the future (i.e., in a foreign currency, or a product that could vary widely in price), you may need to protect your potential profit by buying either the foreign currency or the product now. Otherwise, what was once a reasonable profit might disappear.

For example, I did some consulting in Japan once for a very nice fee. However, the Yen dropped from 125 to 105 during the 10 days I was in Japan. That can really be an eye opening experience, especially when you're being paid in dollars.

12. Spreading

Spreading essentially means you are trading two different items at the same time. For example, you could trade two different months of the same contract (i.e., buy September and sell December); you could trade two different, but related commodities (i.e., buy Gold and sell Silver). There are thousands of possible spreads in option trading. The basic idea is that you want the price difference to move in your favor. In addition, you can set up a program so that your risk is limited, but your profit potential is not. These are very sophisticated techniques that sometimes require split second timing and the ability to execute orders fast.

13. Arbitrage

Takes advantage of the difference in price between two items. This is a sure profit with a limited window of opportunity.

14. Pattern Recognition

Basically this technique assumes that a market move in a particular direction is much more likely after certain patterns (i.e., head and shoulders bottom, three little Indians, Sanzan – a candlestick pattern)

There are three dominant cycles to markets

1) Range Expansion and Contraction

ranges go from small ranges to large ranges, thus the best signals come in narrow ranges.

2) The Relationship of the Close to the High and the Low.

The nearer the close is to an extreme of the range, the sooner the market will turn. The whole idea of stochastics is based upon this observation. If the close is near the low of a day, a market bottom is due. If the close is near the high of the day, a market top is due.

3) The Relationship of the Close to the Open

Large range days (days, weeks, months) most often close right at their extremes. Thus, you need to get out at the end of the time frame you trade.

Extreme Trend Day (this could also be under swing trading)

When the market closes at an extreme (10-20% of its range), it has an 80% chance of showing more follow through on the next opening. However, it only has a 50% chance of closing in that direction.

Larry William's Method

Take 20% of yesterday's volatility and bracket the opening. If the price goes beyond either point, enter.

Larry William's Opps! Pattern

Prices close on an extreme and you get a gap opening in the same direction. That's an opps! pattern. The entry would be if prices rally back to yesterday's extreme.

An Opps! pattern is even stronger if the previous day is a trend day (i.e., it opened on one extreme and closed on another).

Long Positions (short positions are reversed)

- 1) Yesterday the market opened in the top 20% of its daily range and closed in the lower 20% of its daily range.
- 2) Today the market must trade at least 5-15 ticks below yesterday's low.
- 3) An entry buy stop is placed at yesterday's low.
- 4) If filled, a sell stop is placed at today's extreme.
- 5) Move the stop up to protect profits.

Patterns to Specific Markets

S&P 500 usually declines after option expiration as well as after contract expiration. They usually start to rally about two weeks after expiration.

Accumulation/Distribution in futures

If the market closes up, then subtract the day's low from the close. If the market closes down, then subtract the day's high from the close (i.e., a negative number). Keep this as a running total of what Larry Williams calls the A/D line. Look for a divergence between the A/D line and the price as a pattern for a market turnaround.

15. Statistical Approaches

Statistical Entry

Price reaches high probability of a retracement within various time frames.

Statistically based upon price moves

Can use the Random Walk Index as a method to equate across time frames

Use narrow stops with reversal — reversal is high probability of trend

Volatility Breakout might fit here.

Notes

Notes

Section 2-3

Random Entry System

Objectives:

To show the entry, which most people insist upon, is not critical to trading success.

Trading Concept:

Market Trends and it is possible to take advantage of that just through my exits and proper money management.

Slippage & Commissions:

Equal to \$100, including rollovers

Market Selection:

I picked 10 markets which are fairly liquid and somewhat diversified. These included Gold, Silver, Bonds, Eurodollars, Crude Oil, Soybeans, Sugar, D-Mark, Pound, Live Cattle. (S&P not included)

Market Direction:

Not used, random

Market Timing or Entry:

Random, I was always in all 10 markets and was either long or short, depending upon a coin flip.

Protective Stop:

Very Important. Had to be wide enough to be meaningful.

- 1) Too narrow, then money management doesn't work.
- 2) Frequently in & out and getting killed with commissions & slippage
- 3) Must be wide to give trend time to develop.

My average trade lasted 29 days

Stop = ATR (19 day exponential) x 3 subtracted from the entry.

Re Entry:

Random.

Profit Taking Exit:

The ATR value was continually calculated and subtracted or added to the close for a trailing stop.

Filters:

None, I wanted a simple system.

Money Management:

Risked 1% of equity per trade and I never risked more than 25% of equity in the portfolio. Since I was only trading 10 markets, this didn't come into play until I went to multiple systems.

Portfolio Section:

In this case it was the same as the market selection.

Multiple Systems:

I applied the random system multiple times, creating new systems for each by adding 10, 20, 30, 40, 50, 60, etc., days to each new system, respectively, before it started trading.

Profitability of the Random Entry System:

Run No.	One Contract		With Money Management		
	Total Gain/Loss	Percent Correct	Total Gain/Loss	Percent Correct	Gain to Loss Ratio
1	\$157,983	38.0%	\$1,797,819	38.0%	2.05
2	\$50,459	36.0%	\$454,081	36.0%	1.95
3	(\$5,517)	33.9%	\$81,838	33.9%	1.98
4	\$90,437	36.7%	\$841,469	36.7%	1.99
5	\$47,059	34.7%	\$58,765	34.7%	1.91
6	\$33,742	35.5%	\$44,833	35.5%	1.84
7	\$142,758	37.6%	\$1,051,660	37.6%	1.95
8	\$160,479	37.9%	\$1,413,917	37.9%	1.95
9	\$189,950	38.2%	\$1,866,028	38.2%	2.05
10	\$210,025	39.6%	\$2,328,232	39.6%	2.60
11	(\$10,666)	34.9%	\$277,705	34.9%	1.99
12	\$46,841	36.6%	\$242,873	36.6%	1.83
13	(\$27,254)	36.4%	\$575,389	36.4%	1.97
14	\$26,980	34.8%	\$76,504	34.8%	1.91
15	\$64,538	34.5%	\$395,173	34.5%	2.05
16	\$49,118	35.8%	\$408,610	35.8%	1.00
17	\$40,587	35.3%	\$193,042	35.3%	1.91
18	\$171,933	35.3%	\$117,184	35.4%	1.97
19	\$10,853	35.1%	\$162,296	35.0%	1.91
20	\$336,304	36.7%	\$994,917	36.7%	1.94
21	\$55,856	36.4%	\$752,496	36.4%	1.92
22	(\$6,648)	36.5%	\$453,968	36.2%	1.85
23	\$59,260	36.0%	\$333,526	35.9%	1.87
24	\$214,205	35.2%	\$828,491	35.3%	2.01
25	\$143,616	37.9%	\$1,007,545	37.8%	1.86
Average	\$90,116	36.2%	\$670,334	36.2%	1.93

Risk Overview Table:

MAXIMUM DRAWDOWN

Run No.	Percent	Dollars	Time (years)	11 year Reward to Risk Ratio
1	21.67%	\$463,221	1.02	8.297
2	23.99%	\$468,808	2.05	2.022
3	25.26%	\$359,083	5.75	0.325
4	18.92%	\$353,094	2.22	4.445
5	20.92%	\$256,604	4.30	0.282
6	38.31%	\$597,676	4.31	0.117
7	22.70%	\$569,863	1.82	4.634
8	27.27%	\$855,177	2.55	5.185
9	23.77%	\$603,926	1.99	7.850
10	15.42%	\$354,176	1.53	15.097
11	21.33%	\$272,314	5.69	1.303
12	20.77%	\$301,900	2.56	1.170
13	24.76%	\$444,683	4.69	2.322
14	34.04%	\$549,559	3.12	0.226
15	24.61%	\$427,866	3.46	1.605
16	23.72%	\$406,816	2.61	1.724
17	28.21%	\$410,830	2.92	0.684
18	36.50%	\$810,814	4.95	1.948
19	35.10%	\$366,130	8.39	0.593
20	27.33%	\$574,670	5.27	3.387
21	27.01%	\$614,279	3.36	2.784
22	19.49%	\$321,725	3.36	2.329
23	38.92%	\$673,803	8.10	0.858
24	23.03%	\$420,128	4.78	3.595
25	26.29%	\$507,967	4.88	3.834
Average	25.97%	\$479,404	3.83	3.065

Consecutive Streaks:

10 COMMODITIES

Run No.	Number of Trades	Consecutive Wins	Streaks Losses
1	980	7.0	13.0
2	1,019	7.0	13.0
3	1,049	6.0	13.0
4	1,015	7.0	13.0
5	1,052	7.0	13.0
6	1,059	6.0	13.0
7	1,020	6.0	16.0
8	1,009	7.0	13.0
9	994	7.0	11.0
10	989	7.0	17.0
11	1,047	6.0	16.0
12	1,005	6.0	12.0
13	929	6.0	13.0
14	1,024	5.0	11.0
15	1,006	6.0	14.0
16	997	6.0	11.0
17	1,022	8.0	16.0
Average	1012.7	6.5	13.4
18	1,439	6.0	16.0
19	1,488	7.0	12.0
20	1,425	7.0	22.0
21	1,439	6.0	13.0
22	1,454	6.0	10.0
23	1,455	5.0	21.0
24	1,437	8.0	14.0
25	1,417	7.0	16.0
Average	1,444	6.5	15.5

GO FILE: RANDOM.GO

Summary	-19382	-36753	17370	345	681	33.6%	
Item	Closed	Out Net	Longs	Shorts	Wins	Losses	Percent
81BP	3937	-9138	13075	4	5	44.4%	
81DM	275	-3812	4088	2	8	20.0%	
81GC	1990	-5710	7700	3	4	42.9%	
81LC	-3420	-1830	-1590	2	6	25.0%	
81S	-2838	-6562	3725	2	7	22.2%	
81SI	-25440	-27165	1725	4	9	30.8%	
81SU	9671	-2362	12033	2	3	40.0%	
81US	713	-444	1156	4	6	40.0%	
Sub Total	-15111	-57023	41912	23	48	32.4%	
82BP	-13513	-19188	5675	3	12	20.0%	
82DM	-7338	-6363	-975	5	12	29.4%	
82GC	-330	-1230	900	3	8	27.3%	
82LC	1690	2660	-970	4	9	30.8%	
82S	2713	-2350	5062	3	3	50.0%	
82SI	12540	3710	8830	5	4	55.6%	
82SU	3884	-1742	5626	5	4	55.6%	
82US	6438	8806	-2369	2	5	28.6%	
Sub Total	6084	-15696	21780	30	57	34.5%	
83BP	5737	-2100	7837	4	4	50.0%	
83DM	-7738	-8888	1150	4	11	26.7%	
83GC	-6720	-7600	880	1	7	12.5%	
83LC	-1690	560	-2250	2	6	25.0%	
83S	-2813	1700	-4512	4	7	36.4%	
83SI	26040	8080	17960	4	5	44.4%	
83SU	5695	4280	1415	4	2	66.7%	
83US	-18913	-9669	-9244	2	13	13.3%	
Sub Total	-400	-13636	13236	25	55	31.3%	
84BP	4275	-6188	10463	3	5	37.5%	
84CL	-4610	-3310	-1300	2	10	16.7%	
84DM	3488	-675	4163	4	5	44.4%	
84ED	-600	-2025	1425	2	3	40.0%	
84GC	-7070	-6990	-80	2	7	22.2%	
84LC	1490	2260	-770	3	6	33.3%	
84S	4488	-1425	5912	3	5	37.5%	
84SI	-810	-8305	7495	5	5	50.0%	
84SU	7946	-681	8627	4	2	66.7%	
84US	-5131	-225	-4906	1	9	10.0%	
Sub Total	3465	-27563	31028	29	57	33.7%	
85BP	-7388	6112	-13500	3	10	23.1%	
85CL	5050	6630	-1580	3	6	33.3%	
85DM	6975	3075	3900	3	2	60.0%	
85ED	13775	15200	-1425	4	3	57.1%	
85GC	-5810	-5160	-650	2	9	18.2%	
85LC	1030	-830	1860	5	7	41.7%	
85S	-3475	-4050	575	4	8	33.3%	
85SI	-2315	-3745	1430	5	5	50.0%	
85SU	-217	-481	264	2	5	28.6%	

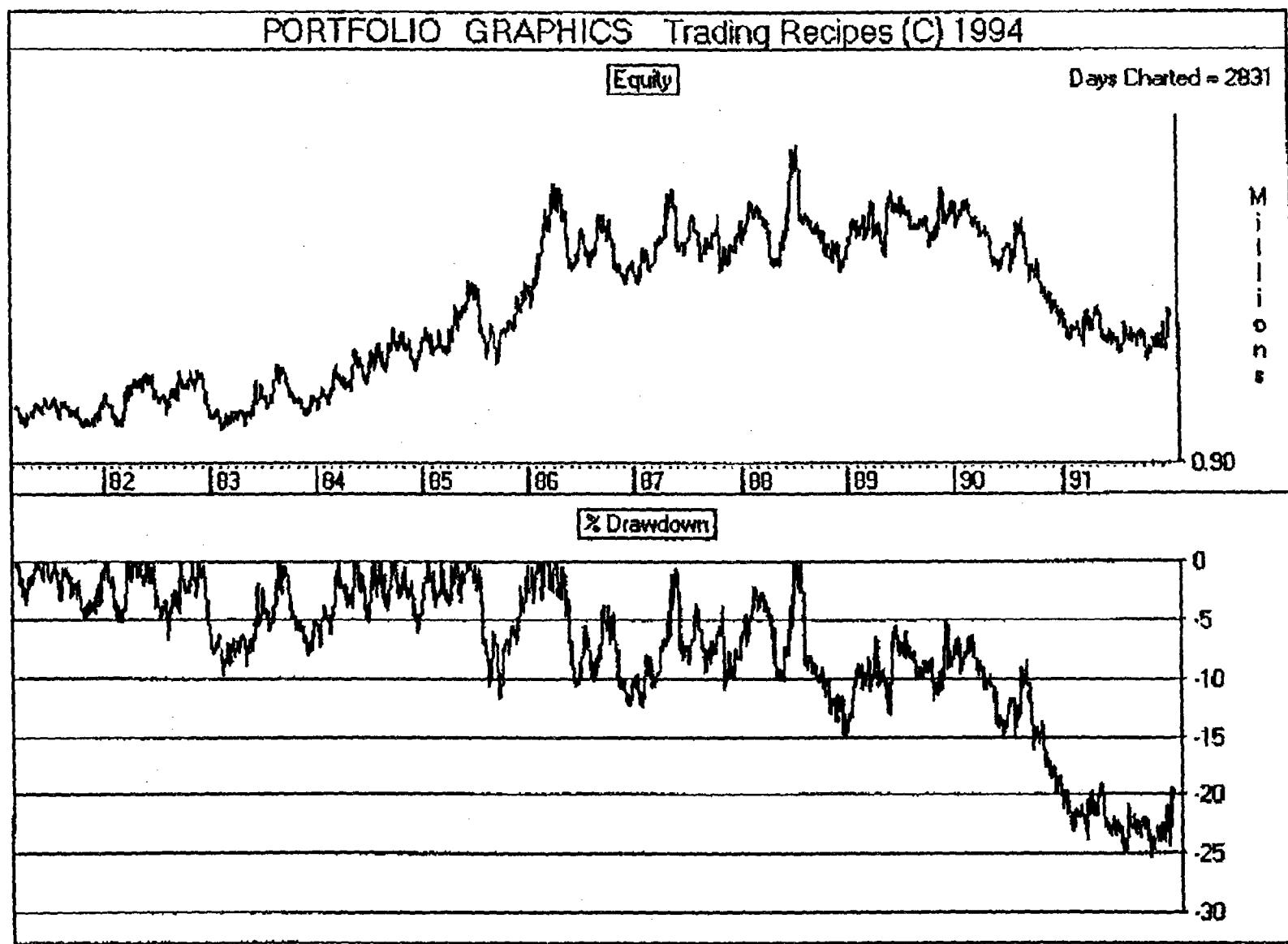
85US	3475	6625	-3150	4	4	50.0%
Sub Total	11101	23377	-12276	35	59	37.2%
86BP	513	3600	-3087	4	4	50.0%
86CL	15770	-1080	16850	3	3	50.0%
86DM	5175	12100	-6925	4	9	30.8%
86ED	1000	2450	-1450	4	6	40.0%
86GC	230	3840	-3610	3	7	30.0%
86LC	-7220	-2760	-4460	3	9	25.0%
86S	-2838	-1575	-1262	1	7	12.5%
86SI	1755	-950	2705	5	4	55.6%
86SU	-1494	-682	-812	4	4	50.0%
86US	12244	18181	-5938	4	7	36.4%
Sub Total	25135	33125	-7990	35	60	36.8%
87BP	2175	11237	-9062	2	7	22.2%
87CL	-2950	1040	-3990	5	11	31.3%
87DM	-1000	750	-1750	4	6	40.0%
87ED	2850	350	2500	4	2	66.7%
87GC	-2180	880	-3060	4	6	40.0%
87LC	3200	4640	-1440	5	5	50.0%
87S	4825	4100	725	5	2	71.4%
87SI	-36760	-10590	-26170	3	12	20.0%
87SU	869	-602	1470	4	2	66.7%
87US	-27156	-17431	-9725	3	12	20.0%
Sub Total	-56127	-5625	-50502	39	65	37.5%
88BP	22862	17987	4875	4	7	36.4%
88CL	-7220	-3220	-4000	2	9	18.2%
88DM	-1413	350	-1762	3	12	20.0%
88ED	-2675	-2225	-450	2	8	20.0%
88GC	4190	-3380	7570	4	4	50.0%
88LC	1080	3010	-1930	6	5	54.5%
88S	-3100	-612	-2488	1	9	10.0%
88SI	-2605	-6100	3495	3	7	30.0%
88SU	-7436	-62	-7374	2	12	14.3%
88US	1056	3069	-2012	3	5	37.5%
Sub Total	4740	8817	-4077	30	78	27.8%
89BP	1837	-4550	6387	4	8	33.3%
89CL	9670	9670	0	4	1	80.0%
89DM	-1850	-5500	3650	3	6	33.3%
89ED	4625	2300	2325	3	4	42.9%
89GC	1870	-490	2360	4	5	44.4%
89LC	-4460	-1560	-2900	2	9	18.2%
89S	-6588	-6675	88	3	8	27.3%
89SI	-1670	-4390	2720	2	7	22.2%
89SU	-2679	-881	-1798	4	7	36.4%
89US	1875	5112	-3238	4	5	44.4%
Sub Total	2631	-6963	9594	33	60	35.5%
90BP	-500	10487	-10987	4	8	33.3%
90CL	11310	11980	-670	4	3	57.1%
90DM	16338	16538	-200	6	2	75.0%
90ED	-3875	-1750	-2125	2	9	18.2%

90GC	20	-710	730	2	7	22.2%
90LC	-6960	-220	-6740	1	12	7.7%
90S	-10688	-7700	-2988	4	10	28.6%
90SI	-990	-3835	2845	2	6	25.0%
90SU	-1582	-1218	-364	4	5	44.4%
90US	-16025	-8875	-7150	2	11	15.4%
Sub Total	-12952	14697	-27649	31	73	29.8%
91BP	13587	9175	4413	5	5	50.0%
91CL	-500	-2590	2090	2	5	28.6%
91DM	11925	5300	6625	5	5	50.0%
91ED	1350	4875	-3525	4	8	33.3%
91GC	160	-2390	2550	4	6	40.0%
91LC	-4290	-2560	-1730	5	8	38.5%
91S	-4450	-4975	525	3	7	30.0%
91SI	-1695	-1845	150	3	7	30.0%
91SU	-5823	-3320	-2503	2	11	15.4%
91US	1788	8069	-6281	2	7	22.2%
Sub Total	12052	9739	2313	35	69	33.7%

Resident GO file: C:Random.GO Date: 950116

Here's one sample run:

Net Win Loss		<u>Summary</u>	Capital Required	
		\$154,813	Date of Requirement	101,608
Percent Wins	33.69			830,421
Trades, Trades Rejected	1026	0		
Wins	345	4,643,259	Total Slg + Commision	995,490
Losses	681	4,488,446	Start Up Capital	1,000,000
Long Wins	165	2,524,991	Margin Calls, Max	0 0
Long Losses	357	2,308,627	Max Items Held	95 870,213
Short Wins	180	2,118,268	Days Winning, Losing	1379 1,367
Short Losses	324	2,179,819	Expectation, Kelly	2.3 1.1%
Max Consecutive Wins	5	39,822	Comp. Anul. ROI, ROI	1.3% 15.5%
Max Consecutive Losses	13	87,898		
Largest Winning Trade		124,400	Total Itmes Traded	6478
Largest Losing Trade		17,728		
Average Winning Trade		13,459		
Average Losing Trade		6,591		
Avg \$Win to Avg \$Loss	2.04			
Max drawdown by \$	25.27%	366,001		
Longest drawdown	3.46 yrs			



Notes

Section 2-4

Setting Your Initial Stop Loss

(knowing when to get out to preserve capital)

Basically, you don't have a system unless you have some idea of when you'll get out at the time you get in. Your initial stop loss also allows you to apply a good money management overlay.

As soon as you put a stop in, you'll probably reduce the reliability of your entry technique to under 50%. Use a dollar amount and make that a fixed benchmark. Test your other stops against that.

Sound Stop Loss Methods Are Based On the Market Telling You When Your Idea Isn't Working and You Should Get Out to Preserve Capital.

1. **Natural Support and Resistance** (*don't be too obvious or the floor traders will know about it as well*). Above or below periods of consolidation is logical. Right now these natural areas of support and resistance just don't work as stops.
2. **Volatility Based.** If the range of the market over the last 10 days has been X, then there is a good chance that if the market moves against you by more than that, that your idea about the market is wrong. A volatility of 1.5 to 2 is probably good.
3. **Based Upon Your Technique.** The one advantage of counter trend following systems is that you must have some reason to predict a turnaround. Thus, you can use a very close stop, based upon your entry concept. As a result, if you're wrong, you won't lose much money.

Other Types of Stops

1. Time Stops
 - extreme of last x days
 - close out if no profit after x days
2. Dollar Value Stops
3. Reversing Stops

Issue of Intraday versus Close-Only Stops

Notes

Section 2-5

Exit Techniques

Exit Game:

I'd like you to develop an exit strategy to use in the following game. For example, here are some strategies, you might pick.

- If the price moves X points against you, exit. (i.e., if the price drops 2 points against me, I'll get out).
- If I have a profit of X points, I'll get out. This is a target objective.
- Have no exit. Just take your profits or loss at the end of the year.
- Have a target.
- Have a specific loss (i.e. if the price drops 2 points from the starting price).

At the beginning of each run, you have one unit. You can elect to be either long or short. I will give you a series of 10 to 15 numbers that represent price changes. You can elect to get out at some point (according to your exit strategy) or you can elect to stay in the market until the end of the run. Your profit or loss depends upon whether you are long or short and what the price is when you get out. A maximum move on any given day is 5 points and each run will start at 11.

Just to get you in the mood, here's a sample run. Assume you are long and you have no exit strategy.

11 12 13 18 17 16 14 11 8 5 4 3 2

Since you didn't have an exit strategy and stayed in to the end, you lost \$9 dollars, but notice that at one point you had a \$7 profit — so you really let \$16 get away from you.

Write your exit strategy here before we begin:

- | | |
|----------------------|-------------------|
| 1. Exit price _____ | Profit/Loss _____ |
| 2. Exit price _____ | Profit/Loss _____ |
| 3. Exit price _____ | Profit/Loss _____ |
| 4. Exit price _____ | Profit/Loss _____ |
| 5. Exit price _____ | Profit/Loss _____ |
| 6. Exit price _____ | Profit/Loss _____ |
| 7. Exit price _____ | Profit/Loss _____ |
| 8. Exit price _____ | Profit/Loss _____ |
| 9. Exit price _____ | Profit/Loss _____ |
| 10. Exit price _____ | Profit/Loss _____ |

Total Profit/Loss _____

Determine Your Exit:

Categories of Exits:

Static Exits:

Price targets are such an exit.

Adaptive:

ATR from the previous day's close (moves with the market).

Moving average

Parabolic

Channel Breakout

Dependent — can't be your only exit:

Large move against you.

Price target

Time Stop

Independent — these will get you out of the market:

Hits a 2 week extreme against you.

Psychological — these depend upon you:

You feel burnout.

You're going to be out of town.

Once you are in, you have to be prepared to exit under any condition. To allow for an infinite range of possibilities, employ multiple exit strategies. For example, you might have one exit to control risk and one to maximize profits.

LeBeau Exit Efficiency Index = (Actual profit) / (maximum potential profit)

In the maximum potential profit, don't go more than twice the time period that the trade takes.

Here are some possible exits.

1) Volatility:

Chuck LeBeau: "An abnormal one day move against us will trigger an exit. When an abnormally volatile move happens, it is telling you that something is happening that you should pay attention to."

M. Marcus: "One of my rules was to get out when the volatility and the momentum became absolutely insane... On the third straight limit-up day, I would begin to be very, very cautious. I would almost always get out of the fourth limit up day." (p. 34, Market Wizards)

2) Trailing Stop:

Based on volatility
Extreme of the last x days
X dollar move from close against you
X dollar move beneath recent pivot (swing) against you
Parabolic stop
Displaced or trailing Moving average
Channel Breakout Against

3) Percentage of Equity:

4) Unusual Events:

Exit before a report, trade rumors before a report.

5) Reversing Stop

6) Objectives

Fixed objectives

Variable objectives

When market moves in your favor by an amount equal to the difference between the high and low of the last x days.

Oscillator signal against you (overbought or oversold plus retracement)

Notes

Notes



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Day 3

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Section 3-1

Trading Simulation: Game 2, Part 2

These worksheets and instructions are for the Trading Simulation Game that is played during the seminar. The simulation was designed as a group exercise that takes place over a 2-day period, with 30 trades placed per day. The "market" consisted of a set of marbles, with each colored marble representing a win or loss and a multiplier value. Each game included a 20:1 loss marble. Participants drew one marble at a time, the results were determined, then they got 2 minutes to decide on their next trade. Every 10 trades, the results were tabulated. Due to the way the game is structured, it was not practical to include this simulation on the Audio Cassette Series. For those of you with access to the internet, you can participate in a similar simulation on the **Virtual Trading Exchange** at www.iitm.com.

Trading Game: Part 2

New Equity	Amount Risked	Amount Won/Lost	Peak to Trough Drawdown
31.			
32.			
33.			
34.			
35.			
36.			
37.			
38.			
39.			
40.			
<i>Group Results:</i> 4 th 10 trades			
41.			
42.			
43.			
44.			
45.			
46.			
47.			
48.			
49.			
50.			
<i>Group Results:</i> 5 th 10 trades			

New Equity	Amount Risked	Amount Won/Lost	Peak to Trough Drawdown
51.			
52.			
53.			
54.			
55.			
56.			
57.			
58.			
59.			
60.			
<i>Group Results: 6th 10 trades</i>			

Section 3-2

Filters to Entry and Exit

Remember that a system consists of an input, an output, a process, and a hierarchy to reach some desired goal. Given this definition of a system, a filter is usually part of the process/hierarchy. It is a rule in the hierarchy.

Entry Examples:

Example 1:

- 1) Market moves to 5-day high
- 2) 10 day DMI > X
- 3) 14 day slow stochastic reaches 90
- 4) 14 day slow stochastic retraces to 80

* Items 1-3 would be filters while item 4 is the entry signal

Example 2:

- 1) Market reaches 5 day extreme
- 2) 10 day DMI supports trade
- 3) Higher close than previous day

* Items 1-3 would all be filters

Example 3:

- 1) Market reaches 28 day high
- 2) Volatility contracts ($ATR[10] < ATR[20]$)
- 3) Three higher closes occur

Exit Filter Examples:

Example 1:

- 1) 13 day extreme hit and
- 2) DMI (5 days) against you, or
- 3) 2 day prove it or lose it rule

Example 2:

- 1) Reversal Signal
- 2) \$2500 disaster stop
- 3) 2 times $ATR[10]$ from close as a trailing stop
- 4) 2 day prove it or lose it stop
- 5) When price X is hit, you take a profit.

The first condition hit triggers an exit of half the position, while the second

condition triggers an exit from the rest of the position. This is an example of multiple exit filters.

Example 3:

- 1) Disaster Stop
- 2) Whenever price is profitable by X amount, put in a breakeven stop
- 3) Trailing Stop = 2 times ATR[10] from the close, continually moved in the favor of a profit.

Note that 1 and 2 are filters for each other, while 3 is simply a sufficient condition to exit.

Core Equity

	\$1,000	10%	\$100 (trade 1)
	<u>- 100</u>		
New core equity	\$ 900	10%	\$90 (trade 2)
	<u>- 90</u>		
New core equity	\$ 810	10%	\$80 (trade 3)

Reduced Total Equity

	\$1,000	10%	\$100 (trade 1)
	<u>- 100</u>		
	\$ 900		
	90		
	<u>+ 3</u>	Market moves up, move your stop up by 3	
	\$ 93		

Notes

Notes

Section 3-3

Money Management for Money Management Systems

The purpose of money management is to limit the amount of capital at risk on each trade so that your account will survive drawdowns.

Money Management for Money Management Systems

Are you looking for maximum return or for a smooth equity curve.

- Martingale vs Anti-Martingale Systems
- Expected Value Formula
$$\text{Expected Result} = (\text{Average Win} * P_{\text{win}}) - (\text{Average Loss} * P_{\text{Loss}})$$
- To get a common denominator you need to divide everything by your average loss size.

Risk as a Percentage of EQUITY

- **Total Equity** — Equity in Open Positions is Included
- **Reduced Total Equity** — Risk and Equity in Open Positions are Excluded, except for risk that is abolished or profits that are locked in by a raised stop
- **Core Equity** — Equity in Open Positions is Excluded

Percentage Guidelines (depends on the numbers used in the calculations) but for the average trend following situation these are good guidelines.

0.1% to 1% — per trade when managing other people's money

0.8% to 2% — per trade when trading your own money

3% or greater (according to Ed Seykota) is being a gunslinger

Percentage of Volatility

Percentage of Margin

Percentage of Leverage

One Unit per So Much Equity

Group Risk

Portfolio Heat — Total Portfolio Heat should not exceed 20 to 25%

Ongoing money management calculations — peel off contracts when exposure becomes too great.

Going for the Moon

Kelly Criterion Percentage:

Optimal f: What fraction of your maximum loss should you bet?

Using the market's money/Creative Money Management.

Additional Information on Money Management

Perhaps the greatest secret to top investing and trading success is appropriate money management. I call it a "secret" because few people seem to understand it, including many people who've written books on the topic. Some people call it risk control, others call it diversification, and still others call it how to "wisely" invest your money. However, the money management that is the key to top investing and trading simply refers to the algorithm that tells you "how much" with respect to any particular position in the market.

There are many psychological biases that keep people from practicing sound money management. In addition, there are also practical considerations, such as not understanding money management or not having sufficient funds to practice sound money management. Aside from psychology, money management is the most critical factor in determining how much you win or lose in the market — you should know that now.

We have available a *Special Report on Money Management* that I have written to provide you with an overall understanding of the topic and show you various models of money management. The report is 70 pages long, provides an explanation of money management, and discusses 9 different money management models as well as various techniques that combine aspects of each model.

Since you have purchased this audio tape series, you can **save 10%** off the cover price of this informative report. To order, call our offices at 919-362-5591 or drop us an email at sales@iitm.com.

Van K. Tharp, Ph.D.

Notes

Percentage of Equity Money Management

You can calculate the % equity on the basis of *total equity* (includes all open positions) on a daily or a minute-by-minute basis, *core equity* (you exclude all open positions); and *reduced total equity* (you include open positions to the extent that you have aborted risk or locked in profits with a stop).

Tom Basso's Risk Control Technique:

1. New Position Risk

First, use some decision making model to decide the price at which you will enter the market. Make sure you have a plan to get out of the trade if you are wrong. This plan should include some sort of stop loss point to protect you from catastrophic loss. Convert the distance from the stop into dollars per contract.

Example: Buy gold at 400, with a stop price of 390, and the objective being as high as it wants to go. Let's trail it with a 10-day moving average of the closing price and use an account size of \$200,000.

$$\$RISK = (400-390)*\$100/\text{point} = \$1,000 \text{ risk per contract}$$

Next we decide how many contracts to buy. I trade for clients and I prefer to limit my risk to 1% of equity. Lower risk levels will reduce your exposure even more. High risk requires more stomach lining and psychological control.

$$\begin{aligned}\text{Allowable risk \$} &= 1\% \text{ of } \$200,000 = \$2,000 \text{ per position} \\ \text{Contracts} &= \$2,000/\$1,000 \text{ risk per contract} = 2 \text{ contracts}\end{aligned}$$

2. Ongoing Risk Exposure in an Existing Trade

Some investors/traders limit the risk of a new trade, but forget the psychological impact of higher risk associated with an existing trade. To control existing risk, I limit my risk in an existing position to 2.5% of equity.

Continuing with the same example: Gold jumps to \$450 overnight and our stop moves to \$405. Our new equity is now \$210,000. Where is our current risk and how do we maintain risk control?

$$\text{Risk per contract} = (\$450 - \$405)*100 \text{ per point} = \$4500. \text{ Since we have two contracts we have } \$9,000 \text{ risk.}$$

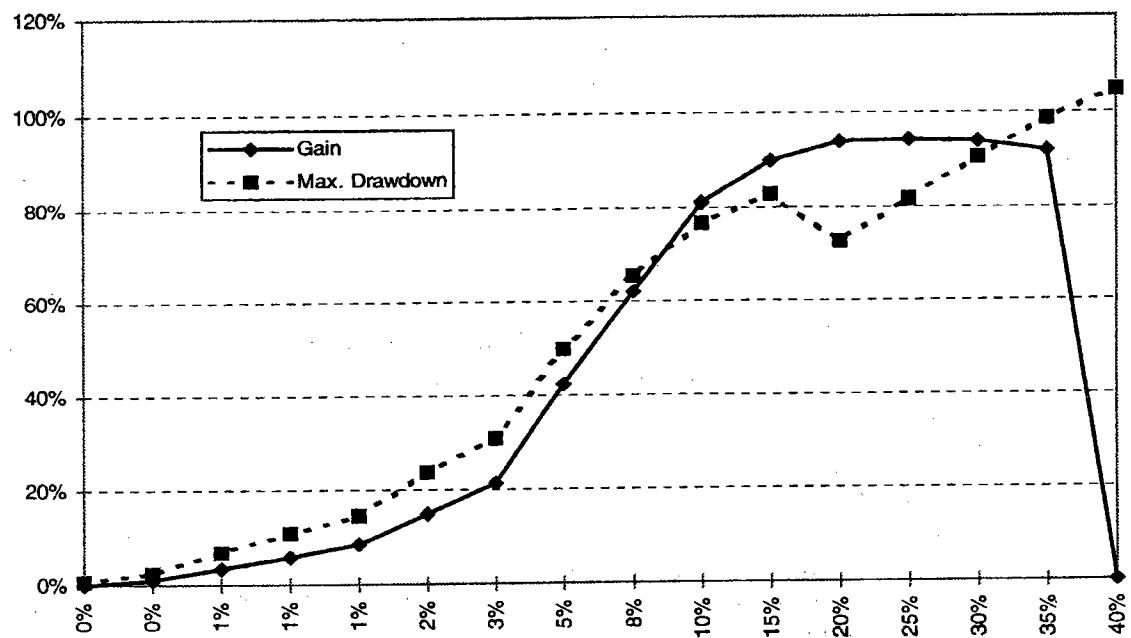
2.5% of \$210,000 = \$5,250 risk that we can allow. $\$5,250/\$4,500$ risk per contract (see above) = 1.167 contracts. Round this down to 1 contract. Therefore, it's necessary to sell one contract and keep the other one. Thus, every day the risk of your position is within a fixed range. Thus you are focused on the process of good trading, letting profits run and keeping risk to acceptable levels.

Effect of Money Management of Breakout System.

Starting Capital = \$1,000,000

% Risked	Net Profits	Rejected Trades	Gain/ Year	Margin Calls	Maximum Drawdowns	Ratio	Longest Drawdown
0.1%	\$7,849	432	0.1%	0	0.66%	0.15	3.93 years
0.25%	\$121,316	166	1.1%	0	2.49%	0.44	2.52 years
0.5%	\$454,446	33	3.5%	0	6.7%	0.52	2.52 years
0.75%	\$839,394	9	5.8%	0	10.78%	0.54	1.33 years
1.00%	\$1,371,341	4	8.4%	0	14.68%	0.57	1.33 years
1.75%	\$3,478,424	1	15.0%	0	23.73%	0.63	1.33 years
2.50%	\$7,130,907	0	21.5%	0	30.95%	0.69	1.33 years
5.00%	\$43,607,978	0	42.3%	0	49.97%	0.85	1.33 years
7.50%	\$179,100,000	0	62.1%	0	65.49%	0.95	1.33 years
10%	\$585,200,000	0	80.9%	0	76.61%	1.06	1.35 years
15%	\$997,500,000	0	90.0%	7	82.85%	1.09	1.35 years
20%	\$1,232,000,000	0	93.8%	21	72.44%	1.29	1.35 years
25%	\$1,255,000,000	0	94.1%	43	81.79%	1.15	1.71 years
30%	\$1,236,000,000	0	93.9%	60	90.55%	1.04	2.89 years
35%	\$1,111,000,000	0	92.0%	72	98.78%	0.93	3.32 years
40%	(\$1,665,230)	460	0%	2	104.79%	0.00	11 years

Return and Drawdown versus Percent Risked



Percent of Equity Risked

Based upon this chart, what is the maximum amount of risk you'd be willing to take with this system? _____

What is the maximum amount of risk you'd be willing to take with this system if you only had \$50,000 to trade with instead of \$1,000,000. _____

Kelly Criterion (for Brave Traders)

Once you have a trading system and have tested it out, you need to calculate three primary statistics to determine the amount of risk that will produce the maximum rate of return for you. The maximum rate of return will also tend to produce the largest drawdowns. These statistics include the reliability of the system, the size of the average gain, and the size of the average loss.

Gambling has worked out a formula that you can use to determine your maximum bet size as a percentage of equity.

$$\text{Kelly \%} = A - [(1 - A)/B]$$

Where:

A is the % of winning trades in decimal form (reliability of system) and B is the average profitable trade in \$ divided by the average losing trade in \$.

For example, suppose I flip a fair coin. Thus, the reliability of the system (whether it comes up heads or tails) is 0.5. The rules of the game are you make twice the amount you risk when you win and you lose the amount you risk when you lose. Thus, B = 2. The question is, what percentage of my remaining equity should I bet on each run to produce the maximum rate of return.

$$\text{Maximum \%} = 0.5 - [(1 - 0.5)/2] = 0.5 - [0.5/2] = 0.5 - 0.25 = 0.25$$

Thus, a maximum bet of 25% would yield the largest returns in this game.

Note that the Kelly Criterion gives you a maximum ceiling for your bet. In reality, your maximum bet size should be nowhere near the Kelly %. It should be well below this level!!!!

The Kelly Criterion for the simulation game was about 13% — did any of you figure that out?

Optimal F — or What Fraction of Your Maximum Loss Should You Risk on a Trade?

Since the Kelly Criterion is really based on a fixed bet size (as in gambling), Ralph Vince has come up with the idea of *Optimal f* which is applied to a string of wins and losses in which the bet size varies.

Ralph Vince — “For any given independent trial situation, where you have an edge (i.e., a positive mathematical expectation), there exists an optimal fixed fraction (*f*) between 0 and 1 as a divisor of your biggest lost to bet on each and every event to maximize your winnings. Most people think that the optimal fixed fraction is the percentage of your total stake to bet. This is absolutely false. *Optimal f* is the divisor of our biggest loss, the result of which we divide our total stake by to know how many bets to make or contracts to have on.” *Portfolio Management Formulas*, p. 80.

Tharp — *Optimal f* gives you a larger bet size, so the Kelly Criterion is actually a more conservative number. Even though it is more conservative, it is still probably too large for most traders to use safely — unless you want to tolerate huge drawdowns.

Optimal f is based on the largest sized loss you have had in your historical testing of your system. Thus, if you use *optimal f* and you have not yet had your largest loss (a likely possibility since the variable of price change may be infinite), you might be in for a tremendous loss trading at *optimal f*.

You must calculate *optimal f* for each market and each market system pair.

There is no easy formula for calculating *optimal f*. You must use a computer and test all possible values between 0.01 and 1.00 in 0.01 increments or use some form of iteration. This amounts to finding the *f* that produces the largest Terminal Wealth Relative (TWR) in the following formula:

$$\text{TWR} = \text{summation(i)} \text{ from 1-N trades of } [1 + (-\text{trade i/biggest loss})]$$

Some Key Thoughts About Expectancy

What makes up your expectancy? Check your marble size. For example, the expectancy of the trading game we played was 51 cents per dollar risked for those of you who went short. (i.e., it was minus 51 cents for those who went long.)

Long Marbles	55 pay at 1 to 1	= 55
	20 pay at 2 to 1	= 40
	Total	= 95 cents
Short Marbles	12 pay 3 to 1	= 36
	8 pay 5 to 1	= 40

5 pay 10 to 1	= 50 (you only get a positive expectancy when you add these)
1 pays 20 to 1	= 20
Total	= 146

However, all of the expectancy was due to the 20:1 marble and the five 10:1 marbles. If you never got those marbles, you'd have trouble making money with that system.

Think about your system. What marbles do you need to make your profits? You must make sure that you get those marbles. In addition, you need to look at the distribution of your marbles. Is your expectancy high enough to be worth while? If not, are you getting enough big marbles? If your expectancy is worthwhile, then are you playing the appropriate money management style to achieve your objectives.

How does the expectancy relate to the Kelly Criterion to determine maximum bet size?

Take a look at the following table:

**Recommended Maximum Portfolio Heat
As A Function of Your Expectancy and Reward to Risk Ratio
Divide by the Maximum # Possible Positions at One Time for Position Sizing**

Reward to Risk Ratio	Expectancy						
	0.10	0.20	0.40	0.75	1.00	1.25	1.50
1 to 0.5	16%	32%	64%				
1 to 0.75	10.7%	21.3%	42.6%				
1:1	8%	16%	32%	60%			
1.5 to 1	5.3%	10.7%	21.3%	40%	52.9%	66.7%	
1.75 to 1	4.6%	9.1%	18.2%	34.3%	45.7%	57.1%	68.6%
2 to 1	4%	8%	16%	30%	40%	50%	60%
2.5 to 1	3.2%	6.4%	12.8%	24%	16%	40%	48%
3 to 1	2.7%	5.3%	10.6%	20%	26.7%	33.3%	40%
3.5 to 1	2.3%	4.5%	9.1%	17.1%	22.9%	28.6%	34.3%
4 to 1	2%	4%	8%	15%	20%	25%	30%

Remember that these are designed for maximum return rates. They are not designed for maximum reward to risk ratios. If you have inaccurately estimated your expectancy or your reward to risk ratio, your risk could be way too high.

Volatility Control

Volatility is the dollar value of the true range of price movement for the day. The higher the amount of volatility, the more it will tend to distract you from your purpose of concentrating on good trading. Thus, I like to limit the amount of movement in any

position to no more than 1% of equity on new and existing positions. This seems comfortable to my clients as well as myself. More, is a wilder ride, and less volatility is even more stable.

Example: Gold is at \$400 and the previous few sessions have averaged \$3.00 range for an average day. Our equity is still \$200,000. How many contracts would volatility allow us to do?

$$\$3.00 * \$100 \text{ per point} = \$300/\text{contract}$$

$$1\% \text{ allowable volatility} = 1\% \text{ of } \$200,000 = \$2,000 \text{ per position}$$

$$\text{Contracts} = \$2,000/\$300 = 6.67 \text{ contracts (I'd round this down to 6 contracts)}$$

Limit both Risk and Volatility

Limit your position to the smaller of either risk or volatility. In the two examples shown, risk control yielded 2 contracts and volatility yielded 6, so I'd open the trade with 2 contracts.

Volatility in an Existing Trade

I limit volatility in an existing trade to 1%, exactly like I calculate it for a new position. Then I just peel off the number of contracts necessary to get me back to an acceptable level of 1% equity.

The graph below shows the same system (i.e., the 55/21 day channel breakout) traded on the same commodities with the same million dollars in starting equity. The only difference is the money management, which is now volatility based.

This following system tested 10 commodities from 1981 through 1991 starting with a million dollar position. The table shows the result of asking "how much" based upon volatility.

55/21 Breakout System with Volatility Based Position Sizing					
% Risk	Net Profits	Rejected Trades	% Gain per year	Margin Calls	Maximum Drawdown
0.10	\$411,785	34	3.3%	0	6.1%
0.25	\$1,659,613	0	9.5%	0	17.1%
0.50	\$6,333,704	0	20.3%	0	30.6%
0.75	\$16,240,855	0	30.3%	0	40.9%
1.00	\$36,266,106	0	40.0%	0	49.5%
1.75	\$236,100,000	0	67.9%	0	69.7%
2.50%	\$796,900,000	0	86.1%	1	85.5%
5.00%	\$1,034,000,000	0	90.7%	75	92.5%
7.50	(\$2,622,159)	402	0.0%	1	119.8%

Notes

Notes

Notes

Section 3-4

Money Management for Rule Based Systems

1) Trade One Contract Per X dollars (usually \$50,000/\$100,000)

You must determine how many markets you will participate in.

**55/21 Day Breakout System
with 1 contract per \$X in equity
(Starting Equity is One Million Dollars)**

one contract per \$X in equity	Profits	Rejected Trades	Annual Percent Gain	Margin Calls	Maximum Drawdown
\$100,000	\$5,034,533	0	18.2%	0	36.86%
\$90,000	\$6,207,208	0	20.2%	0	40.23%
\$80,000	\$7,725,361	0	22.3%	0	43.93%
\$70,000	\$10,078,968	0	25.0%	0	48.60%
\$60,000	\$13,539,570	0	28.2%	0	54.19%
\$50,000	\$19,309,155	0	32.3%	0	61.04%
\$40,000	\$27,475,302	0	36.5%	0	69.65%
\$30,000	\$30,919,632	0	38.0%	0	80.52%
\$20,000	(\$1,685,271)	402	0%	1	112%

2) Hedge with options instead of stops

3) Joe Ross System

- Trade 5 contract units, but get out of 3 contracts when you are slightly ahead of all costs.
- Raise stops on remaining contracts to break-even.

4) Larry Williams' Martingale Strategies (Definitive Guide to Trading, Part 2)

System Expectations are Low: When the actual results of the system are out-of-whack with the expectations of the system, then you can start increasing your commitment. For example, if you have a 65% system, when you've had 13 losers out of the last 20 trades (i.e., 65% losses), then increase your commitment by stepping up one unit. If you normally trade 1 unit, you now trade 2 units and continue to trade 2 units until you have winners in 13 out of 20 trades.

Minimal Martingale: If you have a system that is only right about 30% of the time, you might do the following. After every losing trade, increase your commitment on the next trade by 1 unit. If you normally trade 1, then you'd move up to 2 units after a loss. If you have another loss, you add another unit so that you're trading 3 contracts. If that trade wins, then you'd move back to 2 units. If the next trade wins, you'd go back to 1 unit and stay at that level until you have a loss.

Section 3-5

Creative Money Management

Suppose you have a \$100,000 account and you want to make your money grow as rapidly as possible. You are using a 3 times volatility stop as I did in the random entry trading system (reference Course Update #23a). You've also decided that your system is optimal risking 24% of equity at a time, using a reduced total equity model. You plan to have as many as six open positions at one time, so you are willing to risk up to 4% per position — but not all at once. You'll build up to a position as big as 4% as your profits increase. Your initial risk will only be 2%.

Let's see how such a money management system might work. You buy corn at \$3.025. The ten-day average true range (which we'll call "V") is 3.5 cents. Therefore, a 3 times volatility stop is 10.5 cents (i.e., at \$2.92) which amounts to a total risk of \$525. You can risk 2% of your \$100,000, which amounts to 3 contracts (rounded down to the nearest contract).

Your pyramiding scheme is to add one contract every time your profit increases by one daily volatility or V (i.e., which is currently 3.5 cents). When this occurs, (i.e., corn moves to \$3.06) you risk another 2% with a 3 times V stop at \$2.955. However, your stop on the original position moves up by 3.5 cents to \$2.955. Thus, you now have six contracts all with stops at \$2.955. However, notice that your total exposure of your original equity is now only 3% (actually less due to rounding) because you raised your initial stop.

Let's say that your daily volatility now increases to 4 cents. Thus, a new stop would now be 12 cents or \$600. Corn moves up to \$3.10, so you can now risk another 2%. (Actually, you could have done so at \$3.095 — when the price had increased by the old V-value of 3.5 cents.) Your reduced total equity is now \$97,000 and 2% of that is \$1,940. As a result, you can still purchase 3 contracts at \$3.10 — with a stop at \$2.98. You also get to raise your stop on both of your other units by their respective V-values. Therefore you now have six contracts with stops at \$2.99 and three contracts with a stop at \$2.98.

You might be saying, "How can you do that? Your risk is over the 3% limit with the reduced total equity model." No, it isn't because you raised your other stops enough so that your exposure is still about 3% of your reduced total equity.

Contracts	Current Stop	Remaining Risk in Original Equity	Total Risk to Original Equity
3 at \$3.025	\$2.99	3.5 cents	10.5 cents = \$525
3 at \$3.06	\$2.99	7 cents	21 cents = \$1,050
3 at \$3.10	\$2.98	12 cents	36 cents = \$1,800

Let's say that volatility stays at 4 cents and corn now goes to \$3.14. It's time to risk another two percent. Your reduced total equity is now \$96,625. You can risk 2% of that or \$1932.50. Your 12 cent stop is a \$600 risk, so you can again purchase another 3 contracts. You must also raise your stops on the existing contracts. The stop on the first six contracts raises to \$3.025 (i.e., it was raised 3.5 cents, the original V). The stop on the last three contracts raises to \$3.02.

Consider where you are with respect to the reduced total equity model in terms of risk. You now have risked 2% four times, but have you exceeded your 4% limit?

Contracts	Current Stop	Remaining Risk in Original Equity	Total Risk to Original Equity
3 at \$3.025	\$3.03	0	
3 at \$3.06	\$3.03	3.5 cents	10.5 cents = \$550
3 at \$3.10	\$3.02	8 cents	24 cents = \$1,200
3 at \$3.14	\$3.02	12 cents	36 cents = \$1,800

The total risk to your original equity is now only \$3,550 or 3.55% — still under our 4% limit. So let's say corn starts to really get volatile now and V goes to 6 cents. And you get a chance to buy more corn as it goes up to \$3.20 (actually you could buy at \$3.18, when it increased by the last value of V). But we'll say that you buy at \$3.20.

Your total reduced equity is now \$96,450 and 2% of that is \$1,929. Your new stop, at 3 V, is now 18 cents or \$900. Thus, you can now only purchase two contracts, but you also get to raise your other stops. Let's say that we make a decision to leave the break-even stop alone, giving it plenty of room to move. However, you can now move the stop on the second 3 contracts purchased to break-even. Move the stop on the contracts purchased at \$3.10 to \$3.06; and move the stop on the contracts purchased at \$3.14 to \$3.06.

Thus, the current risk picture is shown on the next page. Notice that by the reduced total equity model, your risk has changed very little. The risk to your original equity is now \$3,600 or 3.6%.

Contracts	Current Stop	Remaining Risk in Original Equity	Total Risk to Original Equity
3 at \$3.025	\$3.03	0	0
3 at \$3.06	\$3.06	0	0
3 at \$3.10	\$3.06	4 cents	12 cents = \$600
3 at \$3.14	\$3.06	8 cents	24 cents = \$1,200
2 at \$3.20	\$3.02	18 cents	36 cents = \$1,800

Let's now say that corn goes as high as \$3.50. Your exit gets you out at \$3.40. Your profit is as follows.

Contracts	Profit on Contract	Profit in Dollars
3 at \$3.025	37.5 cents	\$5,600
3 at \$3.06	34 cents	\$5,100
3 at \$3.10	30 cents	\$4,500
3 at \$3.14	26 cents	\$3,900
2 at \$3.20	20 cents	\$3,000
	Total Profit	\$22,100

Your total profit is \$22,100 and your maximum risk to your core equity was \$3,600. Does that seem like a reasonable rate of return?

Some of you might be saying "... but you ended up with 14 contracts! It might have been disastrous if you had some limit moves against you." That's true, but my point was to show you creative money management. In addition, there are other ways to protect against such limit moves (i.e., options) that make the risk well worthwhile.

In fact, it is quite ironic that as the time I developed this example I was looking at a real corn trade. Corn actually went above \$4.80 in that particular move. Had you really pressed this particular trade (as this money management system will allow) that trade would have been a trade of a lifetime. I haven't figured it out, but you probably could have made as much as a million dollars without risking over \$3,600 in your core equity. However, your risk to your total equity would have been considerable before the trade was over.

This particular money management scenario is carried out in much more detail in my Money Management Report — available at the seminar or from our office.

There are any number of variables that you can vary in creative money management — your initial stop, your maximum risk per commodity, moving your stops in your favor, your equity model, your money management model, etc.. For example, you could even use the idea of increasing your "reduced total equity" by raising your stop to justify opening up positions in other commodities. This could really help the small trader who does not have a large enough account to trade using most of these models.

Notes

Notes

Notes

Appendix I

Supplemental Readings

- **Trader Profile: LeBeau and Lucas**
- **Psychological Issues in Trading System Development**
- **A Hard Look at Day Trading by Chuck LeBeau**
- **System Testing by David Lucas**

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LeBeau and Lucas: Truth in testing

By Jack Reerink

Chuck LeBeau, 57, and David Lucas, 50, tested every technical indicator under the sun during their seven-year partnership and came to a disturbing conclusion: Most are no better than flipping a coin.

"We tested how effective the market entry is to exit after n-days and see what percentage of the time we were on the correct side," Lucas says. "It's amazing how few technical studies, pattern recognition or whatever you want to use are actually better than random. If you can get over 55% after five days, 50% after 10 days, you're doing remarkably well."

Lucas got a bachelors degree from Central Connecticut State University in New Britain, Conn., and studied biological statistics at the State University of New York at Binghamton, N.Y. After safeguarding missile silos in North Dakota for the U.S. Air Force from 1966 to 1970, he started as a computer programmer at Signa Insurance in Hartford, Conn.

"After a while, unless you're a real computer junkie, it gets old," says Lucas, who joined E.F. Hutton in Long Beach in 1984. "I wanted to do something that was a little more vibrant."

LeBeau got hooked on futures earlier. At California State University, he took an investment class taught by Charles Harlow, a second-generation commodities trader. Upon graduation in 1963, LeBeau was drafted in the U.S. Army. He worked his way up to captain, as commanding officer of the armed forces courier station at the U.S. embassy in Paris. After "tough duty in the trenches of Paris," LeBeau extended his tour to bring his wife over. He started with E.F. Hutton as a broker in 1967.

Lucas and LeBeau teamed up in 1988, publishing a monthly newsletter, writing a book and developing a trading system for their commodity trading advisor, Island View Financial Group in Torrance, Calif.

"At first I wrote a little program that would test 20,000 combinations of moving averages on different markets. We just ran the thing on an old 286 for weeks and weeks," Lucas says. "After months of trying to find the holy grail, we discovered the reality was if markets were trending, any moving average made money."

Instead they concentrated on determining the trend and gauging its acceleration. They found the best tool is directional moment (DI), the largest part of a trading day's range outside the previous day's range. The value will be +DI in a rising market and -DI in a bear market.

"If the upward moves outweigh the basket of downward moves by a certain amount, there's a trend in the upward direction," LeBeau says. "If divergence between -DI and +DI reaches a certain level, in 70% of the cases the trend will continue in the present direction for 20 days."

LeBeau and Lucas enter a trade if the trend is accelerating, using the rate of change in Welles Wilder's 14-day average directional movement index (ADX) measured over seven weeks. They attach little value to ADX levels.

"We found the levels are not nearly as meaningful as



Michael Justice

**'We've come
to appreciate
being out of
the markets.'**

Wilder and we originally thought." LeBeau says. "The level merely tells you where you've been and has very little predictive value."

Lucas adds the ADX (on a scale from 0 to 100) spends most of the time between 10 and 40, with 20 or 25 being the average.

"Nowadays we'd rather be trading when the ADX is at a lower level, probably in the teens somewhere is optimum," he says. "Markets get more mature, so trends are often shorter and more violent."

After much research, LeBeau and Lucas built their system around directional movement only.

"It's very easy to throw a whole lot of things in the hopper. But in reality you're curve fitting and reducing the ability for the system to work in real time," Lucas says.

LeBeau and Lucas use a hard dollar stop, a trailing stop based on chart patterns and a volatility-based stop (over a single period). They calculate them each day and use the one nearest to the market at the close. In case of a big winner, a profit more than x-times the contract's four-day average true range, they employ a profit-taking strategy.

"Whereas the [volatility] stop is based on x-multiples of the four-day average true range, in this case it's a fraction," LeBeau says. "It is to the point where we have to change our stop several times a day."

This enabled them to sell March Deutsche marks at 73.15 on March 8 (99 ticks from the contract's high) for a profit of 571 ticks, or \$7,100 per contract. They also bought back September yen at 102.82 on Aug. 16, for a 1,326-tick profit, or \$16,580 per contract.

They have learned that — as in foreign affairs — in futures markets no action is often the best action.

"Unlike a lot of traders, we've come to appreciate being out of the markets," Lucas says. They were flat for a total of eight weeks in 1995 in their \$8.7 million currency financial program, which trades five (IMM) currencies and three interest rates (up 48.6% through November).

Having found one indicator that beats a random strategy, LeBeau is searching for a fundamental beacon. The \$400,000 fundamental program was down 9.04% in 1995. He got whipsawed in cocoa, missed the Canadian dollar's rally and went with the wrong grain contract, soybean oil. LeBeau says: "Fundamental trading is difficult."

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Van K. Tharp, Ph.D.

COURSE UPDATE

YOUR PERFORMANCE TRADING EDGE



Psychological Issues in Trading System Development

In my course on Peak Performance Trading, you've learned why trading is so difficult for the average person. You've also learned how emotions and conflict keep people from following their trading systems. But now it's time to explore another important area—the psychological reasons why it's so difficult to develop a trading system that will work for you.

Imagine that you've decided to trade and you suspect the only way you can do so successfully is to develop a trading system. Is that you? Or are you now in the process of developing that system? What are your chances of doing so successfully? To find out, take the System Development Test contained on page 2 of this newsletter. In fact, if you want to get the most out of this newsletter, then take the test before you continue to read any more of the article.

My research suggests that the problems people have in developing a trading system fall into five different categories. The individual scores in these five areas are percentage scores, ranging from 0 to 100%. Any score above 30% suggests a problem in that area and any score over 50% indicates a definite problem.

The first three areas prevent traders from ever starting (or finishing) the development of a trading system. These include: computer phobia (CF), procrastination (PR), and being overwhelmed (OV) by the whole process. The last two problems tend to prevent the trader from coming up with a workable system. These include: perfectionism (PF) and judgmental biases (JB) in your thinking.

COMPUTER PHOBIA. Put your CF SCORE _____ here. If you scored 50% or more on the CF portion of the test, you have what is known as computer phobia. You probably are so afraid of computers that you are not likely to own one. And if you do, you probably haven't turned it on for some time.

Yet how can you go about the task of developing a trading system without using a computer? It's a major stumbling block! Market data usually comes into an office via a satellite dish or phone lines into a computer. Various computer charting packages can show you a representation of what the market is doing—at least what various indicators say the market is doing. And you've even heard about software packages which allow you to develop and test trading systems. But the very thought of you working with one of those computer packages terrifies you.

If it's any consolation—you are not alone. One of our work colleagues has it also and even enjoys having it. She believes that computers have a mind of their own and are out to get her. Murphy's Law prevails whenever she gets involved with a computer. And she's created her reality so that's what actually happens. First, her fingernails are so long she cannot use the keyboard adequately so it is easy to press a wrong button. Second, we've given her the least functional computer in the office and locked out a number of normal functions so she can't do too much damage. And amazingly enough, the computer seems to do things to her that it does not do to anyone else. For example, we've had boot-up problems that only occur when she's around, but not when a technician is around to repair the problem. We've had problems printing with her computer that no one else can possibly duplicate. Once she swore that the computer just stopped printing because it didn't like her (actually, the printer was out of paper). And, I'm sure she will somehow create more problems to justify her lack of faith in computers.

What to do about computer phobia? So you have computer phobia—computers, math, or perhaps even anything mechanical just terrifies you. So what do you do? You have several options. First, you can hire someone who has a talent for computers to

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Test Your Ability to Develop a System.

You've suddenly decided to develop a trading system. But the process is not always that easy. In fact, many people have psychological problems that totally prevent them from ever developing their own trading system. To determine to what extent you may have one or more of these problems, take the following mini-test. Read over each item and then give it a rating of 0 to 4, according to the following scale.

- 0 - never applies to me
- 1 - seldom applies to me
- 2 - sometimes applies to me
- 3 - often applies to me
- 4 - definitely applies to me

1. _____ I really want to be a trader, but I find the task of developing a trading system to be very tedious.
2. _____ When it comes to trading, average-sized profits will definitely be unsatisfying to me.
3. _____ Other people can design trading systems, but that's beyond me.
4. _____ I doubt if I'll ever understand all of these indicators.
5. _____ Developing a trading system to trade real money—that's too much work.
6. _____ When I think about developing a mechanical system, I just don't know where to begin.
7. _____ People tend to think less of me when I make a mistake.
8. _____ It's really hard to understand computers, trading systems, and how markets work.
9. _____ The longer a market trend lasts, the more I feel it is likely to turn around soon.
10. _____ I understand exactly how markets work and everything else is just a waste of time.
11. _____ Computers are more trouble than they are worth.
12. _____ A trading system that wins 60% of the time is not good enough for me.
13. _____ I've got too much to do to develop a trading system, but I'll get to it one day.
14. _____ I demand perfection out of my trading system. I want it to do well in all sorts of markets.
15. _____ Once I observe a strong relationship in the market a few times, I'm ready to trade it. I don't need to have a computer test it for me.
16. _____ I hate math problems and avoid them at all costs.
17. _____ There are aspects to developing a trading system I know I have to do, but I just keep putting them off.
18. _____ To me the trading indicators are real phenomena and I believe I can make money trading indicators.
19. _____ Computers have a mind of their own, they always give me problems.
20. _____ If I have to do one more thing with respect to developing a trading system, I feel like I might explode.

TOTAL

Scoring the System Development Test

The total score can range from 0 to 80. If you scored under 15, then you probably have no serious blocks to developing a trading system unless all of your scores fall into a particular area. Similarly, if you score 30 or less, you probably can design your own system well, but you may have problems in particular areas. If you score above 30, then I would guess that you might have some major psychological problems developing a trading system. To determine exactly what those problems might be, perform the calculations below and determine your individual scores.

Total your score from questions 8, 11, 16 and 19 =
Q8 _____ + Q11 _____ + Q16 _____ + Q19 _____ =
Divide that score by 20 to obtain your **CF SCORE** _____.

Total your score from questions 1, 5, 8, 13, and 16 =
Q1 _____ + Q5 _____ + Q8 _____ + Q13 _____ + Q16 _____ =
Divide that score by 20 to obtain your **PR SCORE** _____.

Total your score from questions 3, 4, 6, 8, and 20 =
Q3 _____ + Q4 _____ + Q6 _____ + Q8 _____ + Q20 _____ =
Divide that score by 20 to obtain your **OV SCORE** _____.

Total your score from questions 2, 7, 10, 12, and 14 =
Q2 _____ + Q7 _____ + Q10 _____ + Q12 _____ + Q14 _____ =
Divide that score by 20 to obtain your **PF SCORE** _____.

Total your score from questions 9, 10, 15, and 18 =
Q9 _____ + Q10 _____ + Q15 _____ + Q18 _____ =
Divide that score by 16 to obtain your **JB SCORE** _____.

work with you or for you. Your computer person need not even be familiar with standard market programs. Most of them are more complex than they need to be because they rely on the need of most traders to be visually tied to graphic charts of the market. If you can skip that need, then you'll find it is much easier to do all your system development programming in a common database language such as dBase or Foxpro. People who can program in these languages are plentiful and not too expensive. Second, you can do all your calculations by hand. It's possible to both design and test a trading system by hand (it was done 40 years ago by almost everyone). However, the process is very time consuming and tedious. More importantly, deciding to do the task by hand might get you into another problem—procrastination or being overwhelmed. Also, people who do their analysis by computer will have a distinct advantage over you in terms of speed and how much they can do in a given period of time.

Your third option is to overcome your phobia. I suggest you find someone trained in Neuro Linguistic Programming (NLP) to assist you. For most of you this would be about a half day of consulting in my office. I'd be happy to work with you until you feel comfortable with computers.

PROCRASTINATION. Put your PR Score _____ here. So many of us have a hard time getting started—especially when it comes to the task of developing a workable trading system. Yet postponing the task creates even more problems. If you scored 50% or more on the PR portion of the test, then procrastination is probably a major problem for you.

What is behind procrastination problems of this sort? Often, a major cause is the fear of failure, especially since the result of completing the task is an opportunity to play a risky game like trading. For example, if you've tried trading without a plan, you know how risky it is and part of you may be so afraid of the consequences of trading any more that you are having difficulty starting to develop the plan. Or, perhaps you've quit your job to start trading full time, but you're so afraid of the results of not trading well that you cannot complete the job of developing your system. *If you're uncertain of your ability to perform, either based on past experience or a general lack of self-confidence, you'll probably find it difficult to begin.* And the greater your time pressure to perform, the more fear you will create.

Sometimes the fear of success will produce the same result — continually postponing the development of a trading system. People fear success because it will bring something new. Suppose you become "rich" and, based on your experience, you don't like all the implications of what it means to be "rich." Perhaps your friends will no longer want to be associated with you or perhaps they'll try to take advantage of you when you have more than they do. Or perhaps you think wealthy people are stingy and narrow-minded. You don't want to become stingy — you might make a lot of money.

Another reason you might procrastinate about developing a trading system is lack of interest in that portion of the task. You don't like the idea of playing around with computers, testing numbers, and doing all of the work. Maybe it reminds you too much of school. Lack of interest, like a fast growing weed sending out roots in all directions, can strangle motivation and make it impossible to even start a simple task. All you wanted to do is get about the business of trading. As a result, you just trade, but you have never tested what you do. You just prefer to make mistakes the hard way.

Perhaps the work involved in developing a trading system reminds you of someone you do not like. Someone you dislike told you to do it and you feel resentment — or perhaps someone you dislike always used to do things like develop trading systems. You don't want to be like that person, even though you know you have to do the work, so you tend to put it off.

The more you dislike the idea of developing a trading system, or even doing certain parts of the task, the more you will tend to push it away. This means you'll leave the toughest part of the job for that portion of the day when your energy is lowest or you are likely to make a lot of mistakes.

Lastly, the most important part of developing a trading system is to develop the objectives for the system. Once you have the objectives down, then the task of developing a system really is fairly simply. Getting your objectives down is 50% of the task. Until you have your objectives written down, you have no way of knowing what you want or of knowing when you've got it. How can you even monitor your progress, a major factor in ongoing procrastination, until you know exactly what you want? In contrast, once you know what you want, you can set deadlines for each phase of the project.

How to overcome procrastination. First, you must realize the procrastination comes from you and take control of the situation. Make a commitment to get the job done. Also concentrate your focus on starting the project (or the next phase) rather than finishing it.

Next, write down all of your objectives for your trading system. At this point, you should know both what you want, the tasks involved in producing it, and standards you will have for knowing when each part of the task is complete. When you know what has to be done next, it's much easier to concentrate on doing it.

Third, divide the task of developing a trading system into steps. Rank the steps in terms of priority and then in terms of your desire to do them. Set deadlines for completing each step and announce those deadlines to the world. If you find that one portion of the job is particularly onerous, then break it into subtasks and give yourself a deadline for each subtask.

Lastly, begin the next step. Concentrate on taking each step and then begin. Remember that Lao Tse, the great Taoist teacher, once said, *"A journey of a 1000 miles begin with a single footprint"*

BEING OVERWHELMED. Put your OV Score _____ here. The most difficult thing to overcome, at least when you are in the middle of it, is being overwhelmed by a particular task. And if you scored 50% or more on the OV portion of the test, then you are probably overwhelmed by the prospect of developing a trading system. Your energy is probably low and your head is just swimming with details. Moreover, you don't understand all of the concepts you need to and you don't know what to do next.

John was in the process of developing a trading system. He'd read about ten books on systems and indicators that are used in futures and stock trading. All the indicators confused him and when he thought about varying the parameters of each indicator his mind started spinning. He'd also been to several seminars in which various systems were recommended and taught, but he was not sure they were for him. He was feeling even more confused. The costs were mounting up and taking a toll on his trading capital and that added more pressure. He'd just bought a computer system with all the software to make developing a system easy. But there were so many details to learn. There were at least three manuals to read for him to operate the computer system and they didn't even tell him where to begin his own development work. The details just kept piling up. John was feeling more and more stressed and soon all he found himself doing was going over everything he had to do without seeming to accomplish anything. He felt desperate to get something done soon or he'd run out of money!

John's problem is typical of what happens when people are overwhelmed. However, the problem can be solved when you realize there are basically three aspects to being overwhelmed: 1) the concentration on details as opposed to the big picture; 2) being out of balance in your life in some way so there is undue pressure on you; and 3) the lack of a plan to get out of the mess.

The average person has a processing capacity of 7 + or - 2 chunks of information. When people start concentrating on details, then their capacity is quickly exceeded. When your focus on the details becomes uncomfortable, because of pres-

sure from some source, the feeling of being overwhelmed really starts to set into the mind.

Most people can easily handle a lot of details. In fact, you do so all of the time. However, if your life is out of balance and conflict is created because your needs are not being met, then the details take on a different meaning. Small details that were once trivial seem very important. The pressure to sort out the details multiplies because you create more details as a result of your imbalance. Soon it all builds into a vicious cycle of being overwhelmed! Yet it all started from the pressure of life being out of balance in some area. Maybe just one area is throwing your life out of balance? Is it your finances? Your relationships? A family crisis? A health problem? Balance your life and you'll be amazed how overwhelming problems suddenly disappear.

Lastly, when people are overwhelmed it is because they don't see the big picture and thus lack a plan to get away from the details. Probably the sense of being overwhelmed just came over you. You didn't realize how much your financial pressure (or whatever the pressure) was taking a toll on your ability to think. You also didn't realize how much you were getting bogged down by the details of system development. Because you don't have an overall plan, you don't know how to deal with the details.

Getting out of being overwhelmed. If you are in the process of developing a trading system and are currently feeling overwhelmed, then the first thing to do is take a break from the task that is giving you the feeling. Take a day off, or perhaps even a week, and just relax. Go to a beach or a lake and just contemplate the water.

The next step is to determine what aspect of your life is giving you so much pressure. Where is it coming from? Find out what part of you is responsible for the pressure. Once you know which part, you can negotiate with it. Find out how to meet its needs and if it will agree to let you continue with the task of developing a trading system. For example, you may have (1) to agree to give so much time each day to meeting the needs of that part; (2) to set a deadline for the development of your trading system and/or (3) to agree to devote full attention to that part once the deadline occurs.

Lastly, you must develop an overall plan for developing your trading system. Work out your objectives in detail! Once your objectives have been written down, you can then develop a plan for meeting those objectives. Divide the plan into various tasks and set a deadline for meeting each of those tasks.

The first three areas of blockage — computer phobia, procrastination, and the feeling of being overwhelmed — can keep you from progressing through the task of trading system development or perhaps from even starting it. The last two areas — perfectionism and judgmental biases — will keep you from getting satisfactory results from the trading system you develop. In these two areas, you may not know you have a problem and/or the problem may cause you to waste a great deal of time without making any progress. Both types of problems, however, are solvable. We will discuss the problem of perfectionism first and then cover the area of judgmental biases in our thinking.

PERFECTIONISM. Put your PF Score _____ here. Perfectionism, in contrast to what one might expect, has an extremely negative impact on performance. People often strive to be perfect in what they do because their parents demanded they be perfect as children. Unfortunately, these lofty standards sometimes keep them from ever coming close to achieving them. Perfectionists waste time with unnecessary tasks. Businessmen make less effective decisions, traders make less money, and athletes perform poorly—all because of the high standards they set for themselves.

But the vicious problem perfectionists have is not just created by lofty standards. You can have lofty standards without being a perfectionist. Instead, *perfectionism means those standards are tied into your self esteem. If you don't achieve those standards (and for most perfectionists, those standards are all-or-none), then you feel less of a person.* The perfectionist has trouble tolerating a mistake or handling a

Heebie-Jeebie/At-A-Boy Tape

We've come out with a new "hypnotic" tape that is terrific. Side one is for when you want to get over the

Heebie/Jeebies. That's our term for when you are frazzled; your attention is scattered; you just can't seem to move forward; and that little guy is sitting on your shoulder whispering in your ear so that you find yourself fearful, anxious, stressed, and uncertain. Whether you have those kind of days occasionally or often, this tape is the anecdote.

Heebie Jeebies asks the kind of questions that let you know where you have gone off course so you can change it. At the same time, it uses a stress reduction technique to pull you into a much more resourceful state.

Side two gives you the kind of rewards most people forget to give themselves. We call it the *At-A-Boy* side. You know when you are on a pathway toward excellence — achieving, with each step, a new level of success. It feels good, you've got energy, enthusiasm, magnetism, and passion. You are in balance and the world is your oyster. In celebration of each new day, we want to give you one big *At-A-Boy*.

We believe your mental state has a lot to do with the success. The *At-A-Boy* tape helps you maintain that state and thus prolong the success. It is a major addition to the psychological arsenal of any trader.

The *Heebie/Jeebie At-A-Boy Tape* is \$16.95 plus \$3.00 for shipping and handling. Use your mastercard or visa, or make a check out to Van K. Tharp Associates, 337 Lochside Dr., Cary, NC 27511. Call (919) 233-8855 for more details.

distraction. Perfectionists tend to have all-or-none thinking, so everyday little setbacks lead them into a world of despair.

Here is how the perfectionistic mind set can create lowered performance—the opposite of the desired result. The likelihood of a person achieving any outcome depends on two primary beliefs: 1) the belief that the behavior attempted will produce the outcome and 2) a belief that you are capable of producing the necessary behavior. The perfectionist has extremely high standards, by definition, which suggests their outcome may not be directly obtainable as a result of the behavior. More importantly, the perfectionist tends to be his or her own worst critic when these high standards are not achieved. At first, the perfectionist's criticism drives him forward towards his goals. But as he repeatedly fails to achieve them, the self-criticism gets much stronger and the person begins to create a wall around himself making the task impossible. As a result, the desired result of nearly impossible standards frequently creates below-average performance.

Let's take a look at Elmer:

Elmer was a perfectionist who was trying to develop a trading system that would win in nine out of ten trades and would make five times as much money as he was risking on any given trade. When he first tried to develop the system, it was just profitable after commissions and slippage. But when he saw the results—only a 2% gain each year—he wanted to beat his head into the wall. "How could you be so stupid to think that an approach like that would work," he wailed. After three failed attempts, he was beside himself. His family found it hard to live with—he was uncivil and didn't spend any time with them. He just locked himself in his computer room doing more testing and feeling more and more unsatisfied with himself. Normally, Elmer would have just given up after about six months. But in trading, he was exceptionally committed to find something that would meet his standards. He'd abandon a lot of good ideas before testing them because of his self-criticism. Those he did test, no matter how well they turned out, would not meet his criteria for acceptance. Eventually, Elmer's wife left him and Elmer found himself broke, without a family, or even a trading system that met his standards.

Poor performance among perfectionists is well documented in many fields. Psychologist David Burns, for example, found that perfectionistic insurance agents, those who linked their achievement to their self-worth, earned on the average \$15,000 a year less than their nonperfectionistic counterparts.

Similarly, highly successful athletes tend to show a lack of perfectionistic tendencies. For example, elite male gymnasts who qualified for Olympic competition tended to give much less importance to past poor performance than did a group of highly talented gymnasts who failed to qualify. The latter group, in fact, would rouse themselves into near panic states by dwelling on the images of past failure and turning those images into excessive self doubt and thoughts of impending tragedy. Think about it—the best baseball hitter in any given year will only get a hit about 3.5 times out of ten. If that player

New Seminar: How to Develop A Winning Trading System That Fits You.

Dr. Tharp is an expert modeler. That means he can take several people who do things well, find out what they do in common, and then develop a model of excellence which can be taught to others. Now Dr. Tharp has developed a model for learning "How to Trade." You will learn this model in the seminar. Dr. Tharp and one of his model traders, Tom Basso, will be presenting the seminar on June 4th - June 6th.

Here's a tentative outline of the seminar:

Friday June 4th:

- Why trading is so difficult for most people and what to do about it. This section will include some money management simulation.
- Psychological issues that make trading system development hard. What the issues are and what to do about them!
- Workshop on "Developing Trading System Objectives." This section is 50% of good trading system development and you will accomplish it during the seminar.

Saturday June 5th:

- Understanding Money Management
- Deciding What Concepts You want to Trade
- Overview of the Model for Learning How to Trade
- Selecting Your Time Frame, Markets, Broker.
- The importance of entry and how to select an entry method.

Sunday June 6th:

- How to determine your stop loss and your market exits. We will do specific exercises designed to give you experience in this area.
- Portfolio Theory, Money Management, and Putting it all together.
- Computers and Trading.
- Questions and Answers with Tom Basso.

The seminar fee will be \$1495. The seminar will be held at the Embassy Suites Hotel. We've reserved a block of suites for \$79 per day plus tax, including breakfast. Please call 919/881-0000 for room reservations and mention the ITTM seminar.

We expect to sell out on this seminar. At this time, you can still reserve a space for a \$250 deposit. Your deposit is fully refundable until May 26th. The balance is due at the door.

dwelled on the 6.5 times he didn't get a hit, his chances of getting exceptional performance would be slim indeed.

Perfectionists tend to find themselves under a great deal of emotional stress. They drive themselves hard, while at the same time, being their own worst critics. For example, when a perfectionist falls short of a goal, he or she is probably screaming criticisms at themselves for not meeting his/her own lofty standards.

Joe was a trader on a diet. One day he ate a tablespoon of ice cream and scolded himself by saying, "I shouldn't have done that. I'm a pig." His self-critique so upset him that he went on to eat the entire quart of ice cream. And, of course, by the time the quart was finished, he'd berated himself so much that the whole idea of a diet seemed hopeless.

How does this cycle of lofty standards tie into a person's self esteem development? One theory holds that perfectionism develops when a child is regularly rewarded with love and approval for outstanding performance, but severely criticized for substandard performance. The child, in order to gain parental acceptance, begins to take on the parent's high standards. And, in order to avoid criticism from the parents, the child begins to criticize him/herself. Soon the young child begins to anticipate mistakes that will lead to a loss of acceptance and starts criticizing himself for the slightest mistake. The logic is: "If I criticize myself, I'll do better and then my parents will love me more". But, of course, self-criticism leads to feeling bad and then even poorer performance. And suddenly, the vicious cycle of high standards leading to poor performance, common to almost all people with this trait, ensues. A perfectionist has started down the road to ruin.

Getting out of the perfectionistic trap. The best solution to getting out of perfectionism is probably to seek professional help to get rid of the perfectionistic decisions that you made some time in the past. However, there is a five-step program you can do on your own to help you make progress.

First, make a list of the advantages and disadvantages of being perfectionistic with respect to your trading (or in anything for that matter). Once you have the list, notice how the advantages may not be as great as the disadvantages. This should give you some insights about your standards and what you are doing to yourself.

Second, since your perfectionism comes from all-or-none standards, spend a day investigating how well the world can be evaluated by such all-or-none standards. For example, notice what happens when you decide that food must either be terrific or awful. What happens when you decide that a room is either totally clean or totally messy? What happens when you decide that a person is either beautiful or ugly? Intelligent or stupid? Or fat or thin? And, of course, as you are doing this notice how distorted all-or-none thinking is and then think about your perfectionistic standards.

Third, keep a daily written record of self-critical statements you make. You might notice how irrational some of these thoughts are, even though they may seem quite plausable when you think them. Give yourself a reward for being able to write down at least 50 such thoughts in a day. Your reward, of course, is for your self-awareness – not the

negative thoughts. At the end of the day, examine what you've written down and notice the distortions in the thinking.

Fourth, for several days keep a record of the activities you do. Before you undertake each activity, estimate how satisfying you think the activity will be. When you finish the activity, record how satisfying you felt it actually was and how effectively you performed. What will happen is that you will notice your personal satisfaction is not necessarily correlated with superior performance. When you learn to move toward what gives you satisfaction, rather than superior performance, you will be on the road toward making your life work. And quite often superior performance will follow.

Lastly, each day while you are developing a trading system, set behavioral standards that are about 10% of what you would normally expect of yourself. When you accomplish those new standards, agree to be proud of your performance and congratulate yourself. If you achieve more than that, fine! But always celebrate when you achieve your new standards. If necessary, get help from someone close who is not a perfectionist in setting your standards. Most people, when doing this exercise, find that the lower they set their standards, the higher their productivity suddenly becomes.

JUDGMENTAL "HEURISTICS" OR BIASES. Put your JB Score _____ here. At any given instant, over two billion bits of information impinge upon your senses. Yet consciously, we can only process "7 + or - 2 chunks" of information. This tremendous reduction in information necessary to act upon external signals or make decisions is accomplished through various "heuristic" rules or shortcuts. These rules, which are essential if you are to make any decision at all, are both a strength and a limitation. They are a strength in that they provide tremendous shortcuts to making decisions. Decision-making would be practically impossible without them. However, they are a major weakness because people are unaware they are even occurring or how much they distort and delete information and bias our decision-making. For example, we have already discussed two such biases that make it difficult for most people even to make money in the markets: the gambler's fallacy and the tendency to be risky in the realm of losses and conservative in the realm of profits – the opposite of what it takes to become a successful trader.

The real "secret" to making money in the market has to do with developing an edge in the market by using probabilities and proper money management. Unfortunately, people have trouble distinguishing between luck and skill when it comes to market predictions. We are unable to comprehend the many factors influencing an event as complex as the movement of a market. If, for example, we had access to the number of buyers and sellers in the market at a given time plus information about the conviction and capital behind each trade, we would probably find the markets to be very predictable. Thus, any uncertainty you may have about how the market is going to behave at any given time is in you, not in the market. When you accept the fact that uncertainty is in you, rather than in the market, you will suddenly find you have much greater control over your own behavior towards the market. More importantly, you will have much greater control over the process of designing a trading system and greater understanding of how that trading system works!

When you develop a trading system, you are essentially deciding upon a set of judgmental shortcuts to help you make a decision. Yet people are completely unaware of how we make most of our predictions and judgements, let alone any biases in the way we make them. Thus, the process of designing a trading system is replete with error and becomes a very difficult process. In order to simplify the process, traders need to understand the following major factors: randomness, sampling variability, and data reliability.

Randomness. People want to treat the world as if they could predict and understand everything. As a result, one of the most significant biases people have is to seek patterns where none exist and to invent the existence of unjustified causal relationships. Traders don't want to trade probabilities. They want consistency. For example, people fail to understand that a random sequence can include a long string or what would be called a trend. Instead, they try to understand the "trend" as something that it isn't instead of accepting that such phenomena occur.

Understanding and trading well are not necessarily the same thing. People don't understand randomness, yet they expect to be able to understand the market. They then build trading systems out of their attempts to understand the market by identifying unjustified causal relationships without ever realizing they are doing it. It is this expectation to understand markets that leads traders to search for "Holy Grail" trading systems that explain the "underlying order" of the markets. There is nothing wrong with building a trading system based on microcosmic glimpses into how the market might work; but you need to know what you're doing when you're doing it. You're not trying to understand some mysterious underlying order in the markets. You are developing a set of rules whose long term expectancy gives you an edge in the market, while allowing you to withstand the worst possible catastrophe that could occur in the short term.

For example, many people observe a relationship in the market and assume it explains how the market works.

Jack noticed when a particular pattern occurred in the market, it frequently moved 50 to 100 points higher. He assumed the pattern meant that strong hands were moving into the market. And, when the market didn't follow the pattern, he became very confused. I said, "How often, when you observe this pattern, does the market move like that?" He responded, "About 35% of the time!" Thus, Jack had simply observed a pattern that was quite profitable 35% of the time. The rest of the time it had no meaning.

A relationship may occur only 35% of the time, and that may be something you can make money with, but it has nothing to do with being right or trying to explain something. What you must learn is that most trading systems come out of observations that have a certain probability of being correct. Those observations do not explain anything. Remember, a trading system is just a set of rules to guide behavior, nothing less or nothing more. Apparent random fluctuations in the market are caused by many more factors than you can possibly monitor in your system. Develop the attitude of following rules, because they give you an edge in the market. Avoid the need to understand or explain the market.

Because people attempt to understand and make order out of the market, they assume that the longer a trend continues, the more likely it will suddenly turn around. More importantly, traders are usually willing to bet larger amounts of money on that assumption. Thus, traders want to pick tops and bottoms in a trend—a behavior that tends to be as dangerous as stepping in front of a moving freight train, hoping it will stop and turn around just for you. These biases are usually referred to as the *gambler's fallacy*. They have resulted in the ruin of millions of traders over the ages. The gambler's fallacy is one of those biases which make trading difficult without a system and proper money management. However, traders frequently develop counter-trend following systems because of this bias—usually with disastrous results.

Sampling Variability. Most people misuse the basic concepts of sampling theory in making predictions and in designing trading systems. The first principle which is highly abused is that you can make more accurate estimates of the true population probability from larger samples than from smaller samples. In other words, you can get a much more accurate estimate of the reliability of a trading signal from a large sample than from a small sample. For example, Jack said that his pattern predicted a higher market price 35% of the time. The accuracy of his estimate would be much better if it were based on 100 measures of the pattern than if it were based on 20 measures. Unfortunately, most people follow a bias called the *law of small numbers*. Once they observe a phenomenon occurring a few times, they believe they understand it and know its likelihood.

People tend to form their opinions based on a few cases, and fail to revise their opinions upon the receipt of new data to the extent that they should based on probability theory. Traders tend to stick to their old opinions rather than updating them as new information becomes available. We call this the *conservatism bias*. This points out the importance of doing a thorough, objective testing of your market observations on a set of data that is different from the data in which you made the observation.

Traders want consistent information from various sources, such as three oscillators based upon the same data (which of course are likely to show similar results). However, this consistent information will lead to increased confidence, but not to increased accuracy of prediction. We call this the *consistency of information bias*. What it means is that traders are likely to add more indicators in order to get more consistent information so they can feel confident about it. But adding more indicators is not likely to give one more accurate information. This points out the importance of developing a simple, robust trading system.

A fourth major misuse of sampling variability is that people fail to understand that the amount of variability in a sample is positively related to the degree of randomness in the sample. Once you have observed a relationship in a set of data, it is no longer random with respect to that relationship. The more relationships you observe with respect to various parameters in the data, the less random the data is with respect to those parameters. Unfortunately, system developers frequently make this mistake when they use a sample of data to optimize a system and then test the system on the same data. Once a set of data has been used to optimize a system's parameters,

then it is not random with respect to those parameters. As a result, when you use the same sample of data to test the system, you can expect it to do well in the test, but this has nothing to do with how it will work as a system trading real money. Data must be tested on a sample that is independent from the sample used to observe the original relationship.

Reliability. When people obtain information, they fail to assess how reliable their data are, where *reliability refers to the degree to which information reflects what is really happening*. What traders observe in the market, with the possible exception of floor traders and other market makers, is not the market, but some sort of visual representation of the market. Thus, you are responding to a bar chart or a candlestick chart, or a point and figure chart, or to a representation of the market profile, etc.—and not to the real market. Furthermore, few people make decisions from that information alone. Instead, they distort the information even more by using indicators. These indicators are essentially shortcuts or heuristics that people have thought up to condense, organize and make sense of the data. Interestingly, there are hundreds of possible indicators—in fact, hundreds of thousands if you count various permutations and combinations—but most traders use only about 20 of the most common ones in their decision making.

Market information is certainly distorted, and thus less reliable, when it is transformed into various indicators. The less reliable the information is, the less value it has for predicting. Reliability, for example, is a measure of how accurately Jack's pattern actually predicts a sharp move in the market. Many people might notice a pattern or relationship in the market and then use it in developing a system without ever determining how reliable the relationship is. Accurately knowing how well the pattern predicts the move is very important information for any person wanting to develop a trading system.

A lot of the biases people have in their decision making tend to distort reliability in some way. For example, we have many biases keeping us from knowing the true probability of an event happening. The true probability refers to the actual probability of the event occurring as opposed to a statistical estimate of the probability from a small sample.

One such bias that keeps people from developing a good trading system is called the *representativeness bias*. We tend to imagine that what we see or expect to see is typical of what can and/or will occur. Thus, if you observe a pattern in the market, you expect it to occur. If you develop some concept about the market, you will look for data to support that concept in the market, and you will probably find it whether it exists or not. Once again, if you do not test objectively, and understand the results of the testing, you will probably find that your observations, in developing a trading system, tend to confirm what you expect to find. Thus, the representativeness bias is particularly important when it comes to assessing various trading signals. Are you considering the *true probability rate* in assessing your indicator? That is, are you considering the percentage of time a particular indicator is followed by the predicted outcome? Probably not!

Once again, I cannot overemphasize enough that trading indicators are merely ways of representing things of interest. Does a significant chart pattern actually mean that buyers are

Happy Trading Everyone

Van Tharp Associates wishes all of you a wonderful summer of successful trading.

about to dominate sellers, or vice versa, and produce a significant price change? Of course not! It merely represents the possibility such an event might occur. Thus, any indicators you develop for buying or selling in markets are your way of representing potential trading opportunities. It is not the opportunity per se. Yet most traders, because of this particular bias, act as if the indicators are what they represent. It is like the indicators (be they stochastics, RSI, or moving averages) start becoming reality, instead of a representation of a concept or a belief in your head. When you realize this, you will become much more attuned to what trading is all about and less concerned about indicators and understanding the market.

Another bias that keeps people from understanding the true probability of an event happening, and thus distorts its reliability, is called the availability bias. We make predictions based upon how available the information is to us instead of the true probability rate in the population. Thus, when you first start looking at the market, the data sample you use will determine what you observe. In addition, strong emotional experiences, which affect how strongly information stands out in our minds, tends to strongly bias our decisions.

When people start to develop an estimate of how much a trading system can earn in a year or how many winning trades it will have, or any other estimate of its reliability, they tend to start with a set point. They then make adjustments to that figure according to anticipated changes in conditions. The initial set point is called an anchor. The dangers associated with using anchors in our decision making about trading systems (or anything else) is called the anchoring bias. The first danger is that you assume there is some relationship between the anchor and what you are predicting. For example, in order to predict the price of the market a year from now, you would probably start making your estimate with the anchor of today's price. Over a short period of time it may be an accurate basis for beginning to make an estimate (i.e., today's price is a good starting price for forecasting the price in two or three days), but over a longer period of time the strategy does not allow for the unpredicted or the unexpected. That is why one of the most important parts of developing a trading system is extensive planning. And this extensive planning should include a careful consideration of everything that might go wrong.

The second danger in the anchoring bias is people make an assumption that the initial setpoint or anchor itself is meaningful. For example, if you use the results of your testing to predict future results, you are assuming that those results are meaningful and will not change dramatically over time. This is probably true if your testing data is different from the data you used to develop the system and included enough samples to make future estimates reliable. But those are big "ifs."

One last bias that tends to have a significant effect on trading decision-making is hindsight bias. People tend to see relationships in the market after they occur, and then assume they knew it all along. It's very easy to point out such a relationship, after it occurs. I've worked with a number of clients who claim that they cannot follow their signals. However, what tends to happen is that they do not recognize the

New Seminar: Creating Affluence in Your Life

When money flows into your life, it's because you allow your life to work. As a result, we've designed a special two-day seminar to help you open up to the flow of money. That flow of affluence might come through increased trading success or through an unexpected source. If you are ready for a major change in your life, then this seminar may just be the source for that change.

We will be covering a lot of exciting topics in this seminar, all designed to jump-start your brain, including:

- Opening up your unconscious mind. As an illustration of the power of your unconscious mind, we will be teaching you how to suspend conscious mind activity so that information goes directly into the unconscious mind. In doing so, you will learn how to read an entire book in about three minutes. No, that was not a misprint – three minutes. Think what effect this could have on your life!
- How to get what you want! There are certain techniques that really allow you to open up to what you want in life. We will be teaching these techniques at this seminar and you can start to use them immediately.
- Creating affluence in every area of your life! People do not realize that there is a lot more to affluence than just money. What about creative affluence, spiritual affluence, affluence in relationships, educational richness, etc.? We will be teaching all of these forms of affluence at this seminar. And MUCH, MUCH MORE! You won't want to miss this one.

The seminar will be held at the Guest Suites Hotel near the Raleigh/Durham Airport (919-361-4660 or 1-800-424-2900) on August 21-22, 1993. We've reserved a block of suites for you at just \$79 per night, including breakfast. The fee for this weekend seminar will be \$995 (\$795 if paid in full by June 15th or \$895 if paid in full by July 15th). If you'd like to bring your spouse (to double your affluence), you may deduct another \$100 per person.

Since this will be the first time we have given this seminar, we expect to sell out. Once we have 50 people enrolled, you will not be able to get in unless someone else cancels. However, a \$250 deposit will guarantee your spot. And that deposit is fully refundable until August 15th.

So spend a weekend with us to enrich your life and then enjoy fabulous North Carolina. The famous Pinehurst Golf courses are only an hour away. We'd be happy to make golfing reservations for you.

signals while they occur. Instead, they see many possibilities in the data. But once the signal is complete, it is too late! They then criticize themselves for not taking it when it occurred. The typical response is, "I knew it all along. Why didn't I take that signal?"

This problem will not occur if you write down your criteria for a signal in enough detail so that it could be entered into a computer. You can then make a checklist for your signal (or computerize it). Once you do, you will always see a signal when it occurs or the computer will see it for you. Thus, you really will know whether or not you actually knew it all along.

How to overcome judgmental biases. You probably cannot totally overcome the effect of the various judgmental biases. One reason is that one of the most prevalent biases is the ego bias in which people decide, "Yes, I understand all of this, but it applies to other people, not to me. I'm a very special person and it doesn't apply in my case." Nevertheless, if you are willing to assume you are human and that these biases do apply to you, then you can take steps to minimize their impact.

Remember, your job as a trader is to find an edge in the markets. You must capitalize on that edge, so you will make money in the long run, while doing everything possible to preserve your capital in the short run. As a result, I strongly recommend that you spend a lot of time writing down your objectives and designing something to meet those objectives.

Observe the markets as an artist would. Be creative. Determine relationships in the market that occur over a wide variety of markets and market conditions. Remember you are not trying to explain the markets, but just determine some market relationships you can capitalize upon. The more widespread the relationship — does it occur in different markets and different types of markets — the more likely you will be able to profit from it.

Be willing to be unique. Think about how you can best represent the price of the market. Notice relationships in the patterns of price movement which you can capitalize upon. Once you have observed some relationships, figure out how to measure them. If you can avoid common indicators, then you probably have a real edge.

Simple is probably better. Why? Because the more complex the relationship is, the more likely it is to be unique to particular markets and the less likely it is to make you money.

Be sure you understand the edge the relationships you observe in your data give you. Do your observations make sense? How do they give you an edge? Also be sure that you can write down your observations in enough detail so you can recognize them as they occur and not just in hindsight.

Understand money management so you can capitalize on your observations. Trade according to a predetermined plan rather than your emotions.

Be sure to objectively test your observations on extensive market data that is different from the data you used to observe the relationships in the first place. Objective testing is very important, because with subjective testing you will tend to see what you want to see. In other words, the market will confirm your expectations.

Many of the psychological issues described in this article will be covered in our new seminar, *How to Develop a Winning*

Trading System that Fits You. The seminar will be given in Raleigh, NC on June 4-6th. In this seminar, Tom Basso and I will be helping you with the psychological issues covered in this newsletter. We will help you clarify your objectives, and then show you how to design a trading system to meet those objectives. Anyone who mentions they read about the seminar from this article, prior to May 28th, will be given a \$100 discount off the enrollment price of \$1495. Your fee, with the discount, will be due in full upon enrollment. Since we expect to sell out, I'd suggest that you enroll quickly — otherwise we will only be able to fit you in if we have a cancellation.

Also, we will offer an optional, fee-based service to five people who complete the seminar that will involve actually developing and testing a system designed around your custom needs. Charles LeBeau and David Lucas, former Editors of *Technical Traders Bulletin*, will be assisting us in this effort.

Reference Note:

This article is part of my psychological contribution to a new book by Charles LeBeau, David Lucas, and Van Tharp entitled, *The Technical Trader's Guide to Futures Trading Systems and Strategies*. The book probably will be published in mid-1994.

The Frustrated Investor

When I asked Tom Basso, perhaps one of the ultimate mechanical traders, what he got out of our intuition seminar, he indicated that he learned a lot more about how he thought. He said he planned to use his creative talents more and that one of the first things he planned to do was write a book for his clients. Approximately a year later that book was "born" — *The Frustrated Investor*.

The clients of a money manager are just as subject to the same psychological pressures of trading as the money manager. Tom has long thought that every one of his clients needs help to deal with the psychology of his own investments. *The Frustrated Investor* is a book that will provide this help.

Within a week after its release, we had an order for 150 copies of the book for the customers of a bank. It's that good! It is very simple reading and yet to the point. The book is full of numerous examples from Tom's many experiences dealing with the average investor. It's a book everyone can relate to, enjoy, and profit from. If you're a trader, the book is an excellent gift to give your friends and relatives who don't really understand what you have to go through as a trader. If you are a money manager, then the book is an excellent gift (in fact, must reading) for all your clients. It's short — less than 100 pages — and easy to read, so people you give it to will probably read it. If you are just interested in learning more about yourself, I'm sure you'll profit from Tom's marvelous book.

We are selling the book for \$12.95 plus \$3 shipping and handling (\$10 overseas). 10 - 49 books receive a 15% discount; and 50 or more books receive a 25% discount. Call 919/233-8855 to order.

TECHNICAL TOOLBOX

A SPECIAL MONTHLY FEATURE OF TECHNICAL TRADERS BULLETIN

SEPTEMBER 1991

A HARD LOOK AT DAY TRADING

We receive more requests for articles and advice on day trading than on any other topic. Beginning traders are especially interested, particularly those that have been attracted by the glamour and intensity of the pit traders who seem to be constantly jumping in and out of the markets and reaping enormous profits. Almost all traders have tried day trading at one time or another. After all, it is very tempting to try and slug it out with the pit traders. Every tick is exciting. Every rumor or news item that affects the market either creates euphoria or is another nail in the coffin. When you have a position on, you can't stand the pressure, but if you're not in the market you tear your hair out every time prices act the way you predicted. Your heart pumps fast, your adrenaline surges, and you feel like you've finally arrived in the wild and woolly world of fast-paced futures trading.

All of this sounds like fun, but as you might imagine, there are many, many pitfalls along the way. We've come to realize, after talking to numerous traders who have attempted or are about to begin day trading, that most traders who start are not fully aware of the scope of the problems they face. To some of our readers the following discussion may be redundant, but we suspect that many of our subscribers may be embarking on a venture with only a limited grasp of the basics.

Costs of Doing Business

The day trader enters and exits trades during the same market session, normally a period of only four to six hours from opening to close. The very short term nature of day trading presents both advantages and disadvantages. The major advantages are the lower margin requirements and the absence of

overnight risk. The disadvantages are the bad odds, the time and effort required, the limited profit potential, and the burdensome costs of frequent transactions.

The transaction costs consist of both commissions and slippage. The commissions are a large and obvious cost of doing business. However the slippage is much more difficult to quantify. The trader might have a mental image of trading at the prices shown on a computer screen, but in reality he must continuously buy at the offered price and sell at the bid price. The spread between the bid and offer becomes a very substantial but hidden cost of doing business. In addition, as most of us have learned many times over, it is unrealistic to expect stop orders to be filled at our stop prices.

In the meantime, to offset these unavoidable costs, the day trader is limited to very small profits when he is correct in his analysis and completes a winning trade. Under even the most optimistic scenario, the day trader's potential profits are limited to a portion of the price range that is likely to occur within a few hours of trading.

Let us assume that our day trader has negotiated a discounted rate on his day trades and is paying twenty dollars per trade. Next let's be optimistic and assume that the spread between the bid and offer amounts to ten dollars buying and ten dollars selling. In order for the trader to complete a trade that nets \$100 he must be smart enough to identify a move of \$140 according to the prices on the screen he watches. On the other hand, when his timing is wrong by only \$140 he is going to lose \$180. It doesn't take a Ph.D. in mathematics or an M.B.A. from Harvard to figure out that this is far from an ideal business environment. In fact, even the professionals on the floors of the exchanges must be intelligent, highly disciplined

traders just to survive. The public does not realize how many of these professionals fail in spite of the advantage of being on the floor and paying only minimal costs per trade. Imagine how small the odds for success must be for an off-the-floor trader faced with the costs we have described.

To have any hope of success, the day trader must strive to maximize the profits on the winning trades so that he can overcome the tremendous disadvantage of both the obvious and the hidden transaction costs. Unfortunately, the day trader has very little control of the potential profit to be obtained because the extent of the price range during the day absolutely limits the maximum profit that can be realized. No trader can reasonably expect to buy at exact bottoms or sell at exact tops. A very good trader might hope to be able to capture the middle third of an intra-day price swing. That means that to make \$180, the total price swing must be three times this amount or \$540. How many futures markets have a daily price range of \$540 or more? Very few. How many futures markets can produce a \$180 net loss? Almost any of them.

Don't forget, the trader that is smart enough to find markets with \$540 price swings and then smart enough to trade them correctly so that he nets \$180 is only going to break even unless he has more winners than losers. To make money in the long run, the day trader must have a percentage of winning trades that is far better than 50% or he must somehow figure out how to make more than \$180 on a \$540 price swing. (Or best of all, do both.) This also assumes that the trader is smart and disciplined enough to harness his instincts and emotions and carefully limit the size of the losses.

Beating Tough Odds

As you can see, the day trader is faced with an almost impossible task. We would venture a very educated guess that less than one out of a thousand day traders make money over any sustained period of time. Our best advice is to not even attempt it unless you are one of the many traders who is actually trading for the recreation and mental stimulation rather than the money. If you are serious about making money, your time and energy will be much better spent perfecting your longer term trading

skills. Even if you should succeed at day trading, it is difficult to reinvest the profits and continue to compound them. Day traders can only operate efficiently in very small size so don't expect to make your fortune at it, it's only a very enjoyable but hard earned living at best.

In spite of our sincere warning, we know many of our readers will attempt to beat the odds and become day traders for a while. Fortunately the lessons learned while day trading can be applied to more serious and productive trading later on. In the meantime, we will do our best to explain as much as we can about day trading and hopefully make the learning process less costly. Obviously, we don't have all the answers ourselves or we wouldn't have such a negative outlook on the probability of success. We certainly have learned a great deal about this subject over many years of trading and the fact that we have elected to no longer play this game simply demonstrates our personal preferences in the allocation of our productive time. We hope whatever hard-earned information we can pass along proves helpful.

Selecting Markets For Day Trading

As we pointed out earlier, there are very few markets that have wide enough intra-day price swings to make them suitable candidates for day trading. Because they must monitor the prices so closely, day traders generally prefer to concentrate their efforts on only one or two markets. In addition to the fact that the prices must be watched continuously, there are very few markets that are suitable even if we had the capacity to follow more of them. Presently, day traders seem to have given up on pork bellies and tend to favor the stock indexes, bonds, currencies, and energy markets. From time to time other markets may become candidates for day trading because of temporary periods of high volatility.

We ran a test to see what percentage of the time various markets had a total daily range of \$500 or more between the high of the day and the low. The following table shows some sample results over 1,000 days of data ending 12/20/90. As you can see, there were only five markets that had a \$500 range at least two days a week or 40% of the time.

DAILY RANGE TABLE

Percentage of days when range exceeds \$500
(1,000 trading days ending 12-20-90).

S & P	69	D-Mark	35
NYSE	64	Crude Oil	31
Br. Pound	53	Soybeans	28
T-Bond	50	Silver	23
Swiss Franc	50	Gold	21
Pork Bellies	39	Sugar	13
J. Yen	38	Live Cattle	3
H. Oil	37	Live Hogs	1

Consider Tick Sizes

In addition to looking for a wide daily range, liquidity and the size of the minimum spread should also be factors to consider when selecting suitable markets for day trading. Our previous example of costs included paying a spread of only \$10 on each side of a trade. In the S&P market a minimum spread would be \$25 each side while in the bond market a 1/32 spread is \$31.25. If you are day trading bonds with \$20 commissions, you must overcome total costs of \$82.50 added to losses and subtracted from gains. Your average winning trade must run \$165 farther than your average loss just to break even. This assumes a one tick spread which is the best case possible.

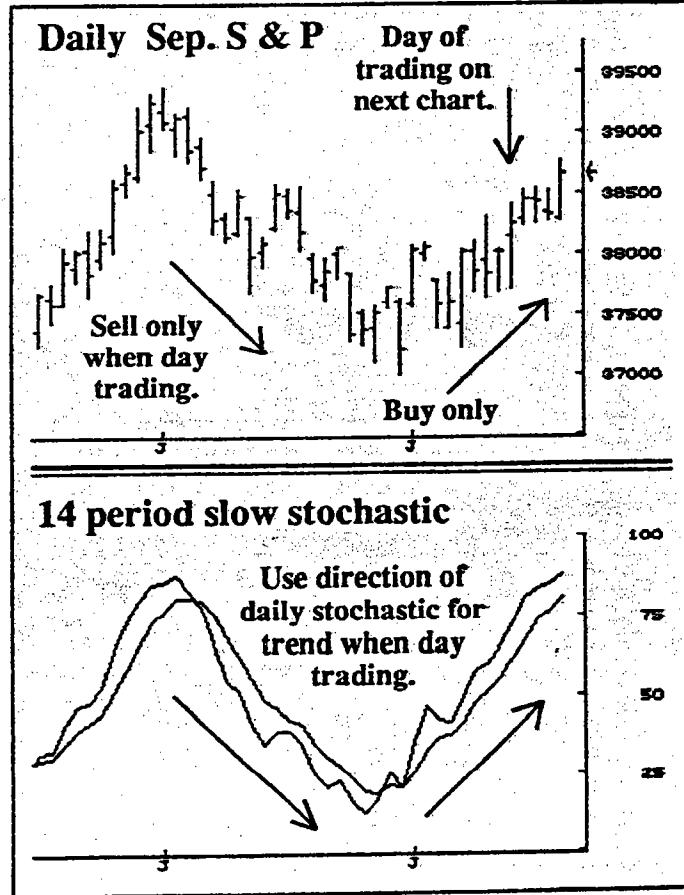
The element of liquidity comes in to play in determining the number of ticks in the spread between bid and offer. A one tick spread is the best you can hope for and most markets have a wider spread than that. You can usually assume that the higher the average daily volume, the tighter the spread. For that reason, you will want to concentrate your day trading in only those markets with very high volume. Otherwise, you can be making good timing decisions and still be assured of losing money.

Maximizing Profits

Day traders, as we discussed, are constantly faced with the problem of capturing as much profit

as possible from a relatively small range of prices. This situation naturally leads traders into the strategy of buying dips and selling rallies rather than attempting to follow trends. Most trend-following strategies tend to be much too slow for day trading. Counter-trend strategies seem to be the logical choice because they offer the potential of extracting the greatest profit from a small range of prices. However, counter-trend strategies as a general rule tend to be less reliable than trend-following strategies. Correctly and quickly spotting turning points in prices is much more difficult than simply trading in the direction of a trend.

We have observed that the best day traders manage to incorporate elements of both methods. Successful day traders try to buy dips within an uptrend and sell rallies within a downtrend. The day trader who consistently makes money must be good at defining trends and good at finding short-term turning points. Most traders lose money because they are not very good at either task. As we look at an example of a possible day trading strategy, keep these two critical steps in mind: First find the



intermediate trend and then find the short term turning points. Both steps need to be done quickly and accurately to produce a winning day trade.

The first chart shows recent S&P daily futures prices. The intermediate term trend we are looking for in step one can be revealed in a number of ways, but for this example we've chosen to use a slow stochastic to define direction (we are indebted to Greg Garrott for recent discussions that clarified this idea). If the daily stochastic is moving upward, we will execute intraday trades from the buy side only. If the daily stochastic is moving downward, we will initiate sell trades only.

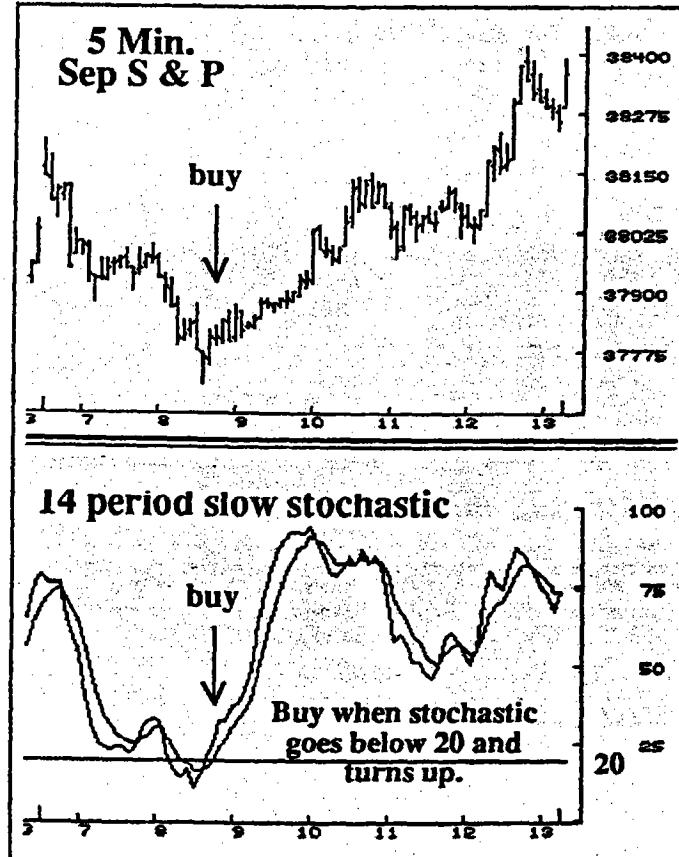
If we were trading longer term, a simple entry system like this might be all we would need. Since we would profit as long as the trend continues and are willing to ride out minor corrections, exact entry timing is not critical. For day trading we must be much more precise, because we know that the distance prices can travel in our direction in any one day is limited. Also, since our risk control stops must be closer to our entry points than in longer term

trading, we want to reduce the possibility that random noise in the market is going to take us out earlier than we want. For step two we need a method that buys dips and sells rallies in the direction of the intermediate term trend.

The next chart shows a 5-minute S&P chart of the day marked by an arrow on the daily chart. Since at that time the daily stochastic indicated an uptrend, we should be initiating buys only. In order to reduce risk and give ourselves a chance for a reasonable profit, we will buy when prices react against the trend. Almost any oscillator will do the job, but for this illustration we've chosen a slow stochastic. As you can see, the market pullback gave a perfect buy signal when the stochastic crossed in an upward direction from below 20. Note that the bottom of the formation is close enough to our entry point that setting a tight stop is possible. This might not have been the case if we had simply bought anywhere in the direction of the trend.

Taking profits in our ideal example is easy in hindsight. Common methods are divergence between the stochastic and prices, a rise in the stochastic over 80, trailing stops under price clusters as the market rises, and a simple dollar amount profit target. The last is tempting in this case because of the tendency of the S&P to retrace its steps quickly, and because it is the simplest way to adjust your profit/loss ratio to acceptable levels.

We have tried to explain the potential pitfalls of day trading, the realities that cause most day traders to fail, and something of the methodology of those that we are aware of that have to some extent succeeded. Similar to other phenomena in the world of trading, day trading, which seems at first glance to be one of the easiest, most productive methods of trading, turns out to be not so easy and not so productive. We know that despite our warnings most of you will try day trading for a while to see if you can beat the odds. We hope our basic advice and observations will help you succeed.



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TECHNICAL TOOLBOX

A SPECIAL MONTHLY FEATURE OF TECHNICAL TRADERS BULLETIN
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SYSTEM TESTING *PART ONE*

Computer testing of mechanical trading systems has been around for over twenty years, but has only become popular in the last several years with the introduction of user-friendly PC-based software packages that make the process quick and easy. Anyone with a little money and time can now create a "profitable" trading system that shows fantastic hypothetical results over historical data. Almost all of the trading systems sold for large sums over the past twenty years or so have been created by this method. Unfortunately, as thousands of disappointed investors can testify, commercial "black box" systems rarely if ever work as expected. As far as we know, the same can be said of the great majority of trading systems generated by the use of testing software. The reasons for this apparent lack of success don't lie in the testing software, but in the testing and evaluation methods used by the testers. We use System Writer Plus and Computrac/SNAP, and both are excellent programs which we can recommend without hesitation. Neither of them show any bias or lack of flexibility that might tempt a researcher to adopt inadequate testing methods. The problem is, as we pointed out, the testing methodology itself and not the software.

The somewhat misguided objective of most testing projects has been to develop trading strategies that squeeze the greatest possible profit out of the historical data. The assumption is that if it worked in the past, it will work in the future. And to carry that logic one step further: the better it worked in the past, the better it will work in the future. If this were true, everyone who designed a historical model that worked in the past (meaning essentially everyone who has ever used system testing software) would be very wealthy by now. Obviously this hasn't happened to the majority of system testers.

Most testing we've seen follows a standard scenario. A trader buys the latest software package and some back data. He puts together a few of his favorite technical studies, adds some chart patterns that seem to have marked market turning points for

him in the past, and optimizes to find the values for each parameter that produces the most profit. Greed takes hold and he starts trading right away. Inevitably, he runs into a series of losses. Two months later he decides that something is wrong with his system and that the best thing to do is optimize again and to get rid of the losing components of his system. He re-optimizes, and is grateful to see that his work has, in hindsight, eliminated his losing trades. Confident again in spite of previous losses, he resumes trading, only to suffer another series of losses. He repeats the process until either his money, his patience, or his wife runs out. Usually, it's his money that gives out, leading him to believe that he would surely succeed if only he could afford to optimize one more time.

What Went Wrong?

It is useful to dissect the above process and review what went wrong and why before exploring more correct procedures. First and most obvious, we are wary of optimization in almost any form. Literally any technical indicator or set of indicators will show tremendous profits when optimized for the best combination of parameters, even over a random data set. The computer is analyzing millions of combinations, so the probabilities are very good that some of these will, at least in hindsight, make money.

Faced with the lure of almost instant riches, as indicated by the optimized results, the temptation to begin trading immediately is overwhelming. The belief in this optimization process is so strong that traders will optimize again and again, even though the status of their trading accounts should be telling them that they are doing something wrong. This is exactly what has happened to the trader in our previous example. You can hear him saying "Just one more optimization, and I'll have it made". Unfortunately, one more optimization will never solve the problem.

How to Avoid Curve-Fitting

Some curve-fitting is unavoidable. It would be difficult and undesirable to design a technical study without it. When a trader "eyeballs" a chart and sees

that a 9-day RSI seems to fit that particular market better than the standard 14-day, he is curve-fitting. Because that seems so simple and effective, it is only a small step to test every possible RSI parameter. From there it is only a small step to test every possible value of a simple moving average, for example. Once this process begins producing profitable results, the permutations become almost endless: We'd better add a few more technical studies to make sure we don't miss anything. While we're at it, let's optimize for the correct initial risk and best trailing stops so our system is as complete as we can make it. The ultimate product is a system contrived with all the best intentions that has been curve-fitted to the nth degree. As good as it looks on paper, the odds against it working in the future have become astronomical. In fact, the better it looks and the more complete and complex the system is, the less likely it is to succeed at all.

Robert Pelletier, of CSI (the data vendors), has provided the most rigorous explanation of why optimization and curve-fitting can go wrong. Frankly, it's such a simple and easily described concept that we can't believe that more traders aren't paying more attention to it. Any statistician knows about the notion of freedom loss. In layman's terms, it means that each parameter that is added to a trading system represents a degree of control lost over the final outcome of the testing procedure. The more technical studies or trading rules or variations of trading rules that you introduce, the less robust and reliable will be the results.

Pelletier recommends a low number of variables, two to five at the most. The fewer variables, the more reliable the results. An interesting corollary of this is that it allows you to look at your own past work and that of others and quickly decide if any of it is curve-fitted. The likelihood of the system being curve-fitted varies directly with the number of variables used to test the system. The greater the number of technical studies and rules (especially exceptions to rules) the more curve-fitted the model is.

Another way to avoid curve-fitting is to avoid creating systems that are custom tailored to specific markets. This is an easy trap to fall into, but it is the ultimate in curve fitting. A good system does not have to work historically in all markets to be successful, but it should work in most markets with few if any changes from market to market. If you have to change the system to make it adapt to each market, something is wrong with the basic system.

Testing Period

Another critical area that is often overlooked is the test data itself. At the bare minimum, the test period should be long enough to generate at least thirty trades in each market. Having less than thirty trades violates one of the basic rules of sampling theory, which dictates that at least 30 data points must exist for a data set to indicate a normal distribution. Note that this doesn't refer to days, weeks, or months of data, but actual trades. Anything less than thirty will generate statistically unreliable results.

Just as importantly, the market periods you are testing must contain as many occurrences of each possible market condition as possible. Up, down, and sideways are the simplest (albeit subjective) definitions of possible market conditions; your study period should contain as many of each as possible. The intent is to simulate potential future conditions by including as much of the past as possible. Measuring this only in years can create problems. For example, the stock market has not had a serious down period since stock index futures were introduced. The full life of the market doesn't really contain enough data to reflect potential future market conditions. The petroleum complex, on the other hand, has shown us a great deal more variability and might be expected to produce a more robust trading system as a result. To explain it another way, the results of a short time period of testing in the crude oil market might give truer results than a longer period of testing in the stock indexes because the stock index data contains an obvious upward bias so far. A buy only system in the stock index market would have been likely to produce much better results than a sell only system.

An interesting corollary of this is that, as tempting as it might seem at times, a system should never be biased towards one side of the market. Obviously, with a few notable exceptions, most of the profits in the stock indexes will have been on the long side. This doesn't mean that a trading system should favor that side of the market. The system should have no opinion or bias toward one side or the other. If this seems obvious, recall that in the 1970's most of the profits made in the commodity markets were on the long side. Many of the trading systems devised became essentially bull market systems. The easiest way to improve your system was to restrict or eliminate short sales. We recall that this bullish bias was a principal reason for the poor performance of many commodity advisors in the early 1980's.

Our conclusion is that there is no static definition of how much data a test should include. If we assume that the average trend-following system trades about once a month per market, at least three years would seem to be a minimum, at least for an initial test which will produce the 30 trade minimum mentioned earlier. Then add two or more years for forward testing (we'll explain this later) and you have five years; which, only by coincidence, is the generally accepted minimum. Add more time if the market has been only one or two-dimensional during the period studied. You will want to include as many different market conditions as possible in your study.

What to Test For

The most obvious testing goal is profitability. How much money did my model make? A better way to calculate this might be percent return, which is the annualized return based on the amount of money needed to trade the account. The percent return should be looked at over the entire testing period and then broken down into small segments so that negative periods can be isolated. Keep in mind that percent return is a function of the amount of capital used. You can double the percent return by starting with only half as much capital but you have not improved the system. You may actually improve a system by starting with more capital, but percent return will suffer accordingly. Frivolous and meaningless trading contests are always won by making big returns with small amounts of capital. This seldom results in a viable or sustainable track record, as evidenced by the dismal performance of the commodity funds managed by some well known contest winners.

A derivative of the percent return is the Sharpe ratio, which is defined as the annualized return (a profitability measure) divided by the annualized standard deviation of return (a volatility measure). The higher the Sharpe ratio, the higher the return and the lower the volatility. The industry standard for CTAs is to calculate the Sharpe ratio based on monthly data. We realize that the Sharpe ratio has limitations (for example, increased upside volatility will result in a lower Sharpe ratio) but it is still the most common index of its type. We suggest you use it to compare the results of one system versus another and to compare your results with those of professional advisors. The best system for you may not be the one that makes the most money, but the one with the highest Sharpe ratio.

A very important yet commonly overlooked statistic is % equity drawdown, measured peak to

valley. A system that generates an annualized percent return of 100% over five years will be difficult to follow if it has allowed peak to valley drawdowns of 50% several times during the five years. It would take a strong stomach and deep pockets to trade such a system with confidence. In our experience, a smooth equity curve is much more desirable and harder to obtain than a high annualized return.

Other worthwhile measures of system testing results include % profitable trades vs % losing trades, average profitable trade (in dollars), average losing trade (also in dollars), ratio of average win to average loss, the largest profit or loss, and the % of long or short trades that were profitable. This last measure can give you some idea of whether your test period or your system is biased towards one side of the market. Both of the testing systems we use will generate these statistics.

We want to stress that a trading system should be designed from the beginning to achieve a predetermined set of performance measures. For example, you may set out to design a trading system which has at least 45% winning trades with average profits that are more than 2.5 times losses.

Volatility and Probability of Ruin

Calculating two key figures will give you some idea of how reliable your trading system will be in real time. We are indebted to Tom D'Angelo for his adding to our understanding of these and other key money management statistics. The first figure to calculate is the standard deviation of your trading results. The higher the standard deviation the more volatile your trading results will be. The lower the standard deviation the less volatile your results will be. All other things being equal, choose the system that has the least volatility (lowest standard deviation) in terms of individual trading results. This should help ensure the highly desirable smooth equity curve.

The second key figure is Probability of Ruin (POR). POR gives the trader the exact probability, expressed as a percentage, that his or her account equity will decline to a specified point before rising to a specified higher point. Six figures go into the calculation: % winners, average profitable trade in dollars, average loss in dollars, initial account equity, level at which an account can be said to be at ruin, and level at which account can be said to be successful.

The POR is based on the notion that within any trading system, events will routinely occur that may appear abnormal but that are really within the realm

of probability. For instance, a coin flipped an infinite number of times will have a heads/tails ratio of 1 : 1, but approximately every 1,024 coin flips either heads or tails will show up 10 times in a row. Every trading system therefore lives with the possibility that, independent of changing market conditions, it will to some extent self-destruct. POR is the probability of that self-destruction. The extent to which we can control % winners and the profit/loss ratio dictates the degree of control we have over our trading system. We may not be able to control changing market conditions, but we can at least make sure that our trading system won't self-destruct of its own accord.

The following table shows POR figures for a representative variety of winning percentages and average profit to average loss ratios. Just to keep the numbers simple we've assumed an initial account equity of \$10,000, a profit target of \$15,000, and a loss level (ruin) of \$5,000.

altering your trading system to take into account non-trending markets may be necessary to ensure survival.

The Mechanics of Testing

Earlier, we mentioned forward testing as a means of weeding out the elements of a trading system that have crept in as a result of curve-fitting. Another term for forward testing is blind simulation. In practice, it means creating and testing a trading system over a data series, for example the back three years of a five year data set, and then testing the completed system over the remaining data, in this case two years. Remember that you need enough data to create at least 30 trades in each test.

Whether you optimize or not in the first phase of testing is not as important as keeping the number of variables low, as we discussed. The final testing will eliminate a very high percentage of "winning" systems. We've seen a number of different schemes for optimizing, re-optimizing and forward testing (see for example Steve Kille's article in Vol. 6 of

the reprints of *Technical Analysis of Stocks and Commodities*, and numerous articles by Jack Schwager). We're not convinced that any one of them is significantly more efficient than the others. We'll be discussing some of these testing schemes in our future articles. By far the most important point is that any trading system that is subjected to simple testing or optimization without forward testing and a careful analysis

Probability of Ruin Matrix

		30%	35%	40%	45%	50%	55%	60%
		1:1	1.5:1	2:1	2.5:1	3:1	3.5:1	4:1
Profit/Loss Ratio	1:1	99	88	88	73	50	27	12
	1.5:1	98	85	50	17	4	1	0
	2:1	74	38	14	5	2	1	0
	2.5:1	40	17	7	3	1	1	0
	3:1	23	11	5	3	1	1	0
	3.5:1	17	8	5	3	1	1	0
	4:1	14	8	5	3	1	1	0

As you can see, the POR changes drastically as the winning percentage and profit/loss ratios change. A small system adjustment that results in a positive change in either ratio can make an enormous difference in our confidence in the system's future capabilities.

POR can be very revealing. For example, the average CTA managing public funds today probably has a winning percentage of from 35% to 45%, with most of them under 40%. A 35% winning percentage demands a high average profit to average loss ratio to be successful, as you can see. This is fine and readily attainable when the markets are trending, but if they get choppy the profit/loss ratio will quickly drop and the POR will increase to frightening levels. Monitoring these two statistics closely and perhaps

of its volatility and probability of ruin is most likely doomed to failure.

Editor's Note Our testing software:

System Writer Plus is produced by Omega Research, Inc. (305) 594-7664.

CompuTrac / Snap is produced by Computrac, A Telerate Co. (800) 535-7990.

This has been the first in a series of articles about system testing. Next time we'll do some specific testing, describing our procedures and results as we go.

TECHNICAL TOOLBOX

A SPECIAL MONTHLY FEATURE OF TECHNICAL TRADERS BULLETIN
OCTOBER 1990

SYSTEM TESTING PART Two

Last month we stressed the importance of testing for specific goals, using a predetermined plan. This month we'll explore system creation and testing in more detail.

We realize that not everyone has system testing software. It is expensive and complex, with a steep learning curve. It is not necessary to possess it to create a viable trading system. The elements of any system should be the same whether you have expensive testing software or are doing your own programming, as some of our subscribers do. It is even possible to test a trading system without expensive software, simply by sitting in front of a computer screen and objectively trading your system over back data. In fact, there are certain advantages to doing it this way. One advantage is that without the extensive optimization capability of the software packages, your system won't be over-optimized. However, the pros of the testing packages far outweigh the cons. We strongly recommend that you obtain some system testing software.

Elements of a Trading System

At the risk of being redundant, we'd like to cover the attributes that a trading system must possess if it is to be successfully tested. Some (or all) of these things may seem obvious, but we have spoken to literally thousands of traders over the past year and a half and we can say with some confidence that many people don't fully understand what a trading system should or should not do.

The first prerequisite of a trading system that is to be seriously tested is that it must be purely mechanical. The only discretionary component should be the decision to trade the system fully or not. All other decisions must be built into the system. We realize that many, if not most of our subscribers are currently trading systems that are at least partly discretionary. We're also aware that most truly successful traders consider some degree of discretion a necessary component of their trading. We have no quarrel with this, but it's impossible to test because it's hopelessly subjective. Discretionary elements have no place in a mechanical trading system that is being prepared for testing.

Expect the Worst

The system you design for testing should attempt to anticipate all contingencies. It is very common for us to hear a trader downplay a missing element of a favorite trading system. The typical response to a polite comment is "it's never happened to me, so why plan for it? Why should I use stops if my system always seems to catch tops and bottoms and there's never been a drawdown that I couldn't handle?"

This is not only naive, but dangerous. What can happen will happen. A system must always expect the worst, and be prepared to cope with it. You must always use complete risk control. Don't assume that because it hasn't happened in the past it won't happen in the future.

Here is a typical example: Many traders prefer to use close-only stops. The rationale is that intraday price movement is inconsequential and that only the close is significant. A deeper motive might be that the trader is trying to avoid taking whipsaw type losses. (They probably got stopped out of a potentially profitable trade once and they're making sure that it won't happen again.) We hope none of our subscribers were foolish enough to be long the S & P on October 16 or 19, 1987 with a close-only stop! It only takes a few of these to convince anyone that it's better to have an ordinary stop and a re-entry strategy. Anticipate the awful; then you won't be quite as surprised and unprepared when it happens.

Note that it is entirely acceptable for your system to be profitable in most of the markets you're testing and a loser in a few of them. One successful CTA of our acquaintance trades in all the markets he has tested (winners and losers), and claims that his equity curve is smoother as a result of this diversification. He deliberately seeks some negative correlation between commodities in the portfolio. He has found that the profitable periods in his "losing" markets usually coincide with losing periods in the "winning" markets. A trading system will not be profitable in all markets all the time. If you have designed it correctly, the drawdowns will be minimal in the losing markets, and they will eventually have profitable periods.

Be careful about testing lots of commodities and then constructing a portfolio of only the winning contracts. This is a popular device of system vendors and is pure fantasy. (Though it sure produces a hell of a track record.)

Test for Specific Results

In our previous article we stressed the need to test with specific goals in mind. As we mentioned, the most important of these are %winners and the ratio of average win to average loss. These can be used to calculate Probability of Ruin, giving you some idea of the robustness of your system (see Tom D'Angelo's articles for details about these and other pertinent statistics). The testing software gives other useful data also. Here is a list, with comments.

Net Profit: A very overrated measure of success for several reasons. First, check to make sure that a few large trades haven't skewed your results. You don't want to use a system whose success depends on nonrecurring events (Like the Hunt's corner of the silver market or sugar futures going back to 63 cents).

Next, don't assume that, in real time, your system will reproduce anything like the net profits from your tests. Future results depend on the markets performing as they did in the past and we know that they won't. You can not predict what the markets will do in the future. You can only try your best to make sure that your system is prepared to deal with most of the foreseeable future market conditions.

Number of Trades in the Test Sample: The total must be over 30 to be sure of statistically significant results. Even if you tested 25 years of data, if you didn't have at least 30 trades, the results would be highly suspect. We once heard a lecture about the validity of a stock market indicator that averaged one trade every 40 years. We would have wanted to see 1200 years of results to be impressed.

Largest Winning and Largest Losing Trade: Largest winner is important if it has skewed Net Profit unreasonably. Many conservative system testers will throw out the largest winner in each commodity and reevaluate the results. The largest loser can be especially important if it exceeds your normal risk control measures. Perhaps there is some problem or contingency you've overlooked. Be careful of measures to eliminate the biggest losers; this is where most traders stumble into curve fitting. Don't make special rules that skip the big losers, just review your stop and risk control procedures.

Maximum Consecutive Winners and Losers: Maximum consecutive losers could be useful. It

gives you an idea of how much emotional pain you might have to endure while trading your system. A forecast of this number could help prevent panic.

Peak-to-valley Drawdown: This is very important as a measure of how practical your trading system will be with real money on the line. Most often, the systems that give the largest net profits have the largest drawdown. Combine a large drawdown with a string of losses and you have the reasons most people prematurely abandon a potentially good trading system. You've heard us stress before that a system must be designed within the personal stress tolerance of each individual trader. Much like the anticipation of consecutive losses, anticipation of the potential drawdown that we must endure can generate a vital element of confidence which will allow us to trust the system and survive inevitable losing periods.

For professional money managers there is another reason for calculating Maximum Drawdown. CTAs and the people who market CTAs tell us that the public is getting smarter (about time) and is more interested in those rare CTAs whose record shows steady growth and small drawdowns rather than in the high-fliers who show big short-term gains with large peak-to-valley drawdowns.

Those of you who are interested in becoming CTAs and managing public money would do well to create a system whose largest portfolio drawdown is in the 20-25% area, measured month-end to month-end. This really requires a combination of good money management (including proper capitalization) and a sound, risk-controlled trading system.

Don't throw away your testing results. They provide an early warning system to alert you if your system is beginning to self-destruct in real trading. Any results approaching the maximum drawdown, or maximum consecutive losers, should be viewed with caution, as should any downtrend in winning percentage or win/loss ratio.

Testing - What to Look For

We like to use lots of data, and to test over varying time periods. Unless you've done this, you can never fully appreciate how elusive a profitable trading system can be, and how time-dependent the testing results are. We are very wary of systems that have not been tested through time periods that reflect as many different market conditions as possible.

Notice how in the following table the results are affected by changing the time frame, especially with regard to drawdowns. The return is similar, which brings up an interesting point. Just about all of

20-Day Channel Breakout System, Crude Oil		
	1/87-1/90	1/86-1/90
Total Return	16,255	19,690
% Winners	41	38
Ratio Avg. Win/Avg. Loss	4.96	3.31
Maximum Drawdown	-3,090	-10,595

the optimization/testing procedures we've seen focus on total return as the sole criterion for choosing the most optimal parameters to use in subsequent tests or in real-time trading. In our simple example above, the returns seem to be in line with one another. The drawdowns, however, are vastly different. How many traders would be willing to ride out a \$10,000 drawdown while trading a contract with an average margin of only about \$2,500? That's asking a great deal.

The example above illustrates one of the seldom-mentioned perils of testing in general and optimization in particular. When you test for only one result (usually total return) you are probably ignoring other, more important data. We recommend that you test for the above matrix of attributes, rather than just for one. We realize that this complicates the procedure, and may in many ways make it subjective, but testing only for total return is misleading and can be harmful to your financial health.

Here are some guidelines that will help focus your testing goals:

% Winners: Try for at least 40% to 45% winners. However, be suspicious if a winning percentage is much over 50%. It is probably not sustainable, and most likely represents inadvertent curve-fitting or a very low profit per trade as a result of large losses and small profits. It can also mean that your risk-control stops are too far away.

Ratio of Average Win to Average Loss: This should be well over 1:1 (break-even). Obviously, a ratio of 3:1 or 4:1 is nice but, given a decent percentage of winners, even 2:1 will make you more money than you can spend.

Total Return and Maximum Drawdown: These are both contract-specific measurements expressed in dollars. For example, the total return on

S&P contracts should only be compared with the maximum drawdown on S&P contracts. Total return and maximum drawdown are the ultimate expression of risk/reward. Of the two, drawdown is more important. It is possible to express both as a % of margin, but margin is a moving target related to contract months and can change frequently and abruptly so it doesn't always give a precise measurement.

Test Data

As far as we know, there is no existing testing software that incorporates the ability to roll a trade from one contract month to another without causing a break in the values of any technical study it is calculating at the time. The break invalidates the study and therefore the test. It is possible to feed the computer a series of contract months for a given commodity, test each month separately, and then consolidate the results, but we can't imagine a more tedious and error-prone procedure.

The solution is to arrange your data into a continuous stream that has no breaks and therefore allows continuous testing. We won't go into detail about the calculations to ensure a smooth transition from one contract to the next, but we are satisfied that, given that any testing is hypothetical anyway, the results are reasonably accurate.

We have data from three sources: FutureSource, Technical Tools, and Omega Research. The latter arrives as continuous contracts. The Technical Tools data comes with software to create your own continuous (or other) contracts. If you have a number of different analytical software packages (as we do), Quote Butler, from Technical Tools, is an excellent way to switch data from one to another without having to buy data for each specific application. We have no recent experience with any other data vendors.

Slippage and Commissions

Don't trust any testing results that don't include a liberal allowance for slippage and commissions. They make an incredible difference in your results. There are a lot of trading systems that make small steady profits when tested without allowing for slippage and commissions, and turn into steady losers when transaction costs are factored in. This is especially true of short-term or daytrading systems. The more trades a system has, the more critical transaction costs become.

There was a particularly glaring example in a recent national publication. The article explained an indicator that purported to call intraday turns in stock index futures. Although the volume of trades was

high, there was no allowance for transaction costs. We calculated that, given very discounted commissions and only occasional slippage, the system was at best a break-even method, at worst a steady loser.

Everyone has their favorite numbers for transaction costs. We allow \$75 for slippage and \$50 for commission per round turn, for a total of \$125 per trade. This number may seem high, but we prefer to err on the conservative side.

To Optimize or not to Optimize

Anyone who believes that full optimization works as well as touted by some system vendors would do well to read "The Usefulness of Historical Data in Selecting Parameters for Technical Trading Systems" by Louis B. Lukac and B. Wade Brorsen, in The Journal of Futures Markets, Vol. 9 (1989), No. 1, pp. 55-65. Their work is systematic and complete. They tested two trend-following systems, the Channel Breakout and Wilder's Directional Movement System, using 20 years of data. The only variable that was optimized was the number of days used in each calculation. That parameter was stepped through a time period of 5 to 60 days, in 5-day increments.

They compared three different optimization schemes with a random test which used parameter values randomly chosen from the 5- to 60-day set. The most significant finding was that the reoptimization strategies did nothing to increase system performance. Each optimization method produced results not significantly different from the random test. With or without optimization, profits were on the order of 50 to 65% for the Channel Breakout System, and 30 to 54% for Wilder's Directional Movement System. They stated "The results of all the tests suggest that the forecasting ability of optimization is limited. Optimization was not able to forecast parameter sets which would produce portfolio profits better than a random selection strategy".

Let us stress that this was a rigorously formal test done with great attention to detail. Anyone who claims that full optimization works better than a simple blind simulation will have to produce contrary results that are just as rigorously attained.

Testing Protocols

We'll explain a few of the most common optimization and testing schemes.

Simple Optimization: This is as easy as it sounds. You create a trading system, then optimize it over a comprehensive set of parameter values until you find the ones that yield the best return. In our

opinion this is the least productive system testing method. It is curve-fitting of the worst kind.

Cumulative Forward Testing: This requires that you optimize a system over a period at the beginning of your data, then test the results over a relatively short subsequent period. You then re-optimize over a period that includes both data sets, and continue the cycle. For example, if you have 10 years of T-Bond data, you might optimize over the first 3 years, then test over the next one. If the results are still good, you then optimize over the full four years, then test the fifth year, and so on. This is one of the forms of optimization that was tested by Lukac and Brorsen and found to be no better than random (see above).

Simple Forward Testing: This is also called blind simulation. You optimize for the beginning of your data (say for the first five years of a 10 year data set), and then test the results of your optimization over the more recent time period, with no modification. If it doesn't work, it's back to the drawing board.

Forward testing is the most elegant solution to the system testing muddle. It offers some of the advantages of optimization with none of the disadvantages. If your system doesn't prove profitable with this forward testing procedure, throw it out. It will probably be only sporadically effective in real time.



To Be Continued

This has been the second installment of our series on system testing. When we continue, we'll walk through some specific examples, employing various testing techniques. We'll try to stay away from boring everyone with useless results, e.g. testing of individual technical studies outside the context of a trading system and with no regard for risk control. We hope that everyone realizes that just about all tests using the same indicator for entries and exits will end up as zero sum and have no relation to the indicator's potential value when correctly integrated into a trading system.

TECHNICAL TOOLBOX

A SPECIAL MONTHLY FEATURE OF TECHNICAL TRADERS BULLETIN
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SYSTEM TESTING PART THREE

BY DAVID LUCAS

In our first two articles about system testing, we presented the basics of creating a viable trading system. In this article we are going to chronicle the evolution and testing of a simple, but effective trading system, beginning with an appropriately sized account and continuing through the phases of selecting a portfolio to trade, establishing risk control, and building the system itself. We'll explain the reasons for each decision we make along the way. We think that simple systems require simple testing procedures, so we won't be using complex optimization techniques (which we're skeptical about anyway). We want to emphasize that our goal in this article is simply to show the procedures for building and testing a system. The system produced as a result of this article is not necessarily a system that we would recommend. We make no claims whatsoever that the system will be profitable in the future.

Goals for the Trading System

One of our first requirements is that the system be mechanical, easy to maintain, and easy on the trader's ulcer. By easy to maintain we mean that the trader doesn't have to be glued to a quote machine all day, and, in fact, can dispense with real-time quotes altogether if he or she wants. It also means that all necessary calculations can be done (using the right software) in a matter of minutes per day, with all orders entered only once per day, preferably just before the opening. The turnover rate of the system (what we call the pace) must be low enough that the part-time trader will feel comfortable and in control.

It is obviously difficult to project a rate of return for any investment scheme, never mind for a futures trading system, but the opportunity for return must be commensurate with the degree of risk. We would like to see our testing show an annualized rate of return of at least 20 - 30%. Just as importantly, we would like a winning percentage of at least 40% and a v.g. win/avg. loss ratio of at least 2.0 : 1 (see our previous system testing and money management articles for a full explanation), which would give us

a statistical probability of ruin of nearly zero. The probability of ruin calculation gives us some idea of the extent of our maximum potential peak-to-valley drawdown, which we would like to limit to about 40% or so. If this drawdown sounds high, check the track records of a few successful CTA's. You'll find that very few of them have avoided drawdowns of 40 to 45%, even though they normally work with very large, well-diversified accounts.

Account Size

Choosing the size of a futures trading account is obviously up to the individual trader's wallet size and fear quotient, but there are boundaries below which it is very difficult to operate effectively. It is our experience, backed up by considerable industry research, that relatively small accounts, meaning under \$25,000, have a much lower probability of success than larger accounts. With this in mind we've chosen \$25,000 as our account size.

Portfolio

Choosing a portfolio to trade is always a subjective task. We want to be sure that we're diversified, and that we're in markets that aren't so continually volatile that the risk becomes impossible to control. We're creating the system with the idea that it can be maintained in about 20 minutes a day, so that precludes day trading. It is difficult if not impossible to trade the stock indexes for \$25,000 if we're holding trades overnight, so they are effectively eliminated. We don't want to be in a situation where one bad market day will erase most of our account. Also, just to be conservative we want to keep our maximum margin requirements to about 30% of the account. We can't do this if we're trading the stock indexes.

After some thought, we decided on five markets, each in a separate market group. In currencies we chose the D-Mark, in precious metals gold, in interest rates T-Bonds, in agriculturals soybeans, and in the petroleum complex crude oil. We left out the food and fiber group because adding a market from that group would bring our total margins above \$10,000

(at present rates) and of all the complexes these markets are in our opinion the most likely (after stock indexes) to cause sudden large losses.

Software and Data

We use both CompuTrac/SNAP and Omega Research's System Writer Plus for testing. For this application we used System Writer Plus, partly because of the existence of a very handy piece of software called Portfolio Analyzer, written and sold by Tom Berry. Portfolio Analyzer takes individual ASCII files created by System Writer Plus and combines them to display test results on a portfolio of markets, rather than one market at a time. It also calculates daily, monthly, quarterly or yearly equity so that you can see the effects of system or portfolio changes across the spectrum of markets you are trading. It allows you to test for portfolio drawdown and rate of return directly, rather than by estimating or building a spreadsheet and entering individual market results to get a composite report. It often happens that a market that is a net loser adds significantly to a portfolio by showing returns that are negatively correlated with those of other markets. If that market (or markets) wins while others are losing the effect is to soften total drawdown and smooth out the equity curve. We should therefore not be dismayed if one or two of the markets we've chosen turn out to be net losers as a result of our testing, as long as the equity curve is smooth and the overall result is as desired.

Six and a half years of daily data will be used for testing, starting with January 1, 1984 and ending with June 29, 1990. The data is arranged as continuous contracts. We really can't go back farther and still test the full portfolio; crude oil didn't start trading until late 1983. We'll be especially interested in the years 1986, 1988, and 1989. These were particularly tough years for trend followers. If we can survive them it lends credibility to our trading system.

Curve-Fitting and Optimization

We've discussed this in great detail in prior articles, but since some curve-fitting is impossible to avoid it's worth mentioning again. We will be curve-fitting to the extent that the technical studies, their values, and our stop values will all be items with which we have had actual trading experience. Trading gives you a feel for some things that it is difficult to acquire in any other way. We've also had a lot of testing experience, which interestingly enough has in most (but not all) cases supported observations derived from actual trading.

We will not optimize. We will test our system, and if it doesn't work, we will modify it. We will not test endless combinations of study values and risk levels in order to find an optimum solution. We will use exactly the same study values and stops for every market, further ensuring that we are doing as little curve-fitting as possible. If the system works in most of the markets we've chosen and the losing markets buffer equity drawdowns, we will have done our job satisfactorily. Remember, it is the markets and our wallets we have to live with; we aren't doing this to satisfy the computer's insatiable need for perfection at the cost of reality.

Risk Control

There is no such thing as a successful trading system that doesn't adequately control risk. For testing purposes, we define risk in two ways: initial risk, which is the difference between an entry point and a protective stop, and equity risk, which is the difference between marked-to-the-market equity and a trailing stop. These two categories can be further divided into initial and equity risk in a single trade, and initial and equity risk across a portfolio of simultaneous trades.

Initial risk is controlled by protective stops. In our own trading we try not to risk more than 1.5% on a \$100,000 account, which means a \$1,500 stop. Since we are trading the same markets as we would with a larger account, and since our experience is that smaller stops in these markets cause a larger number of losing trades, we will stick with this number. We may consider trying different values if our winning percentage is less than we had hoped.

Jack Hutson of *Technical Analysis of Stocks and Commodities* magazine, at a recent conference we attended, suggested an interesting method of setting stops. His idea is that you look at all prior winning trades and use the largest negative excursion over all of the winning trades as your protective stop. He allowed that it was curve-fitting, but we think the idea is interesting and we'll follow up in the future.

Equity risk is controlled by trailing stops. There are several ways to do this, but we prefer trailing by a simple dollar amount. This is a technique that is somewhat out of favor, but we like it because it allows you to quantify portfolio risk, that is, the sum of the differences between open equity and trailing stops. If portfolio risk is too large, equity swings will be unlivable. This is a phenomenon familiar to CTA's and clients of CTA's. Profit builds up in a group of positions over a period of months, and then

the markets reverse and a sudden, sharp equity loss occurs. This happens even though there have been no losing trades! A client of a CTA can easily find himself or herself in a position of paying incentive fees or even taxes on profits that have vanished. The only way to control this type of risk is with trailing stops. We will trail a \$1,500 stop.

A third type of stop that is often employed is a break-even stop. System Writer Plus defines this as moving a stop up so as to cause an exit at the entry point once a trade is in profit by a given amount. We have mixed feelings about break-even stops, but we will use them in this case. We'll invoke it once a trade is \$1,500 in profit, on a closing basis.

It is possible to optimize these stop values one at a time or all together, but we won't do that. We want a robust trading system that will work tomorrow, not an optimized one that worked yesterday.

Technical Studies - Entries

The most common trend-following study is the simple moving average. We've been using them for many years, and have tested vast numbers of combinations. A few favorites have emerged. We normally favor a dual moving average approach, with some of our favorite combinations being 3/12 (see our Sep. '89 issue), 9/18/10/18, and 10/20. We have found that as an entry technique they are normally on the right side of a trend. We won't waste our time trying to use moving averages for exits; they are normally far too slow for that. We'll try 3/12 first, for entries only.

Technical Studies - Exits

Our current favorite exit technique (barring stops) is Wilder's Parabolic. We'll use that as our exit, using Wilder's original values to increment the SAR points (see TTB November 1989). The Parabolic starting point, however, will be different because

System Writer Plus does not have Wilder's original formula as an available function. Wilder's formula uses the high or low of the prior Parabolic trade as a starting point. SWP's formula uses the high or low of the last n days, leaving you to select the n . A relatively short n period has the advantage of bringing the initial stops closer. When we've tested the Parabolic previously, the number of days selected was not especially important as long as it was within a range of about 4 to 15. We'll try 10 days.

First Test

For this test, we want to keep it as simple as possible with as little degree of freedom loss as we can manage. We're using a 3/12 moving average crossover for entries, a 10-day Parabolic for exits, and \$1,500 initial risk, break-even, and trailing stops.

Our procedure will be to test the entire six and a half years of data in order to see how the entries are working. If they are obviously not working well, we'll break the testing period into two parts, the first part being four years and the second part two and a half. Then we'll test some other combinations over the earliest section of our data and affirm our final combination over the later data.

The test results appear below. We've abbreviated the Performance Summary from System Writer Plus; there isn't enough space to print everything.

Actually, this is pretty encouraging. As we might have expected, soybeans and gold are losers, but it's surprising to see how well the system has handled T-Bonds, D-Marks and crude oil. It's possible that with a little help we may have a workable trading system.

The next step is to run the results through Portfolio Analyzer. We see that the profits average \$3,282 per year (we're always assuming no pyramiding or compounding), which is an annualized yield of 14.8%. We know a lot of traders who would be happy with

PERFORMANCE SUMMARY TEST NUMBER ONE

	<u>Soybeans</u>	<u>D-Mark</u>	<u>Gold</u>	<u>T-Bonds</u>	<u>Crude Oil</u>	<u>Portfolio</u>
Net Profit	-\$8,981	\$16,187	-\$26,860	\$29,156	\$14,525	\$24,027
Number of Trades	81	61	76	94	59	371
% Profitable	33	40	19	44	35	35
Avg. Win/Avg. Loss	1.63	2.09	1.95	1.80	2.47	2.06
Maximum Drawdown	-\$16,256	-\$14,512	-\$30,701	-\$9,937	-\$8,900	-\$22,259

that. But look at the drawdown, \$22,259! If it happened early on in our trading, it would wipe us out. A quick calculation shows us that our winning percentage of 35% and ratio of average win to average loss of 2.06 gives us a high Probability of Ruin. The chances of the portfolio declining to \$15,000 (down 40%) before it rises to \$50,000 are 45%.

As we can see, the predictable has happened. We have managed to design a profitable but unacceptable trading system. This exercise is a good example of why we should never use net profitability as the sole criterion for judging the effectiveness of a trading system. As we've stated in previous articles, test for a specific matrix of criteria that in your judgment is going to yield the most robust solution.

The Next Step

The next step is admittedly subjective and judgmental. We're going to look at the individual trade listings for each market to see if the entries have been successful or not. This is subjective and judgmental for two reasons. First, if you analyze a single element in a group of interdependent parts of a trading system you never really know how important each element is to each trade. Often making one small change that you think is innocent will disrupt the chain of events and the change will ripple throughout the system. Second, there really aren't, and probably shouldn't be, any objective criteria to aid your decision. Perhaps this is where art and experience come in.

We're looking at strings of trades to see how quickly and by how much the trades have been in profit. Obviously, we can't print the results of 367 trades, but two common phenomena emerge as we look at all five markets. First, as you might expect, the good trades were in profit quickly. Second, the bad trades lost quickly, and were in clusters. Looking at the trades on a chart, one at a time, a pattern

becomes clear. Our moving average entry does well when the markets are making wide swings, but there are large strings of losses when they are choppy.

ADX as a Filter

As our subscribers know, we use Wilder's DMI and its ADX derivative frequently. Most of the tests in which we've used it as a filter to objectively decide whether or not a market is trending have shown it to be effective. We'll use an 18-day ADX.

We must use some care in the way we test ADX. If we're not careful it will not act as a filter, but as an entry trigger by itself. We'll code the entry so that we only buy or sell when an ADX uptick and a moving average crossover occur on the same day. If the ADX is trending downward, the market is directionless and our look at the trades has shown us that these are big losing periods.

As you can see in the table below, the changes are dramatic. All of the markets are now profitable, although we might wish to make more money in gold after 6 1/2 years of trading. Surprisingly, T-Bonds and crude oil are not as profitable as before. The winning percentages are higher, though, and the number of trades considerably less. It appears our filter is doing its job. Let's run Portfolio Analyzer.

The total net profit using ADX is \$61,333, more than double the profit of the previous test. The simple annualized rate of return is now 37.7%. The number of trades is down to 151. Even better, our winning percentage has increased to 44%, and the ratio of average win to average loss has also increased to a healthy 2.32. Our Probability of Ruin (as defined above) is now only 2.9%. The maximum peak-to-valley drawdown is \$9,414, well within our original guidelines. On the following two pages are the monthly equity figures. Notice that we have withdrawn profits or deposited losses at the beginning of each year so that we start every year with \$25,000.

PERFORMANCE SUMMARY TEST NUMBER TWO (with ADX)

	<u>Soybeans</u>	<u>D-Mark</u>	<u>Gold</u>	<u>T-Bonds</u>	<u>Crude Oil</u>	<u>Portfolio</u>
Net Profit	\$6,687	\$23,625	\$1,219	\$19,187	\$10,615	\$61,333
Number of Trades	34	22	34	32	29	151
% Profitable	38	59	38	46	41	44
Avg. Win/Avg. Loss	2.27	3.01	1.72	2.15	2.36	2.32
Maximum Drawdown	-\$5,125	-\$2,600	-\$12,529	-\$6,187	-\$6,235	-\$9,414

\$25,000 Hypothetical Account - Jan. 1984 to Jun. 1990

(\$125 per trade deducted for commissions and slippage)

Period Ending	Beginning Equity	Additions*	Withdrawals *	Net Performance	Ending Equity	Rate of Return
Jan-84	\$24,718.75	\$0.00	\$0.00	-\$386.25	\$24,718.75	-1.13%
Feb-84	\$24,718.75	\$0.00	\$0.00	\$1,000.50	\$25,719.25	4.05%
Mar-84	\$25,719.25	\$0.00	\$0.00	-\$1,178.75	\$24,540.50	-4.58%
Apr-84	\$24,540.50	\$0.00	\$0.00	\$2,627.50	\$27,168.00	10.71%
May-84	\$27,168.00	\$0.00	\$0.00	\$4,072.50	\$31,240.50	14.99%
Jun-84	\$31,240.50	\$0.00	\$0.00	-\$197.50	\$31,043.00	-0.63%
Jul-84	\$31,043.00	\$0.00	\$0.00	\$8,807.50	\$39,850.50	28.37%
Aug-84	\$39,850.50	\$0.00	\$0.00	-\$4,517.00	\$35,333.50	-11.33%
Sep-84	\$35,333.50	\$0.00	\$0.00	\$1,375.00	\$36,708.50	3.89%
Oct-84	\$36,708.50	\$0.00	\$0.00	\$2,506.25	\$39,214.75	6.83%
Nov-84	\$39,214.75	\$0.00	\$0.00	\$1,595.00	\$40,809.75	4.07%
Dec-84	\$40,809.75	\$0.00	\$0.00	\$1,252.50	\$42,062.25	3.07%
				\$17,062.25		68.25%
Jan-85	\$42,062.25	\$0.00	-\$17,062.25	-\$2,726.50	\$22,273.50	-10.91%
Feb-85	\$22,273.50	\$0.00	\$0.00	\$1,275.00	\$23,548.50	5.72%
Mar-85	\$23,548.50	\$0.00	\$0.00	\$105.00	\$23,653.50	0.45%
Apr-85	\$23,653.50	\$0.00	\$0.00	-\$171.25	\$23,482.25	-0.72%
May-85	\$23,482.25	\$0.00	\$0.00	\$6,302.25	\$29,784.50	26.84%
Jun-85	\$29,784.50	\$0.00	\$0.00	\$326.25	\$30,110.75	1.10%
Jul-85	\$30,110.75	\$0.00	\$0.00	\$3,027.00	\$33,137.75	10.05%
Aug-85	\$33,137.75	\$0.00	\$0.00	-\$417.50	\$32,720.25	-1.26%
Sep-85	\$32,720.25	\$0.00	\$0.00	\$1,110.00	\$33,830.25	3.39%
Oct-85	\$33,830.25	\$0.00	\$0.00	-\$412.50	\$33,417.75	-1.22%
Nov-85	\$33,417.75	\$0.00	\$0.00	\$480.00	\$33,897.75	1.44%
Dec-85	\$33,897.75	\$0.00	\$0.00	\$692.00	\$34,589.75	2.04%
				\$9,589.75		38.36%
Jan-86	\$34,589.75	\$0.00	-\$9,589.75	\$662.50	\$25,662.50	2.65%
Feb-86	\$25,662.50	\$0.00	\$0.00	\$3,095.00	\$28,757.50	12.06%
Mar-86	\$28,757.50	\$0.00	\$0.00	-\$762.50	\$27,995.00	-2.65%
Apr-86	\$27,995.00	\$0.00	\$0.00	-\$1,456.25	\$26,538.75	-5.20%
May-86	\$26,538.75	\$0.00	\$0.00	\$0.00	\$26,538.75	0.00%
Jun-86	\$26,538.75	\$0.00	\$0.00	-\$1,323.00	\$25,215.75	-4.99%
Jul-86	\$25,215.75	\$0.00	\$0.00	\$2,792.50	\$28,008.25	11.07%
Aug-86	\$28,008.25	\$0.00	\$0.00	\$75.00	\$28,083.25	0.27%
Sep-86	\$28,083.25	\$0.00	\$0.00	-\$2,850.00	\$25,233.25	-10.15%
Oct-86	\$25,233.25	\$0.00	\$0.00	-\$1,025.00	\$24,208.25	-4.06%
Nov-86	\$24,208.25	\$0.00	\$0.00	\$1,801.25	\$26,009.50	7.44%
Dec-86	\$26,009.50	\$0.00	\$0.00	-\$3,558.75	\$22,450.75	-13.68%
				-\$2,549.25		-10.20%
Jan-87	\$22,450.75	\$2,549.25	\$0.00	-\$2,313.75	\$22,686.25	-9.26%
Feb-87	\$22,686.25	\$0.00	\$0.00	-\$1,375.00	\$21,311.25	-6.06%
Mar-87	\$21,311.25	\$0.00	\$0.00	\$2,218.75	\$23,530.00	10.41%
Apr-87	\$23,530.00	\$0.00	\$0.00	\$6,481.25	\$30,011.25	27.54%
May-87	\$30,011.25	\$0.00	\$0.00	-\$1,470.00	\$28,541.25	-4.90%
Jun-87	\$28,541.25	\$0.00	\$0.00	\$0.00	\$28,541.25	0.00%
Jul-87	\$28,541.25	\$0.00	\$0.00	\$987.50	\$29,528.75	3.46%
Aug-87	\$29,528.75	\$0.00	\$0.00	-\$585.00	\$28,943.75	-1.98%
Sep-87	\$28,943.75	\$0.00	\$0.00	-\$1,448.75	\$27,495.00	-5.01%
Oct-87	\$27,495.00	\$0.00	\$0.00	\$2,042.50	\$29,537.50	7.43%
Nov-87	\$29,537.50	\$0.00	\$0.00	\$4,553.75	\$34,091.25	15.42%
Dec-87	\$34,091.25	\$0.00	\$0.00	\$800.00	\$34,891.25	2.35%
				\$9891.25		39.57%
Jan-88	\$34,891.25	\$0.00	-\$9,891.25	-\$2,615.00	\$22,385.00	-10.46%
Feb-88	\$22,385.00	\$0.00	\$0.00	-\$310.00	\$22,075.00	-1.38%
Mar-88	\$22,075.00	\$0.00	\$0.00	-\$4,188.50	\$17,886.50	-18.97%
Apr-88	\$17,886.50	\$0.00	\$0.00	\$718.75	\$18,605.25	4.02%
May-88	\$18,605.25	\$0.00	\$0.00	\$3,903.75	\$22,509.00	20.98%
Jun-88	\$22,509.00	\$0.00	\$0.00	-\$1,992.25	\$20,516.75	-8.85%
Jul-88	\$20,516.75	\$0.00	\$0.00	-\$770.00	\$19,746.75	-3.75%
Aug-88	\$19,746.75	\$0.00	\$0.00	\$2,410.00	\$22,156.75	12.20%
Sep-88	\$22,156.75	\$0.00	\$0.00	\$8,022.50	\$30,179.25	36.21%
Oct-88	\$30,179.25	\$0.00	\$0.00	-\$45.00	\$30,134.25	-0.15%
Nov-88	\$30,134.25	\$0.00	\$0.00	\$2,427.50	\$32,561.75	8.06%
Dec-88	\$32,561.75	\$0.00	\$0.00	\$3,621.50	\$36,183.25	11.12%
				\$11,183.25		44.73%

*Profits withdrawn or losses added at start of each year.

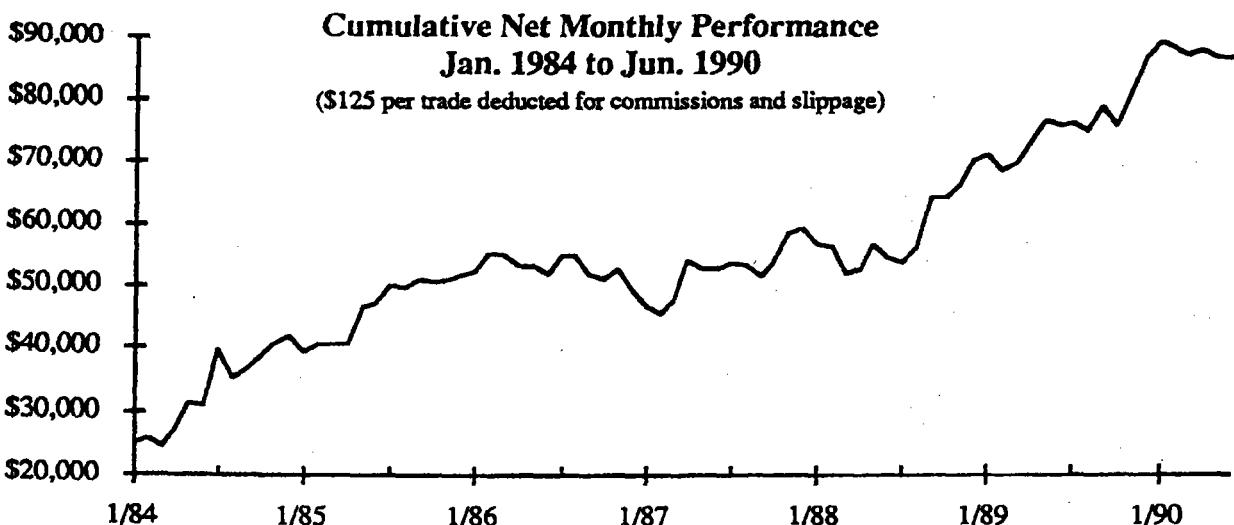
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from page 7

\$25,000 Hypothetical Account - Jan. 1984 to Jun. 1990

Period	Beginning Equity	Additions*	Withdrawals *	Net Performance	Ending Equity	Rate of Return
Jan-89	\$36,183.25	\$0.00	-\$11,183.25	\$763.00	\$25,763.00	3.05%
Feb-89	\$25,763.00	\$0.00	\$0.00	-\$2,261.75	\$23,501.25	-8.78%
Mar-89	\$23,501.25	\$0.00	\$0.00	\$1,212.50	\$24,713.75	5.16%
Apr-89	\$24,713.75	\$0.00	\$0.00	\$3,248.75	\$27,962.50	13.15%
May-89	\$27,962.50	\$0.00	\$0.00	\$3,361.25	\$31,323.75	12.02%
Jun-89	\$31,323.75	\$0.00	\$0.00	-\$825.00	\$30,498.75	-2.63%
Jul-89	\$30,498.75	\$0.00	\$0.00	\$612.50	\$31,111.25	2.01%
Aug-89	\$31,111.25	\$0.00	\$0.00	-\$1,257.50	\$29,853.75	-4.04%
Sep-89	\$29,853.75	\$0.00	\$0.00	\$3,912.50	\$33,766.25	13.11%
Oct-89	\$33,766.25	\$0.00	\$0.00	-\$2,998.25	\$30,768.00	-8.88%
Nov-89	\$30,768.00	\$0.00	\$0.00	\$5,127.50	\$35,895.50	16.67%
Dec-89	\$35,895.50	\$0.00	\$0.00	\$5,332.50	\$41,228.00	14.86%
				\$16,228.00		64.91%
Jan-90	\$41,228.00	\$0.00	-\$16,228.00	\$2,713.75	\$27,713.75	10.86%
Feb-90	\$27,713.75	\$0.00	\$0.00	\$1,050.00	\$26,663.75	-3.79%
Mar-90	\$26,663.75	\$0.00	\$0.00	\$1,240.00	\$25,423.75	-4.65%
Apr-90	\$25,423.75	\$0.00	\$0.00	\$900.00	\$26,323.75	3.54%
May-90	\$26,323.75	\$0.00	\$0.00	\$1,325.00	\$24,998.75	-5.03%
Jun-90	\$24,998.75	\$0.00	\$0.00	\$25.00	\$25,033.75	0.14%
				\$33.75		0.14%

HYPOTHETICAL OR SIMULATED PERFORMANCE RESULTS HAVE CERTAIN INHERENT LIMITATIONS. UNLIKE AN ACTUAL PERFORMANCE RECORD, SIMULATED RESULTS DO NOT REPRESENT ACTUAL TRADING. ALSO, SINCE THE TRADES HAVE NOT ACTUALLY BEEN EXECUTED, THE RESULTS MAY HAVE UNDER-OR-OVER COMPENSATED FOR THE IMPACT, IF ANY, OF CERTAIN MARKET FACTORS SUCH AS LACK OF LIQUIDITY. SIMULATED TRADING PROGRAMS IN GENERAL ARE ALSO SUBJECT TO THE FACT THAT THEY ARE DESIGNED WITH THE BENEFIT OF HINDSIGHT. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN.



One of the fascinating things about system testing is that when you change something in your system, the effects are often unpredictable. When you change an exit technique slightly, not only will exits be affected, but entries as well. Be careful of the one small alteration in your trading scheme that makes a "good" system unprofitable. One of the few truisms about system testing is that it's hard to ruin a good trading system. If you change your initial risk stop by \$100 and the results are wildly different, there is good reason to suspect a flaw in the makeup of the system. It is easy to fall into inadvertent curve-fitting, and difficult to test for it. One possible

method that we've used is to optimize after the fact, using a range of study values and stops. If the results are acceptable across a broad range of values, then your system should be reasonably robust.

We hope you've enjoyed our simple exercise. We'll get more complex next time, and test more combinations of indicators.

System Writer Plus is by Omega Research (305) 594-7664.
Portfolio Analyzer is by Tom Berry (919) 697-0240.

Technical Traders Bulletin
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Appendix II

Answers to the Expectancy Problems

Winning percentage = $10/27 = 0.3704$;

Average winning trade = \$2405;

Losing percentage = $17/27 = 0.6296$;

Average losing trade = \$900.88

Expectancy = $(0.3704 * 2405) - (0.6296 * 900.88) = 890.812 - 567.194 = 323.618$

Divide this by \$900.88 for an approximation of the expectancy per dollar risked = 0.359

Expectancy = $(0.5 * 3) - (0.5 * 1) = \1.00

Losing Percentage = $3/24 = .125$;

Average Losing Trade = \$4426.67

Winning Percentage = $21/24 = .875$;

Average winning trade = \$593.33

Expectancy = $(0.875 * 593.33) - (0.125 * 4426.67) = 519.16 - 553.33 = -\34.17

Divide this amount by the average losing trade (4426.67) for an approximation of the expectancy per dollar risked = minus 0.0077

4. Here we must use the win/loss ratio instead of the average amount won

Expectancy = $(0.27 * 6.2) - (0.73 * 1) = 1.674 - 0.73 = 0.944$

a. Expectancy = $(0.72 * 1) - (0.28 * 1.4) = 0.328/1.4 = 0.234$ per dollar risked

If \$1000 of risk is assumed, then you can expect to make \$234 per trade. Since you will get 60 trades from this system in a 20 day month, 60 times \$234 is \$14,040

Expectancy = $(0.34 * 12.3) - (0.66 * 1) = 3.522$

If \$1,000 worth of risk is assumed, then you can expect to make \$3,522 per trade. Since you will get 6 trades with this system, 6 times \$3,522 is \$21,132

Expectancy = $(0.61 * 2.3) - (0.39 * 1) = 1.013$

If \$1,000 is risked with this system, you could expect to make \$1013. Since this system generates about 140 trades each month, you can expect to make \$141,820 per month using it — a clear winner compared with the other systems.

Expectancy = $(0.46 * 3210) - (0.54 * 1070) = 1476.6 - 577.8 = 898.8$

We need to divide this amount by 1070 to get the expectancy per dollar risked which is 0.84. This means that for every \$1000 risk, you could expect to make \$840. Since this system makes 16 trades each month, its total value is \$13,440.

Expectancy = $(0.53 * 783) - (0.47 * 231) = 414.99 - 108.57 = 306.42$

We need to divide this amount by 231 to get the expectancy per dollar risked, so our resulting value is 1.326. This means you could expect to make \$1,326 per thousand risked, on the average. Since this system makes 6.67 trades per month, we would expect to make \$8,847.71

Appendix III

Calculating Various Indicators

A. Calculating the Directional Movement Index (DMI)

1. Directional movement is the largest part of today's range that is outside yesterday's range (i.e., +DM when it is above and -DM when it is below).
2. Outside days will have both a +DM and a -DM. Use the larger.
3. Inside days have zero DM.

B. Calculating ADX

1. Measure directional movement (DM).
2. Measure the true range (TR), which is defined as the largest of:
 - a. The distance between today's high and today's low.
 - b. The distance between today's high and yesterday's close.
 - c. The distance between today's low and yesterday's close.
3. Divide the DM by the TR to give the directional indicator (DI).
$$DI = DM / TR$$

The result can be either positive or negative. If positive, it is the percentage of the true range that is up for the day. If negative, it is the percentage of the true range that is down for the day. +DI and -DI are normally averaged over a time period. Wilder suggests 14 days. The calculation then becomes:

$$+DI_{14} - +DM_{14} / TR_{14} \text{ or } -DI_{14} = -DM_{14} / TR_{14}$$

+DI and -DI are two of the three values normally displayed as the DMI.

The third is the ADX, which is derived as follows:

4. Compute the difference between +DI and -DI.
$$DI_{diff} = | (+DI) - (-DI) |$$
5. Compute the sum of +DI and -DI.
$$DI_{sum} = [(+DI) + (-DI)]$$
6. Calculate the DX or directional movement index.

$$DX = DI_{diff} / DI_{sum}) * 100$$

The 100 normalizes the DX value, so it falls between 0 and 100. The DX by itself is very volatile and is not usually displayed.

7. Compute a moving average of the DX to create the average directional movement index (ADX). Normally, the smoothing is by the same number of days used to calculate +DI and -DI.
8. A further smoothing can be created by calculating a momentum-type derivative of ADX called the average directional movement index rating (ADXR).

$$ADXR = (ADX_t + ADX_{t-n}) / 2$$

where t = today and t-n = the number of days ago needed to calculate ADX.

References:

- LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL. 1992.
Wilder, J. Wells, Jr., *New Concepts in Technical Trading Systems*. Greensboro, N.C., Trend Research, 1978.

C. Relative Strength Index (RSI)

The RSI calculation is a two-step process. First, calculate the Close-to-Close price differences as follows:

$$U_t = (UP_1 + UP_2 + \dots + UP_n) / n$$

$$D_t = (DN_1 + DN_2 + \dots + DN_n) / n$$

Where:

U_t = the Up average for the n period

D_t = the Down average for the n period

UP_1 = the first upward Close-to-Close price difference in the data series, UP_2 the second, etc.

DN_1 = the first downward Close-to-Close price difference in the data series, DN_2 the second, etc.

n = the number of periods in the calculation

$$RSI_t = (U_t / (U_t + D_t)) * 100$$

References:

- LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL. 1992.
Wilder, J. Wells, Jr., *New Concepts in Technical Trading Systems*. Greensboro, N.C., Trend Research, 1978.

D. Slow Stochastics

Slow stochastics are derived from fast stochastics, which in turn are derived from the basic stochastic calculation for raw %K, which is:

$$\%K_{raw,t} = ((Close_t - Low_n) / (High_n - Low_n)) * 100$$

Where:

$\%K_{raw,t}$ = current raw %K

$Close_t$ = current close

$High_n$ = the high of the past n periods

Low_n = the low of the past n periods

n = number of periods

Then:

$$\%K_t = ((\%K_t - 1 * 2) + \%K_{raw,t}) / 3$$

Where:

$\%K_t$ = current fast %K

$\%K_{t-1}$ = prior fast %K

$\%K_{raw,t}$ = current raw %K

2 = a smoothing constant

%D is a three-period moving average of %K. Thus:

$$\%D_t = ((\%D_{t-1} * 2) + \%K_t) / 3$$

E. Slow Stochastics are derived as follows:

$\%K_{slow} = \%D_{fast}$

%D is again a three-period moving average of %K.

$$\%D_{slow,t} = ((\%D_{slow,t-1} * 2) + \%K_{slow,t-1}) / 3$$

Where:

$\%D_{slow,t}$ = current slow %D

$\%D_{slow,t-1}$ = slow %D for the prior period

$\%K_{slow,t-1}$ = slow %K for the prior period

References:

- Elder, Alexander, *Using Stochastics to Catch Early Trend Reversals*. **Futures**, June 1987, pp. 68-70
- Kaufman, P. *The New Commodity Trading Systems and Methods*. New York: Wiley, 1987
- Lane, G. Lane's Stochastics. *Technical Analysis of Stocks and Commodities, Investment Techniques*, 2, 1987-1990
- LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL.: Business One Irwin, 1992.
- Murphy, J. *Technical Analysis of Futures Market*. New York, NY: NY Institute of Finance, 1986.

F. Moving Average Convergence Divergence (MACD)

MACD consists of a first line that is the difference between two exponential moving averages, and a second "signal" line which is an exponential moving average of the first line. The first line is computed as follows:

$$\text{MACD}_t = (\text{EMA1} - \text{EMA2})$$

Where:

MACD_t = current MACD

EMA1 = an exponential moving average

EMA2 = an exponential moving average

Normally MACD uses 12 days for EMA1 and 26 days for EMA2. This gives the MACD that Appel recommends for the sell side of the stock market, but which most practitioners use for both long and short signals. Appel's buy configuration uses 8-day and 17-day EMAs, respectively. The signal line is computed as follows:

$$\text{SIG}_t = \text{SIG}_{t-1} + (\text{SC} * \text{MACD}_t - \text{SIG}_{t-1})$$

Where:

SIG_t = current signal line value

SIG_{t-1} = previous signal line value

MACD_t = current MACD value

SC = smoothing constant. This is derived from the number of days in the exponential calculation (see Moving Average section of the Appendix).

References:

- Appel, G. *The Moving Average Convergence/Divergence Trading Methods - Advanced Version*. Toronto, Ontario: Scientific Investment System, 1985.
- LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL.. Business One Irwin, 1992.

G. Parabolic

The first Parabolic SAR (Stop and Reverse) point in a data series is the extreme price of the prior Parabolic trade: thus $\text{SAR}_1 = \text{EP}_{\text{prior}}$. Subsequent SARs are calculated as follows:

$$\text{SAR}_t = \text{SAR}_{t-1} + (\text{AF} * (\text{EP}_{\text{prior}} - \text{SAR}_{t-1}))$$

Where:

SAR_t = current SAR

SAR_{t-1} = prior SAR

EP = extreme price

AF = acceleration factor. The AF normally starts at 0.02 and steps up in increments of 0.02 to a maximum of 0.20.

References:

- Kaufman, P. *The New Commodity Trading systems and Methods*. New York, NY: Wiley, 1987.
- LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL., 1992.
- Wilder, J. *New Concepts in Technical Trading Systems*. Greensboro, NC: Trend Research, 1978.

H. Percent R

$$\%R_t = ((High_n - Close_t) / (High_n - Low_n)) * 100$$

Where:

$\%R_t$ = current %R

$High_n$ = the highest prices for the past n trading periods

Low_n = the lowest price for the past n trading periods

$Close_t$ = current close

n = number of periods in the calculation

References:

- LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL., 1992.
- Williams, L. *How I Made One Million Dollars Last Year Trading Commodities*. Carmel Valley, CA: Conceptual Management, 1973.

I. Rate of Change

$$ROC_t = (P_i / P_{i-n}) * 100$$

Where:

ROC_t = current rate of change value

P_i = current price

P_{i-n} = price n periods ago

References:

- LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL.: Business One Irwin, 1992.

J. Commodity Channel Index (CCI)

There are four steps to calculate CCI:

1. Compute today's average price, using high, low and close:

$$X1 = 1/3 (High + Low + Close)$$

2. Compute a moving average of the n most recent average prices:

$$X = \frac{1}{n} \sum_{i=1}^n X_i$$

Where:

n = number of periods in data base

$\sum_{i=1}^n$ stands for the sum of items following the symbol, starting with 1 and ending with n

e.g., $\sum_{i=1}^n X_i = X_1 + X_2 + X_3 \dots X_n$ symbol, starting with 1 and ending with n ,

X_1 = current typical price

X_2 = prior typical price

X_n = oldest typical price in the data base

3. Compute the mean deviation of the n most recent typical prices:

$$MD = \frac{1}{n} \sum_{i=1}^n |X_i - \bar{X}|$$

Where:

e.g. $| |$ signifies "absolute value"; differences should be added as if all were positive numbers.

4. Compute the Commodity Channel Index:

$$CCI = (X_1 - \bar{X}) / (0.015 \times MD)$$

References:

- Lambert, D. *Commodity Channel Index: Tool for Trading Cyclic Trends*. Commodities, October, 1980.
 LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL., Business One Irwin, 1992.

K. Moving Averages

Simple:

$$MA_t = P_t + P_{t-1} + P_{t-2} + \dots + P_{t-n} / n$$

Where:

MA_t = current moving average value

$P_t + P_{t-1}$ etc., prices $t-n$ periods ago

n = number of periods in the calculation

L. Weighted.

The most common methods of weighting a moving average simply multiplies each day's price by the number of days ago the price occurred. In a 10-day weighted moving average, the price today is given 10 times more weight than the price 10 days ago.

$$WMA_t = W_1P_t + W_2P_{t-1} + W_3P_{t-2} + \dots W_nP_{t-n} / n$$

Where:

WMA_t = current moving average value

W = the number of periods ago the price occurred

P_t, P_{t-1} , etc. = prices $t-n$ periods ago

n = number of periods in the calculation

M. Exponential Moving Averages

$$EMA_t = EMA_{t-1} + (SF * (P_t - EMA_{t-1}))$$

Where:

EMA_t = present EMA value

EMA_{t-1} = prior EMA value

SF = smoothing factor. The most common smoothing factor is

$SF = 2/n + 1$, where n is the number of periods in the calculation.

References:

LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL., Business One Irwin 1992.

Maxwell, J. *Commodity Futures Trading with Moving Averages*. Red Bluff, CA: Speer Books, 1976.

N. Momentum

$$M_t = P_t - P_{t-n}$$

Where:

M_t = current momentum value

P_t = current price

P_{t-n} = price n periods ago

References:

Eng, W. *The Technical Analysis of Stocks, Options and Futures*. Chicago: Probus Publishing, 1988.

LeBeau, C. and Lucas, D. *Computer Analysis of the Futures Market*. Homewood, IL., Business One Irwin, 1992.

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Appendix IV

Course Update

Parts & Self-Esteem

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Van K. Tharp, Ph.D.

COURSE UPDATE

YOUR PERFORMANCE TRADING EDGE



Parts and Self-Esteem

Deep in space, many light years away, a planet provided existence to some very special people. These people had the power to totally create their own lives. Whatever they wanted, they got, and whatever they believed, came true—as long as their beliefs and desires were not counteracted by another person. However, there was one problem with these miraculous gifts—very few people on the planet realized they had these abilities. In fact, most people believed that circumstances and chance created the experience of their lives. In other words, you make money if you happen to come up with the right formula in business and if circumstances happen to work out. You have a successful relationship only if you happen to be lucky and just meet the right person at the right time. And since their beliefs came true, they were right.

Imagine what it is like to be born onto this planet. You have no knowledge of your ability to get whatever you want. You grow up with parents who teach you, because they believe it themselves, that external circumstances determine what your life will be like. According to your parents, in order to succeed in life you have to do your best to find the conditions that will allow you to have the best possible life. These beliefs are also reinforced in school. And of course, given the special powers of the people on this planet, as they accepted these beliefs, they became true for them.

There was another strong mental power that these gifted people had—the ability to split themselves into multiple personalities or parts. For example, if some crisis developed, these people could just allow a part of themselves to handle that crisis and make sure it would never happen again. Soon that part would become unconscious, but it was still there attempting to prevent similar crises in the future. Since people seldom attempt to communicate with such a part once it is created

(Why should they when they were not really aware of having created the part in the first place?), each part just keeps adopting whatever behaviors it feels are necessary to get the job done. And each part, being part of the whole person, has all the secret abilities to obtain whatever it wants and to make true whatever it believes.

Can you imagine what life was like for these people once they became adults. They had many parts, each creating its own reality and each being totally unaware of the others. Each part got what it wanted, but only if what it wanted did not conflict with another part, because each part had equal abilities in terms of getting what it wanted. It seems to me that their lives are a lot like the lives of the people on planet Earth. Don't you agree?

Who knows whether or not people are made up of parts? I certainly don't! But at the same time it appears to be a useful fiction to assume we are composed of parts. Most forms of psychotherapy assume we are. For example, Freud's theory of personality assumed that we each have an Id, Ego, and Superego—parts that certainly could be in conflict. Transactional Analysis assumes we have a parent, child, and adult. I could go on listing theories all the way to Psychosynthesis, which assumes that we are all composed of thousands of parts and the primary job of therapy is to get the parts to work together as a unit.

I don't know that we have thousands of parts, but it is useful to assume we have some parts and that core behavior problems often come from conflicting parts or from parts acting on their own without understanding the whole picture. Each part has a positive intention for you or you would not have created it in the first place. As a result, you can use some fairly standard negotiation techniques to get the parts to work together. Those techniques are detailed in the third volume of the course, so there is no need to review them here. However, I would like to provide you with more information about 1) who your parts may be; 2)

Van K. Tharp, Ph.D.

COURSE UPDATE

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what their positive intentions may be; and 3) how you can better get to know them. In particular, I want to explore the intentions of parts that might seem to function to lower your self esteem by producing fear, anger, depression, or feelings of worthlessness.

In our seminars we ask people to do a bedtime exercise to determine which parts are in their heads. The exercise is called a "parts party." I recommend you do it about a half hour before you go to sleep, while you are in bed. Here's how you do the exercise:

First, since everyone reading this is a trader or wants to be a trader, assume you have a trading part. Bring up that trading part and ask (him/her/it) the following questions:

- 1) What are you trying to do for me? What's your positive intention for me?
- 2) Who are you in conflict with? What other parts give you the most trouble in your trading?
- 3) How does this part represent itself? If it is an image, what does it look like and how would someone else recognize it if it walked into the room? If it is a voice, whose voice is it? If it is a feeling, then describe the feeling? How heavy is it? How big is it? And so on.

Ask all your parts to come and let them know you are just giving them a chance to show up and play. But whenever you become aware of a new part, ask it the same questions.

The next morning, after everyone has done the exercise, we ask each participant about their parts. Often the discussion helps others to discover parts that might not have shown up at the party. Here are some typical responses:

- I had five parts show up — the *trader* whose primary purpose is to make me the best possible trader I can be; the *banker* who is very conservative and in charge of risk management; the *little boy* whose intention is to have fun and enjoy life; my *family part* whose intention is to love and care for my family and give them lots of time; and my *mother*. I don't know what my mother's intention is, but she is always telling me what can go wrong and making me worry. I know it's her, because it is her voice I hear. The trader, at times, can be in conflict with all the other parts.
- Well, I seem to have four trading-related parts. At least, that is all that showed up last night. One part is the *trader* whose job is to trade. The second part is the *broker part* of me whose job is to execute customer orders. However, he's always giving the trader advice based on what I hear from my customers and that's usually not productive. I also have a *gambler part* who really likes the action of playing the market. He is really counterproductive. And then I have this *part of me that really gets angry all the time* — especially at the gambler part for losing so much money. He tends to disrupt my personal life as well.
- I have a *skydiver part* and a *banker part*. Neither of them gets along at all. The banker part is very business-like. It makes money by taking low-risk ideas. It manages money well. On the other hand, the skydiver part just loves fun. It loves the excitement. But what it does is very dangerous. It could kill me — both physically and financially.
- What I discovered is that I have thousands of parts. I have five advanced degrees and there are parts responsible for each. I'm involved in three different jobs and there are parts involved in each of those. Each family member seems to be represented by a part — for example, there is not just a father

part, but I have a part of me to look after each child. I could go on and on. And there are new parts being formed each time I want to learn something new. The problem I have is that none of these parts have enough time.

What to do with Conflicting Parts.

So you have discovered you have certain conflicting parts. What do you do about them? The exercises for resolving conflict are given in Volume 3 of the course, but I thought I would give you another example of the value of such negotiations. The following example comes from one of my clients whose name has been changed to provide anonymity:

Henry had made great progress in his trading, but he was convinced there was some part of him sabotaging his trading. And he just didn't know who it was. However, he had given me several clues. First of all, he said that his father was an alcoholic who had left the family when he was an adolescent. Part of the progress Henry had made had come from forgiving his father. Nevertheless, Henry was convinced there was a self-sabotage part. For example, he said that sometimes he would avoid taking system trades and at other times he would take trades that were not part of his system — yet when he did so, he knew he would probably lose.

I asked him to do the parts party. He said that when he tried to bring up his parts, the first one to come up was a blank slate. He said he couldn't get much information out of the slate; it was just there and it seemed to demand to be there. And since he couldn't get any information out of the slate, he just stopped looking for the self-sabotage part.

Here's how the exercise progressed:

Tharp: "Let's first bring up your trader part and put it in one hand. Then bring up the part of you that is sabotaging your trading and put it in the other hand."

What happened was a swashbuckler first appeared in his right hand and his father appeared in his left hand. The swashbuckler was clearly the trader, but when I asked him what he was trying to do for Henry, he responded, "Provide excitement."

When I asked who the other part was, he said, "It's my father. When he was intoxicated in public, a lot of people we knew, fairly successful people, would laugh at him. I guess this part of me is just trying to prevent me from being like those successful people who laughed at him. But actually, when I think about it my father and the swashbuckler have been working together. My father tells him how to trade and the trader (swashbuckler) is just doing it."

Tharp: "But you've already been successful in your career. Who was responsible for that? You are very organized. Perhaps that blank slate was responsible for that organization? Why don't you put your trader part and your father part together on one hand (he puts them in his left hand) and bring out the blank slate? Now ask the blank slate what his intention is for Henry and if he hasn't been the one who was responsible for your success in the past."

Henry: "He's been my organizer part. He's like a bulletin board that I organized all my engineering projects upon.

And now that I'm asking him, I'm sure he was responsible for my past successes as an engineer."

Tharp: "Well, now negotiate between the blank slate and the trader. Would the swashbuckler be willing to give up trading if he could find more satisfactory ways of obtaining excitement that the other parts will support? And under those conditions will the blank slate be willing to take over the trading role and provide his high level of organization?"

Henry: after thinking for a few minutes: "The swashbuckler has already come up with a number of ways to get excitement that the other parts can support. And since the other parts support him, in fact applaud him, he is quite willing to give up trading to the blank slate. And the blank slate is quite willing to take over the trading role. He says he was just waiting until he was told to do so."

Tharp: "How do the other parts feel about that?"

Henry: "The father part objects, because he's afraid that I'll become like those people who laughed at him."

Tharp: "Would he be willing to support the new organization if the other parts agreed to dedicate your trading success to your father? And will the other parts agree to do that?"

Henry, feeling really ecstatic, "Wow, the other parts are really excited about that! And so is the father part."

Tharp: "Good, and the father part could also look for new ways to celebrate your father."

Henry: "Yes, he feels really good about that!"

Tharp: "And how do all the parts feel now."

Henry: "Excellent. I'm sure this will work!"

Intentions of Parts

Quite often traders will come upon a part, such as the father part sabotaging trading in the previous example, that they cannot imagine as having a positive intention for themselves. In the example given, my client had already done a lot of work forgiving his father for leaving the family when he was young or he would have also had a hard time dealing with this part. As a result, I want to re-emphasize that you created all of your parts. You would not have created any parts had you not had a positive intention for doing so at the time. In the example, the mental image of the father was part of who this person was, and his job was protecting the image. Many people have parts representing people in their past they have trouble forgiving. Remember that this particular part of you is not that person. It is your internal representation of that person.

Since I published the most current edition of Volume 3, I have developed two new theories (i.e., which in my terminology I would call "useful beliefs") about parts. First, certain parts have a strong influence on a person's self esteem. These self-esteem parts – such as those parts of you that represent people you have trouble forgiving – are very hard to deal with by yourself. Second, most of these parts block your true perception of who you are by providing you with a lot of fear and anger. Yet even these parts have positive intentions as you will see below.

Parts and Feelings

People tend to judge their feelings. Those feelings they judge to be good, they are willing to feel until completion. For example, if something is funny, you are willing to laugh until you are finished laughing. In contrast, feelings that people judge to be "bad" tend to be suppressed. In fact, some people tend to suppress all feelings in order to avoid a few "bad" feelings. Thus, if you feel fear, you tend to be unwilling to feel it. Instead, you suppress it and it gets stored in the body in the form of a knot. Such knots are probably the basis for many, if not most, diseases. And they are certainly the basis for many psychological problems. See the Update on Feelings (#11 – Jul '91).

Yet, feelings are neither good or bad. Instead, all feelings are a magnificent part of you. For example, you might not be willing to feel fear when it comes to trading or to personal relationships, but you might enjoy going to a horror movie or riding a roller coaster (i.e., which are simply examples of feeling fear under more acceptable circumstances).

Now, how do parts relate to suppressed feelings? Suppose some trauma happens to you and you decide to suppress some particular feeling and store it in your body. This is probably equivalent to creating a part whose positive intention is to avoid that particular feeling. Suppose you were a part whose intention was to avoid some particular feeling. How would you do that? You would probably continually look for situations in the environment which might produce that feeling. I would call this worry! In addition, you would probably inform your person about each situation (self-talk) by saying something like, "If this situation happens, you will feel this!" as you release a little of the stored feeling in the body. And if your person continued with the behavior, coming even closer to the expected results you want to avoid, you would probably release a lot more of the stored feeling. As a result, your person would fully experience the feeling (from the storage in the body) you were trying to protect him from. Once again we have examples of a part with positive intentions producing negative results – in this case, exactly the opposite result of what it intended.

The solution to parts that are trying to keep you from feeling a negative feeling has been detailed in the Feelings Update (#11). You must make it okay to feel that feeling and release it from storage in the body. You also must give the part some other task that is more useful to you as a whole or have the part join forces to help another part.

Other Examples of How Parts Affect Your Self-Esteem

Basically, there are two ways your parts lower your self-esteem. First, by keeping a lot of negative emotions from being released so that they block you from knowing who you really are. And, second, by storing "negative" representations of people in your life. Yet your representations only represent you. Thus, when people store representations of someone else they have trouble forgiving and making peace with, it is really a portion of themselves, i.e., that they have trouble forgiving.

Let me give you a couple of illustrations:

Jack decided to get a divorce because he and his wife were no longer compatible. However, he still cared about his wife and wanted to part friends and for the process to be as painless as possible for her. As a result, he worked out a separation process, involving a mediator to reduce the cost of the divorce. He also

gave his wife more than half of their estate. His wife amicably agreed to the whole process until the divorce was close to being final. Suddenly, his wife began to imagine all sorts of things in her head as pent-up anger began to surface. For example, she accused Jack of having an affair with another woman. She also believed Jack was hiding millions of dollars worth of assets and the ease of separation was just a ploy to trick her and that Jack was really a deceitful person who was trying to hurt her. The next thing Jack knew, he was fighting a lawsuit for fraud brought by his wife. Notice that Jack's wife was accusing him of all sorts of things that she was just imagining due to her pent up anger. She felt she could never forgive Jack for what he did to her. Yet he didn't do any of the things she accused him of doing. As a result, what she needed to forgive was not Jack, but her image of Jack. All of that anger was coming out of her, not Jack.

Think about anyone in your life you hold resentment toward. Think about the fact that your resentment is coming from you—from your interpretation of events. As a result, what you have to forgive and release is your internal representation of that person. What the other person does is their problem. Your problem, at least for your psychological well-being, is how you represent them in your mind.

Louise Hay's comment on forgiveness is most appropriate here:

"Forgiveness is not condoning poor behavior. Forgiveness is the power of liberation. I give up old limited thinking for new understanding."

The most common cause of low self esteem is blockage of your natural self by feelings of worthlessness, hurt, guilt, pain, fear, resentment, revenge, and anger. These feelings are generated in many ways. Generally, they come from the sense that early in life one was abandoned—either physically or emotionally—because few children are able to see that the fault does not lie in them. It is as if you are carrying the secret knowledge that beneath the social mask you wear lies the real you: a person so psychologically disfigured that no one could tolerate the real person. First, let's review some of the ways a child can receive this sort of message early in life. Second, we will point out how people tend to protect themselves from such pain.

Internal feelings of low self-worth may be generated by any of the following:

1) A primary care-giver is frequently absent or unavailable for love and nourishment of the child. The child experiences this absence as abandonment and incorporates it into their sense of self identity. The child might conclude, for example, that "If this person loved me, he/she wouldn't leave me; and since they don't love me, then I must not be worthy of that love."

2) The abandonment a child experiences might occur as the result of a divorce or separation in which the noncustodial parent loses contact with the child. When this occurs, the child might conclude: "My parent left me because I drove him away or because he hates me. Therefore, I am unworthy."

3) Even the death of one parent, if not handled properly by the surviving spouse, might result in feelings of abandonment and the child reaching a similar conclusion: "My parent left me. I must be unworthy."

4) Evidence from hypnotic regression, including our own experience with clients, indicates that the infant in the womb is quite aware of parental feelings toward it. Thus, when a child is conceived, but the parents don't want it, the fetus is aware of not being wanted. We believe that this is the root cause of many

personal feelings of low self-worth. "My parents don't want me, I must not be worthwhile."

In the current Universal Pictures movie release *The Babe*, Babe Ruth as a seven year old is taken to a Catholic Institute for boys by his father and abandoned with the label "incurrigible." Later, as a star baseball player, he is portrayed as a "wild" man who drinks and parties all night in an attempt to find happiness. Yet when his wife divorces him, and still later when the same woman dies, he experiences emotional trauma that results in major slumps in his performance. One time his manager at the Yankees calls him "incurrigible" and Babe flies into a rage. All of these behaviors are quite predictable based upon his background and what we have just said about the effect of that kind of background. And with these principles in mind, it is easy to see that all of his actions were just an attempt to gain love and acceptance from the people around him.

A parent does not have to abandon a child, however, for the child to develop feelings of worthlessness. Events such as capricious punishment, sexual abuse, severe criticism, or supporting a psychologically ill parent can also help a child decide that he or she is worthless. For example:

5) A child is subjected to sexual abuse and is either frightened or learns that what happened is bad. The resulting logic the child goes through is: " _____ wants me to do these bad things; I must be very bad."

6) A child is severely criticized for a broad range of behaviors or aspects of appearance. Thus, the child's self-talk might be something like: "Dad says I will never amount to anything because I don't push myself hard enough. Mom says I'm always making mistakes and can never do anything right. I'm lazy and worthless!"

7) A child is subject to extreme, capricious punishments. For example, Bill's mother frequently told him, "No child of mine would ever do anything like that! If you ever do that again, I will disown you." Bill never repeated the behavior because he was afraid of being abandoned. However, he grew up with the fear of being abandoned and that fear severely lowered his self worth. "Mom might give me up at any time; I must not be worthwhile."

8) A child is forced to support a depressed or narcissistic parent. Anything the child does to meet his or her own needs or to function independently triggers an extreme rejection. As a result, the child learns: "My needs are bad; my feelings are selfish."

Since your true self is covered by these feelings of anger, fear, guilt, revenge, wrongness, or worthlessness, you are constantly in danger of having these feelings. As a result, you must protect yourself from a great deal of pain. And you do so by creating some sort of protection part. Unfortunately, the protection part keeps you feeling the pain in some way and keeps your self esteem at a low level. Why? Because at the bottom of it all is that empty, lonely, place where you feel worthless and are afraid of falling into it. What you don't realize is that you created the feeling of worthlessness to cover up your true potential.

As a result of this need to protect yourself, you can do three things: First, you can run away. You can escape responsibility by running away. You can isolate yourself and avoid people and situations. You can chemically alter your mental state with alcohol or drugs. You can just pretend that the pain is not there and feel miserable anyway. Thus, you can have parts of you that are trying to avoid pain by running away in some way.

Second, you can attack others. The feelings are in you, but you can assume that others are in some way responsible. You can blame them and attack them. This is perhaps the ultimate form of avoidance, called projection, which is the topic of the next update. You may have parts that avoid pain by blaming others for your faults. If you have a lot of anger inside that you have not dealt with, then you can continually blame others for the anger and attack them.

Third, you can attack yourself. You can block the feeling of being worthless, bad or fearful with inner directed attack. Perhaps if you attack yourself, you can somehow whip yourself into perfection. Self-directed attack is based upon the premise that if you hurt yourself hard enough or persistently enough, you will chase away the feelings of worthlessness. By chasing away those feelings you will somehow correct your flaws. Once you have beaten yourself to death, you will be reborn without those flaws—or perhaps those flaws will die first. Here are some examples of how parts can help you avoid pain by attacking you.

- You have a part that wants to avoid rejection. This part is constantly vigilant for situations in which you might be rejected and avoids them. Thus, if you are afraid of being rejected by the opposite sex, then you will avoid them. You avoid being open with people because they might see your "flaws" and avoid the real you. You avoid taking risks in social situations. Instead, you endure loneliness. When a social situation is forced upon you, you clam up and act shy or unsocial so people will have a reason to reject you without knowing the real you (because that would be even more painful). Notice how this part creates exactly what it is trying to avoid! Do you do everything possible to avoid rejection by the markets?

You were constantly criticized as a child, so you develop a part to avoid criticism. This part releases stored anger whenever there is even a hint of criticism or criticism is intended. Perhaps you put yourself in a position of as much power as possible so you can avoid criticism. Saddam Hussein (Iraq's dictator) had this sort of problem with his father, and his solution was to gain power and quickly eliminate anyone who might criticize him. Did this solution work? Of course not—it produced world-wide criticism. Do you have a lot of anger that just keeps coming out? Are you frequently angry at the market or yourself because of your market behavior?

- A criticism part might also attempt to avoid criticism by constantly criticizing you. Its goal might be to achieve perfection so that criticism is impossible. If you have such a part, notice whose voice it is. Does it sound like a parent who used to criticize you a lot? This part might believe that if you criticize yourself enough, you might achieve perfection and then nobody would criticize you. On the other hand, if you criticize yourself first, perhaps you will beat yourself up enough so others will not criticize you later. Once again, notice how this part produces what it is trying to avoid. Do you seldom trade because your system is never good enough?
- Part of you wants to avoid mistakes or failure so it tells you to avoid new things. You don't learn anything new, because the inevitable errors are too much for you. You take on new challenges, but you avoid completing them because that way no one will ever know whether you succeeded or failed. For example, a client of mine with this problem took lots of college courses. He usually took the midterm exam and got

an A even though he was sure he would fail. However, he would never complete the course because of his anticipated failure. This was the same for various business ventures and his trading. He often would avoid new challenges because he expected to fail. Thus, his efforts to avoid failure produced massive failure. He would often delegate his success or failure to another person so that if the venture did fail it was the other person's fault. Although he had an excellent trading methodology, he seldom took a trade because he might not be successful.

- Part of you wants to avoid problems in a relationship. Such a part might pick flawed partners in relationships because they are the only people you can imagine who would put up with you. This part might not set any limits in the relationship to avoid having the other person get upset with you. Similarly, you might give too much or let other people use you, because you cannot imagine why else they would be willing to put up with you. In addition, this part might avoid people who really admire or love you because they must be either deluded or worse off than you.
- Part of you might focus on your flaws so much that it continually produces emotions of self-loathing or depression. Perhaps if you beat yourself up enough the flaws will go away. Do you continually scold yourself because of trading flaws?

How to Raise Your Self-Esteem.

If you have parts that tend to lower your self-esteem, then you probably cannot easily overcome those problems on your own. However, there are certain steps you can start working with right away.

1) *Get in the habit of loving and acknowledging yourself.* For example, acknowledge your accomplishments and your blessings. What do you have to be grateful for in your life? Take an hour to write down all of the accomplishments you've made in your life. What have you accomplished in terms of education, skills, jobs, etc.? What goals have you achieved? What special abilities do you have that you are grateful for having? What special people do you have in your life? Perhaps the best way of doing that is to imagine yourself in the scenario of James Stewart in the movie, *It's A Wonderful Life*. Or if it's more appropriate what if you were Scrooge in Dicken's *Christmas Carol*. You might also take a look at Barbara Kipfer's book, *14,000 Things to be Happy About*.

Once you have compiled your list, start reviewing it on a regular basis. When you do so, say "I, (your name), am a wonderful person with many blessings. Here are a few of the things I have to be grateful for (recall at least five things from memory)."

2) *Think about how you would act toward a really good friend.* What would your behavior be like? Would you criticize that friend or give that person your support? Would you do something special for that person? Would you try to meet that person's needs as best you could? How much of this behavior would you do for yourself? How much have you done for yourself in the last two weeks?

Make a list of what you will do for yourself in the future. Schedule it. What will you do tomorrow? What will you do over the next week? The next month?

3) *Give your body what it needs.* Volume II of the course lists a number of behaviors as stress protectors. These behaviors include such activities as regular exercise, regular meditation, eating properly, giving yourself a vacation, mental rehearsal, and planning. These behaviors are not only stress protectors, but also ways of showing yourself appreciation. Start scheduling these behaviors into your week.

4) *Negotiate with parts that you determine might be affecting your self-esteem.* For example, remember that each part is really doing you a favor. As a result, get to know each part affecting your self-esteem. Become a friend to each part. Find out what each part's positive intention is — what is it trying to do for you?

Once you become a friend with a part, it then becomes easy to get that part to find more suitable behaviors to carry out its intention using the techniques given in Volume III of the course. For example, if you have a part that causes some emotion by trying to avoid it, then get that part to be responsible for getting rid of the stored emotion inside of you — rather than finding external situations that will indirectly allow you to release the emotion. Get that part or parts to search for your real potential that exists beneath all the emotion.

5) *Keep your agreements so that your parts trust you.* A key element to friendship is trust. If you plan to be a friend to your parts, then they must trust you. You must communicate with them regularly. You must keep any agreements you make and only make agreements you plan to keep. At least keep an agreement to renegotiate if an initial agreement does not work.

6) *If you are looking for the hidden jewel that lies beneath all of that fear, anger, guilt, or resentment, then learn to give it away.* You have had a tendency all of your life to find what you judge to be negative outside of you. As we have indicated indirectly in this article, you can find out what is inside of you just by looking at what you see outside of you. This is a great gift once you realize it is true, and we will devote the next edition of this update to exploring this phenomenon of projection in more detail. We have long described the process of transformation as being a process in which you make an internal change, and suddenly everything around you seems different. The reason is because what you see around you reflects what is going on inside you.

Just as you can discover what you are like inside by looking around you, you can discover the hidden treasures you are looking for by giving them away. If you are looking to make your life more worthwhile, then look around you for worthwhile things. If you are looking to feel better about yourself, then notice how much better the world can look. If you want more love in your life, then give it away. If you are looking for a sense of prosperity, then be willing to spend money on yourself — or more importantly, be willing to give money away. For example, try doing some of the following:

- Pay for someone's dinner at a restaurant anonymously.
- Fill up a parking meter for a stranger or leave a quarter for the next person at a phone booth.
- Think of people you dislike and start saying nice things about them. See that person in your mind bathed in a pink light.
- Take food to someone in need or find a homeless person and take that person into a restaurant and buy them a nice dinner.

• Take five \$20 dollar bills and give them to the first five homeless people you see.

- Visit people in the hospital or a convalescent home.
- Become a big brother/sister to a disadvantaged child.
- Help someone with AIDS.

Try something small to begin with — such as one of the first few suggestions.

One of the most difficult areas to work on by yourself is your own self-esteem. As a result, get yourself a coach. Find a friend you really trust and practice doing these exercises with that person. Since we help traders with parts negotiation and feeling work at our seminars, one of our seminars or private consulting might be a solution for you. Whatever you do, commit to it and do it now.

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New Orleans Seminar

We currently have one Peak Performance Trading™ seminar scheduled at the Hyatt in New Orleans on June 12-14th 1992.

In this seminar we will present the *Successful Attitude Model for Trading*, explore personal issues that may cause you to self-destruct, and help you overcome self-destructive tendencies through specifically designed exercises.

Tom Basso, the subject of two previous updates, will join us in New Orleans to conduct the question-and-answer session of a top trader. Tom always makes himself available during off-hours for more personal questions you might have.

We've designed this seminar for those of you who want help installing the model for successful trading that we present in the course. Many of our clients also attend the seminars and find out new insights about themselves. Don't let these opportunities pass you by. For New Orleans, we are offering a 10% discount to anyone who enrolls by May 12th. Call for details at 919-233-8855.

Here are a few of the comments we have on file about the seminar:

- Best seminar I've been to. I didn't believe this was possible, but now I do believe it. — K. Johnston
- Excellent. Exceeded my expectations by far! — Jim Reed
- Super!!! Too short. I want more. — Robert Allen
- Most traders don't even recognize the need for developing a low risk plan. The process discussed in the seminar definitely reduced the cost of the learning curve for the markets. — Stu Porter.
- Fantastic!!! — Jamie Mendoza
- Couldn't be better. — Bill Pfotzer.

Appendix V

Course Update

Feelings

Van K. Tharp, Ph.D.

COURSE UPDATE

YOUR PERFORMANCE TRADING EDGE



Feeling Your Feelings A Key to Unlocking Your Potential

Suddenly, there it was — that juicy signal that all traders experience only a few times each year. And this one was a gem! My breathing started to quicken and deepen, almost to the point of hyperventilation. I had to wipe my brow with my hand. I then dried my hand on my shirt, because my brow was already wet again. The feeling I had was highly motivating. I was ready to act. But I also noticed a knot in my solar plexus. It was like a heavy hand pressing against my chest. I felt motivated and yet paralyzed at the same time. "How could this happen so quickly?" I asked myself. My vision seemed blurred and my hands shook. I started to take action and my body began to sway, so I threw myself back into the chair. Crying inside, I knew I couldn't do it. "Wait until I calm down," I agonized, but the market started to move just as I knew it would. Yet I was still frozen. I felt ashamed and very much alone.

Old concepts about the nature of the mind and body are changing rapidly. Most of you already understand how people create their own reality through the beliefs they adopt. However, our new beliefs do not necessarily have anymore "reality" than old ones. As a result, the most important criteria for such new beliefs is their utility — how useful are those beliefs to us.

One new belief that is very useful for understanding how people can deal with feelings is to assume that the *mind is not just localized in the brain, but throughout the body*. And if your mind is located throughout your body, then so are your feelings. Let's look at the evidence for this belief. First of all, your nervous system travels throughout your body. You can move

the muscles in your fingers and toes. You have sensations throughout your body.

Second, scientists have discovered a set of chemicals in the brain and nervous system called neuropeptides. Receptors to these chemicals occur in the nervous system, the endocrine system which is responsible for secreting hormones that often have a major effect on moods and emotions, and the immune system. The cells of these systems are located throughout the body. Thus, your immune and endocrine systems are constantly eavesdropping in on the messages you give yourself. Every thought, feeling, emotion, desire — every internal representation you make — is experienced throughout your body.

Third, if you pay attention to your feelings, you'll notice that they are located throughout your body. Let's try an exercise. Think about a situation that made you emotional. Bring back some of that internal feeling. Notice where you feel it. Although you may feel some sensations in your head, most of you probably experienced feelings in your body — especially along the midline. My point is that *your whole body feels*.

Experience is Organized Around Feelings

Feelings are important to the organization of your experience. First of all, memories are strongly linked to feelings. Evidence suggests that feelings are stored in the body in the form of Condensed Experiences or COEXs, for short. The term COEX was coined by Dr. Stanislav Grof to describe the phenomenon he observed in his research on how feelings were released under altered states of consciousness such as psychedelic drugs and, more recently, hyperventilation.¹ For example, someone

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(over, please)

working on a fear issue might have an experience that includes:

a painful rejection experience, a feeling of pressure in the chest, an image of a parent about to beat them with a strap, a certain body posture with its associated feeling, a harsh sounding voice yelling loudly, and an image of a group of boys ready to attack.

This entire complex of internal representations is a typical example of a COEX.

Besides Grof's work, evidence that emotions are linked together into such COEXs comes from the work of Gordon Bower², a psychologist who is well-known for his work with hypnosis. Bower finds that when people are asked to recall events from their childhood, people will recall happy events if they are in a happy mood and sad events if they are in a sad mood. My own work with clients suggests an even more detailed relationship. When someone goes into any particular mental state, they will recall any event related to that state. Thus, if someone imagines a situation in which they would become angry, they can easily recall the entire complex of memories related to being angry.

A COEX might also include a number of beliefs. Dr. Stuart Heller,³ a movement psychologist, postulates that each belief is locked into a particular pattern, a particular physiology of the body. This is very similar to the idea of a COEX. Thus, trying out an experimental belief is not just an intellectual decision. You have to find out how the new belief feels in your body. The way you move expresses your beliefs quite clearly. A shift in belief demands a shift in movement. Each new understanding requires a congruence of physical knowing. If a postural personality does not change, then a new understanding is only a change of mind. It is not a major transformation.

A psychiatrist, Dr. William Gray,⁴ has hypothesized that all memories are coded by subtle "feeling tones" and the brain actually uses feelings to structure information. Feelings, even if we are not conscious of them, underlie everything we know. When we are cut off from our feelings, it becomes much more difficult to make mental connections. Thus, Dr. Gray believes that feelings may be the organizers of the mind and of the personality. And research seems to indicate that the wider the range of one's emotional expressions, the more complex are one's intellectual expressions. As infants, we experience a basic set of feelings such as contentment, love, rejection, fear, anger, etc. These primary emotions are changed through our life experiences into many feeling-tones. Gray believes that human beings have great intelligence because of the rich supply of emotional nuances that they have available to them.

The implications of this linkage of feelings is incredible. Dr. Paul LaViolette,⁴ a systems theorist working with Dr. Gray, has extended Gray's feeling-tone model for consciousness. In short, Drs. Gray and LaViolette assume that consciousness is located in the structure and relation between the feelings themselves. In other words, *consciousness is transcendent*. The brain is simply a blender that allows feeling tones to feel and affect themselves

and thereby to mix themselves into complex concoctions — namely, our thoughts.

Gray, interpreting from his feeling-tone model, argues that there are two basic forms of emotional/cognitive imbalance. The first form amounts to being driven by emotions. This might occur when emotions are locked into the body and continually strive to express themselves. The second form of imbalance amounts to being cut off from one's emotions.

Being Driven by Emotion: Knots in the Body

If you just experienced each feeling as it occurred, you would have few problems with feelings. You would just feel! Unfortunately, what most people do is judge their feelings. Our feelings about people and events are thought to be strictly personal. Our inner emotional states are thought to be best kept separate from our actions. Often, we are told that the intelligent way to make decisions is to keep your feelings out of it. And it is practically an unwritten law for traders not to feel their feelings. Yet, it is very practical and useful for traders to be willing to feel their feelings.

People tend to judge some feelings to be good and acceptable. They judge other feelings as being bad and to be avoided. For example, if someone tells you a humorous story and you feel like laughing, that is judged to be "good" and you are willing to laugh until the feeling is complete and out of your body. On the other hand, if you feel angry or fearful or some other "undesirable" feeling, then you will probably attempt to suppress that feeling. When you were angry as a child, one of your parents, who was probably having a problem dealing with anger, told you that your expression of anger was not appropriate. As a result, you learned to suppress that feeling.

What happens when you suppress a feeling because you judge it to be undesirable? The COEX associated with that feeling becomes tied into a knot of some sort. The knot actually traps the feeling in a person's body. Most of you have many such knots in your body. These simply are COEXs, such as the one described at the top of the first column, plus any judgments we have about the feeling.

When you have such a knot in your body, it will be full of suppressed feeling striving to express itself. It's like you have created a part whose positive intention for you is to avoid feeling the feeling that you have judged to be negative. What happens, however, is that the part continually creates interpretations of environmental events to justify feeling those feelings. Let's look at an example of how this one might work.

Image that you are a teenager. You notice a very attractive person of the opposite sex and you approach that person with the intention of asking for a date. However, this person wants nothing to do with you and says, "I would never go out with anyone like you." What happens? You feel massive rejection inside of you. You judge that feeling to be negative and you suppress the feeling as much as you can. Suddenly you decide, "I never want to feel this feeling again." As a result, you establish

a part of you that has the positive intention never again to feel such feelings. But what happens? This part starts looking for environmental conditions that might produce rejection. As a result, it begins to interpret external events in such a way to create rejection for you continually. You may even begin to think of that part of you as some sort of devil within you.

Let's see how this might work. Suppose, a couple of days later, you see another attractive person you'd like to meet. You start to approach this person, but your new part starts to release some of that stored feeling of rejection, saying, "If you get too close, you might experience a rejection feeling like this." Chances are, you would avoid that person, suppress the feeling, and just make your "rejection" knot even tighter. But, let's assume that you keep approaching this person. What happens? As you get closer, the part starts releasing more and more of that rejection feeling. By the time you get within conversation range, you feel worse than you felt when you were actually rejected — and this new attractive person has done nothing at all. If you actually still have enough courage to talk, you would probably look down and in a very shy and undesirable tone of voice say, "You wouldn't want to go out with me, would you?" Such an invitation is almost certain to produce the response you expected — rejection. As a result, the rejection knot within you becomes even stronger. Chances are you will have difficulty ever approaching anyone again. In addition, you will be continually experiencing rejection in your life. This part of you, in trying to avoid rejection, will continually interpret environmental situations as possible threats that might cause rejection. In doing so, it will continually produce that feeling.

Let's look at another example. Perhaps you got hurt in a relationship. You said, "I'm never going to let that happen to me again." So every time you get to a certain point in a relationship, you begin to feel those old negative feelings and you do something to end the relationship. More importantly, each relationship ends in exactly the same manner. It has nothing to do with the relationship — just your interpretation of it based upon your stored feelings. You probably don't remember the source of the negative feelings. But at a certain point in the relationship you act to end the relationship in the same pattern as before.

Unfortunately, this type of scenario applies to any emotion that you judge as negative. If you decide that you do not like a particular emotion, then you will suppress that emotion and create a knot in your body around the COEX associated with that emotion. Logically, this amounts to creating a part that does not want to feel that emotion and that continually creates interpretations of the environment that produce that emotion.

If you don't want to feel fear, then chances are you will have a knot in your body associated with fear. And can you think of any better vehicle than the market about which to create fear? Of course not! In fact, *your interpretation of what is going on in the market is an excellent way to justify any feeling*. You can become "afraid" to pull the trigger. You can become "afraid" of a position that goes against you even a tick. You can become "afraid" of a position moving in your favor — it might turn around and you might lose your profits. In other words, the part

of you that doesn't want to experience fear can use the market to come up with any number of situations in the market through which it can anticipate being fearful. And, as it anticipates being fearful in each situation, you actually feel fear being released from the COEX. Thus, the part that wants to avoid fear, actually produces fear in the process of trying to avoid it. The same process occurs for anger, greed, or any number of other emotions that you might interpret as being negative. And in each case, you will find that it is easy to interpret market or environmental events in a way that justifies having those feelings.

How do you know if you have trapped feelings? Here are two simple exercises.

First, think about an experience that you judge to be negative. When you think about that experience, do you still feel pain? If so, then you still have trapped feelings in the COEX

Your interpretation of what is going on in the market is an excellent way to justify any feeling.

that includes that experience.

Second, do you have any particular negative emotions that come up frequently for you. Have you noticed any particular pattern to these negative emotions? If so, then this is a good indication that you have that feeling in a knot that is trying to manifest itself.

Although you can learn about the existence of your knots through these two exercises, this whole process of learning how you create your emotions and your reality is an ongoing exercise in awareness. Most people have numerous emotional knots that they know very little about. And when you release the trapped feelings in one knot, the process will probably bring other knots to the surface.

Suppose an anonymous caller tells you that there is a tiger in your basement. You scoff at the idea, hang up, and go about your business. But you sense a strange uneasy feeling in your stomach. Your mind begins to run a movie of a tiger in your basement. Suppose it is really there? Is it better to look in the basement to see if the tiger is really there or to continue to worry about the possibility? Of course, it is better to know for sure. If one is really there, then you can deal with it. When people suppress their feelings, it amounts to not looking for the tiger. As a result, an imaginary tiger will continue to haunt them.

In summary, if you judge your feelings, which all of us do as human beings, you will find that you wish to avoid certain "negative" feelings. Since you consider these negative feelings undesirable, you tend to suppress them in the body. As a result, they become locked into the body as "knots." These so-called knots continually create the very emotions that the person is trying to avoid.

Alexithymia: "Not" Feeling Feelings.

An equally serious problem — perhaps more so in terms of health — is the situation in which a person totally cuts himself or herself off from feelings. This condition is known as alexithymia (meaning "without words for feelings") or the John Wayne syndrome. During severe trauma, cutting off your feelings is useful. For example, under severe psychological trauma, such as combat stress, people learn to totally cut themselves off from their emotions. Combat veterans with alexithymia can clearly describe the incident which resulted in a conscious decision to suppress their experience of emotion.⁵ Alexithymia also may result from a turbulent childhood, rigid family structures, or from families in which emotions are considered unimportant. Indeed, the ability to stifle feelings in order to carry out a particular task is present in everyone. However, when this condition persists, it can become a severe problem for any individual.

How does cutting yourself off from feelings affect trading? Typically, my clients with this problem express symptoms such as not being able to pull the trigger, but they cannot understand these problems since they don't feel anything. They complain of interpersonal conflicts which affect their trading or their business in the long run. Or in some cases they just complain of a general sense of malaise which seems to have a major impact upon their trading. In each case, they notice what is happening, but they do not understand it.

These traders still feel emotions, but only at the extremes. When the average trader might feel very stressed, the alexithymic trader will just feel a mild sense of discomfort. Nevertheless, emotions for such a trader can build up like a volcano. A trader with a mild sense of irritation over a period of time may suddenly find himself responding with a full-blown anger. Similarly, a trader who normally only experiences a mild sense of anxiety may suddenly find himself experiencing a full-blown state of panic. Thus, *the alexithymic trader will only experience a mild sense of discomfort or a full-blown volcanic eruption of emotion.* Emotions in the middle ranges are suppressed.

In addition, the suppressed feelings will probably manifest themselves in some manner other than emotions. For example, *there is a strong tendency for the emotions to manifest themselves as a dis-ease process.* Thus, the alexithymic trader may experience a mild illness, a mental breakdown, or even the build-up of a severe health problem such as the potential for bleeding ulcers, a heart attack, or cancer.

The alexithymic trader will only have limited effectiveness in his or her trading life. This means he or she *will show a lack of focus or sharpness in his or her trading.* Intuitive skills, which depend highly on inner awareness, will be lost. Since intellectual skills, at least according to the Gray-LaViolette Feeling-Tone model, depend on subtle feelings, these skills will be much duller in the trader who has suppressed his or her feelings.

Lastly, *the alexithymic trader will have greatly-reduced or negligible intrapersonal skills.* Dealing with other people involves

handling emotions. People who have suppressed their ability to even feel emotions will be severely handicapped in this area. In fact, an alexithymic person would be hard-pressed to explain most positive emotions, such as love, except in very rational terms. As a result, they lead very hollow lives.

How can you determine if you suffer from some form of alexithymia? Recall a number of different stressful experiences you have undergone recently. First, think about a recent *interpersonal stress* episode: a quarrel, a confrontation, a period of grief, the loss of a relationship, etc. Next, think about a *business stress* episode: a professional conflict, not trading well, or a period of overwork. Thirdly, think about a *crisis situation*: being the victim of a crime, having a very large market loss, or being involved in an accident. Which was more true for you? Did you just experience the situation with only a vague sense of discomfort? Or were you very aware of intense feelings? The first reaction is alexithymic.

If you had an alexithymic response to any of the episodes you recalled, then think about what happened later? Was this reaction temporary or did it last a long time? For example, did your emotions come to the surface as soon as the situation was resolved? Did they come to the surface much later or did they never really surface? The longer it takes for the emotions to surface, the more severe your alexithymic reaction.

Model for Change

Most forms of psychotherapy assume that major psychological problems are preceded by some Significant Emotional Experience (SEE)⁶ that is judged to be negative and that is very intense. It is fully associated and highly charged. The potential of a negative SEE to create mental or physical problems is based on the trapped emotions which remain stored in the body in the form of a knot as described above. Most forms of psychotherapy attempt to undo the effects of the SEE by talking about it.

Another important term needed in our model for producing change is the First Event or the Root Cause of the emotion. This root cause is the primary event, usually one that happened in the first five years of life, which sets the stage for the SEE to have a major effect. For example, if you have a problem with rejection and can remember your fiance telling you she didn't want you, then that experience is a SEE for you. However, if you traced the emotion of "rejection" back in time, you might find out that while you were in your mother's womb you experienced negative vibrations from your mother because neither she nor your father wanted another child. It is that First Event or Root Cause that sets you up so that rejection is a major issue in your life.

Imagine that you are allergic to poison ivy. You believe that allergies are a mental problem, so you go to a psychotherapist to solve it. What happens? You end up talking about the time you fell into a ditch that was full of poison ivy and your body was covered with blisters for over a week. The idea is that if you talk about that experience enough you might discover why you are allergic to poison ivy or might at least relieve some of the trauma associated with the specific incident. Unfortunately, this sort of

treatment is usually very slow and it generally has no permanent effects.

If you actually want to eliminate your allergy to poison ivy, then you need to deal with the time you were first exposed to the poison ivy. Chances are that on that occasion you had little or no reaction to the plant except that your body decided to make antibodies to poison ivy. You probably don't have any conscious memories of that experience. However, your unconscious mind knows about that incident. Since that first incident or ROOT CAUSE is not that traumatic, it is quite easy to deal with. And when you deal with it, you will develop the emotional resources to deal with the later more traumatic events that may have occurred. In fact, those resources can be used to wipe out the entire knot of traumatic events in a few minutes or even a few seconds.

One of my clients was born around the start of World War II. His father went off to war and did not return to the family. Instead, he got a divorce and remarried. His mother did her best to raise the two children, but eventually showed up on her ex-husband's doorstep and said, "I cannot do it, they are yours." As a result, he remembered being raised by his father and step-mother. His major SEE occurred when his step-mother lead him around by the ear, saying he was no good and that *she did not want him*. As a result of this experience, he became alexithymic. He felt a tremendous hatred for his step-mother, but that all that emotion was contained in a bubble which he could not access. He had worked with a number of therapists in an attempt to break through that bubble. However, his step-mother saying that she did not want him was a good example of a SEE. The root cause was his mother giving him up in the first place. Moreover, he had not placed a bubble around the incident with his mother. As a result, when he had dealt with that, then the bubble around his step-mother just collapsed.

This brings us into more detail concerning the very effective procedures that have now been developed to deal with these trapped emotions. Those trapped emotions, when properly used, are the very key to dealing with your suffering.

Dealing with Trapped Feelings

If, in fact, at a moment I suffer ... I shift my attention from my thinking to my feeling, if, leaving aside all my mental images, I apply myself to perceiving in myself the famous moral suffering in order to savor it and to find out at least what it is — I do not succeed ... of suffering itself, I do not find a scrap. The more I pay attention to the act of feeling, withdrawing thereby my attention from any imaginative film, the less I feel. And I prove the unreality of anguish.⁷

Focusing. Dr. Eugene Gendlin, a psychologist at the University of Chicago, noticed that some people who undergo psychotherapy get better, while others never seem to improve. Furthermore, he noticed that those who get better can be identified at the start. Over the years he observed, studied, and

refined the process by which such "naturals" get better. His research evolved into a technique called focusing.⁸

The focusing technique begins with a feeling in your body that something is wrong. That bodily feeling may be a diffuse worry or discomfort. It is just a sense that something is wrong. Gendlin finds that when people hold this vague sense of discomfort for a while — perhaps only a few seconds is necessary — a phrase or word will emerge that will give them insight into the problem. This process results in what Gendlin calls a felt-shift, or a physically-felt step towards the resolution of the problem that comes from within. In fact, quite often the shifts take place without a verbal tag. Focusing, according to Gendlin, is an active process. It oscillates on the line between normal consciousness and meditation. Material comes from what seems like below the line, and you are there to respond to it — but below the thinking, jumping-around level.

For example, suppose that you are flying across the country. However, you have a vague sense that something is wrong, but you don't know what it is. If you are willing to concentrate on that feeling of discomfort, then suddenly a shift will occur as you realize that you have left something behind. Thus, the whole sense of internal feeling will suddenly shift. If you keep concentrating on that feeling, you probably will experience another "felt-shift" as you discover what it is that you have left behind. In essence, focusing does not attempt to fix anything. It just creates changes in consciousness. That change in consciousness can lead to new insights or even instant solutions.

Going With Feelings. Dr. Stanislav Grof⁹, a psychiatrist who pioneered the use of psychedelic drugs in psychotherapy, believes that in an altered state of consciousness we begin to experience COEXs. Furthermore, the process of doing so can relieve life-long traumas. Grof believes that symptoms (or emotions) resulting from some trauma or crisis represent an immense opportunity for the individual. Those emotions are not to be cut out or exorcised, but to be experienced and celebrated. They reflect the effort of the organism to free itself from old stresses and emotional knots. If you are willing to experience these symptoms, in a process that Grof calls experiential psychotherapy, then you can convert knots in the body into a healthy flow of energy.

Grof advocates activation of the unconscious blocks through psychedelic drugs or, more recently, through the use of inducing an altered state of consciousness through hyperventilation. His basic assumption is that it takes an induced altered state to free the unconscious mind to bring out the emotional knots that people need to experience. It is easy to understand how this would work, when you consider that emotional knots are formed in the body simply because people are unwilling to experience certain feelings.

However, there are much more direct techniques of getting rid of emotional knots. In fact, you can use the conscious mind to directly access an undesirable and unconscious pattern of emotions quickly. Then, through a procedure of simply being willing to feel the feelings that come up, you can release knots

in a much shorter, more direct method. The procedure has had startling results for people in our seminars. Here's one person's recollection of the experience.

The first time I went through the feeling process I was very apprehensive. It was like letting my private self out to the world. Your first demonstration seemed strange to me — that was not the way I express my overload of feelings. And the second demonstration that was even stranger — laughter to the point of hysteria. I could feel the tension being released in the laughter and the anger that was in the laughter. I was very surprised at the different expressions of feelings, and even though I know myself pretty well, I was anxious about my own feeling release. I had decided to work on the feeling of anger that I'm sure holds me back as a trader. But I could not dream of entering this private part of my innermost myself without a strong feeling of trust for those around me.

As I started the exercise, different visualizations came into my head about past traumas. A feeling started welling up inside of my chest. It was like I was searching for the right feeling and rejecting others that did not fit. What I did not understand at that moment was that the experience of the exercise had to come without my conscious control of it. At the moment I realized that, I visualized a scenario that was very traumatic for me. It was like a choking feeling in my throat and a shivering feeling throughout my body. The story was not the thing anymore ... the feeling was the thing to go with. When I started recognizing, naming, and giving sensorial descriptions to my feelings, they began to change. It was different. That process continued for three or four different sensations until I got this overwhelming need to laugh. It was not the uncontrollable laughter that I had experienced in the demonstration, but a silly, giddy feeling about holding onto these feelings. The laughter subsided into little gurgles and a sense of relief came over me like a cloud had floated overhead and just left. I wasn't sure what had happened, but there was a lightness and completeness about the experience.

Looking back on the experience, I no longer get angry at the market and my trading is much better as a result. I became less critical of others and of myself. I found more love in my life that I could give to others and my anger just seems to be gone. But I doubt that I could have done it without the kind of support that you gave me in the background. No, I think it would have been impossible.

If you notice that you have a problem with a particular feeling, then just bring up that feeling and be willing to experience it fully. You don't need any external circumstances to justify it. Just bring it up and go with it. The process usually takes 15-20 minutes. However, it should only be done under strict supervision in order to ease the knot in a flowing manner. Without such supervision, people could make fear/anger or any negative COEX worse. Nevertheless, the procedure is fairly simple and we use it in our seminars to help people make major breakthroughs in their trading. Why keep pain and emotions sup-

pressed — hidden in darkness? A hurricane is just as destructive in the darkness of night as during the light of day.

When you have a pain, notice your reactions to it. If you resist it, hate it, fight it, or try to escape from it with some frantic external activity, then you do not understand the whole process. That's why you suffer over and over again. Unresolved pain gradually increases. If your computer breaks down and you pretend that there is nothing wrong, you will continue to have problems. And you will also hate computers! Why not just face the inner breakdown and correct it?

Time Line Use of Feelings. An even more effective method of releasing trapped feelings, but one that requires even more strict supervision, is the process of taking people back in time to find the Root Cause of an emotion and release that event. This involves a procedure that we do with our clients.

Most significant "negative" emotions have no meaning outside of time. Guilt, fear, anxiety, and anger, for example, all have no meaning except in relationship to time. Think about it! Guilt is only significant *after* something occurs. Anxiety is a concern about some *future* event. Fear is based upon some *object in time*, and anger is based upon some *incident that occurred in time*. As a result, people can resolve all of these issues by dealing with them with respect to time.

The time regression procedure makes the assumption that *time exists because it exists in our heads*. Typically, time exists in people's heads as a line that runs from left (past) to right (future) or from back (past) to front (future). Numerous possibilities exist for how people might store time in their heads. The first step in the time regression procedure involves determining how a given person stores time, so that we can make use of the personal way that they store this information.

You might think of the timeline as how you store your memories. It's how you know the difference between the past and the future. Let's do an exercise by supposing for a moment that you knew your unconscious mind could tell you how it stores your past and your future. And if you know that now, could you point to the direction of your past? And where is your future? Do you know that the difference between your past and your future implies a line? It doesn't have to be a straight line, but the implication of a line is there. Do you understand?

Now, what if you were just to float up into the air and take a look at that line? Could you leave the multitude of your memories where they are and just float above them. Now just move along that line into your future and note what that is like. Next float way back into the past and note what that is like. And then return back to now.

You might have noticed some dark areas in your time line. These are indicative of traumas or SEEs. It takes a lot of energy to keep the brightness down on these memories. Eliminate that suppression and you will have a dramatic effect on a person. So how is this done?

The next step is to access the desired COEX by asking the person to imagine themselves in a situation that would involve

feeling that emotion. Since that COEX contains all of the memories related to that particular feeling, accessing the COEX to go back in time is essential. Once we have the COEX, we simply have the person go back in time with that particular emotion. The person does so, noticing each major occurrence of the problem. Our goal in going back in time is to find the FIRST CAUSE of the event. Typically, that happened in the first five years of life. Sometimes the first cause occurs while the child is in the womb and occasionally we trace it back to a pre-birth state of consciousness.¹⁰

Once the first event is found, then it is necessary to give the person the resources necessary to deal with that event. Here I am being deliberately vague, because I do not want people to attempt to do timeline work by themselves. It requires close supervision and we do not even do it at our regular three-day seminars.

Once the root cause of an event is clear, then you can help a person magnify his or her new resources and use that strength to blow out the rest of the COEX literally in a matter of minutes.

The following example is an experience of one of our most recent clients:

I was dealing with the feelings of anger and frustration that I have been fighting all my life with my father factored into that. I was working on a emotion that included anger, lack of trust. I honestly don't believe that I understood what love was all about before I came here. Getting a hug from someone was always very uncomfortable, even though I knew that they meant well.

For example, when I was about seven my father was chasing me in the house. I hid behind a hallway door. He and my mother found me at about the same time. My mother tried to protect me from him. He went to hit me with his fist. I ducked and he hit my mother full force in the face. He started apologizing to my mother and I ran. The anger and lack of trust came from my early childhood because that's where it started. And then it was reinforced by certain teachers as I got older.

As we went back on the time line, memories came back that I didn't even know I had. For instance, I remembered when I was three years old and we had moved into a larger house on our property. I remembered various events that had happened in the cottage. I have no idea how I could possibly remember that, but they were all related to that feeling!

As I went back further I couldn't really understand what was going on, but the pictures were very clear of my father yelling. My sister, who was a year and half older than me, was standing beside me. I assumed that I must have been making noise. I then went back further and rapidly from there. I was in what can only be considered my mothers womb. It was a dark, secure feeling and I could remember that same yelling in the distance. It was the same feeling I could remember later in life. It was not a good feeling or a good sensation. And I could hear someone in the distance

asking me or saying is there anything else earlier . . . is there anything else. I stepped back further.

Suddenly, everything went calm and it was like breaking into a forest. (He was now at a time before he was born.) Deciduous trees were all around. There was no me as I know it. I was the forest. It was very green, very bright and very peaceful. And I could hear someone asking in the distance who am I, where am I going, what am I doing. But it wasn't like that. It was like I was there, but I wasn't there. It felt like I was searching for something, but I didn't know what it was.

I recognized that I felt very secure and at home there. And then my whole life seemed to fall into place. Because throughout my life I felt most secure in the woods or the mountains or in nature by myself. And my whole life, to date, revolved around that.

I then began to move from that early time towards now — towards the future. I started seeing past events, many of them with my father, with certain abusive teachers, and I had a very deep and clear understanding of these people. (Crying) a deep love began to develop for all of them, especially my father. All negative emotions towards these events were completely gone. It was very emotional from a positive and healthy perspective.

We continued on past now and into the future. And as we got to the end of my life, there was no more fear of what comes after because it was clear that I was going back where I came from. It was all very clear and very peaceful. It was complete.

Since the above experience occurred, this man's life has changed dramatically. Within two weeks, he found a woman to share his life with. He got rid of his quote machine, because he no longer needed immediate market moves to justify his feelings. Instead, he's shifted to a much longer time frame for trading — one that suits his new, peaceful state and one that produces much greater trading profits.

As you begin to reach a certain level of insight — triggered perhaps by my course or by this article — you will take an entirely different view of the feelings in your life. You will no longer resist or resent certain feelings. Instead, you will understand each feeling as valuable, if for no other reason than to give you a message that you are in some way living your life out of harmony with your true nature. Therefore, although you may feel pain, you will study your reaction. And as your awareness grows, you will be less and less in pain and more and more in peace. But don't expect your friends to grasp this. They are still resisting everything that they "think" happens to them!

Reference Notes:

1. The psychotherapeutic technique known as rebirthing came out of Stanislav Grof's work with hyperventilation. See S. Grof, *Adventures in Self-Discovery*. Albany, NY: State Univ. of New York Press, 1988.

2. G. Bower. See *Brain/Mind Bulletin*, 1982.
3. S. Heller. See *Brain/Mind Bulletin*, 1983.
4. W. Gray and P. LaViolette work is described in M. Ferguson's *PragMagic*. New York: Pocket Books, 1990, Pp. 33-35.
5. W. Alvarez and N. Noviello. *Combat Stress. Psychotherapy and Psychosomatics*.
6. These terms are borrowed from M. Massey. *The People Puzzle*.
7. Dr. Herbert Benoit, *The Supreme Doctrine*. New York: Random House, 1955.
8. Eugene Gendlin, *Focusing*. New York: Bantam Books, 1981.
9. See note #1.
10. I am not making any assumptions about past lives here. The most effective way of helping someone is to utilize the way they organize their own brain. If they believe that it is necessary to go back before their birth to resolve an issue, then we do.

Prior Updates

A number of you have expressed interest in our prior Updates. As a result, here is a complete list of the *Course Update Reports* that we have published. These updates (or at least parts of them) will be, or already have been, integrated into course revisions. However, if you would like past updates, they are available to *Update* subscribers for \$25.00 each or \$35 each for those who are not subscribers.

1.	Commitment	Feb. 89
2.	The Ten Tasks of Trading	Apr. 89
3.	An Interview with Jack Schwager	Jul. 89
4.	An Interview with David Ryan	Oct. 89
5.	Logical Levels of Belief	Dec. 89
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Subscription Information

The Investment Psychology Update subscription costs \$145 per year for four quarterly reports (plus \$20 for overseas). When you renew, you may obtain one of the following bonuses at no extra charge: 1) the 1989 revision of Volume 1 of the course, including 4 new chapters and illustrations; 2) the 1990 revision of Volume 2 of the course, including new illustrations; 3) a beautiful cover that is custom designed for the course; 4) a 260-page workbook for the course, 5) the 1991 revision of Volume 3, or 6) the 1991 revision of Volume 5. If your subscription expires with this edition (i.e., before the August update is due), then your renewal notification is enclosed.

Planned Updates for 1991-92

Each of the following updates will include an extensive article on one primary topic, plus news and other items of interest. We reserve the right to change the issue date or the content of the reports at any time.

Bonus Issue. We are planning a bonus interview in 1991. This bonus issue will be in addition to our four planned issues. The bonus issue will deal with someone very special—James Sloman. You may have heard of him as the “mysterious” brains behind the *Delta Society* (see the large 2-page ad in the middle of *Futures* magazine) or the *Adam Theory of the Markets*. Incidentally, my support of James Sloman is just that — support of James Sloman. I do not support the way Sloman’s ideas have been marketed. Jimmy is the author of *Nothing* and that should tell you a lot about my support of him. He’s a former trader, a trading system developer, an author, and a spiritual guru by example. You won’t want to miss this bonus issue. (August, 1991)

Organization. Poor organization is an area that most traders have trouble with and yet it is a topic that we have not yet covered in the course. So here it is. Learn about the psychological barriers to poor organization and learn how to become more organized as a trader and as a human being. Your spouse will love you — I think — after you adopt the easy steps contained in this update. (September, 1991)

Agreements/High Production Brokerage. This two-part update will cover agreements and high-production brokerage. Agreements constitute a major area of self-sabotage. There is really only one type of agreement you make — agreements with yourself. Break these, and you’ll stop trusting yourself. In addition, in a separate article I will address some of the insights I have developed modeling high-production brokers. (December 1991).

Parts Update. We have developed a lot of new ideas about parts and how they contribute to self-esteem and to trading success. This issue will focus on these new developments. (March, 1992).

Market Mastery

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Reprints of this report and back issues are available for \$40 each.

New Focus - continued from page one

keeping you and the psychological side of trading/investing in mind. After all, we can only trade or invest our beliefs about the market; our psychological biases affect everything we do, including running a business and designing a system.

I will remain as Publisher and Executive Editor, and will contribute regular columns. I will continue to write at least two special reports each year. In other words, a full subscription now includes ten issues of the new *Market Mastery* plus my twice-yearly special reports.

Chuck Branscomb becomes the new Editor-in-Chief. You can meet him in the interview which begins on page one.

New Editor - continued from page one

nals, and he was devastated. It was his first lost of any significance. He immediately converted the loss into dollar terms and felt bad at how many day's salary he lost and what he could have bought with the money had he not traded. By just watching his reaction, I learned a tremendous amount about trading. I was intrigued by the fact that our reactions to the same event were so dramatically different. However, it would be a few years before I would be able to assimilate my experience—after going through your home study course.

Tell us about your engineering background.

My father was a very successful engineer and executive manager at IBM. He played an instrumental role in many facets of IBM's growth from the 1950s through the 1970s, and I have always been very proud of his accomplishments. His influence on how I looked at the world was wonderful. I grew up with a unique appreciation for finding cause-effect relationships in the world. After getting involved in motorcycle and car racing in high school, I wanted to learn all I could about engineering. It wasn't enough for me to simply know about something—I had to have a deep and complete level of understanding. After graduating from North Carolina State University with a degree in mechanical engineering, I felt like I was only just beginning to achieve an understanding of engineering.

Next I went to graduate school at N.C. State and studied thermal and fluid sciences. A professor, Dr. Mike Boles, taught me about how to approach and solve difficult problems, advanced programming techniques, and how to enjoy the process at the same time. I got a Masters Degree in Mechanical Engineering and Math and went to work for IBM designing cooling methodologies for military computers.

At that time the military was just beginning to look at advanced circuit designs. One of the most difficult problems is cooling these dense circuits given the military's stringent requirements. I developed both computer models using finite element analysis and experimental models to validate the

computer algorithms. Again, I found myself greatly enjoying working with computers to arrive at a solution to a difficult problem. I always envisioned working for myself one day—running my own company—incorporating computers in some unique way. My career there evolved over time from engineering to software development and testing. At the time I had no idea how useful these skills would later become. I just seemed to always know I was on some greater path.

Do you see analogies between engineering and trading/investing?

For a long time, I viewed trading and investing as a problem to solve in the traditional engineering sense. It wasn't until after I was exposed to your work, Van, that I realized I was trying to solve an insoluble problem in that context. I was so fortunate to have been exposed to your work on successful traders and investors. Also to be able to learn from people like Tom Basso and Chuck LeBeau through your seminars has been beneficial.

I had viewed the trading/investing problem to be solved as one of finding the solution that solved all the equations. I came to realize that the problem to be solved, for me, is not figuring out the order to the markets so you can perfectly predict future movement. The problem is simply to develop methodologies based on sound concepts which provide a substantial positive expectation. Then you execute those methods almost without fail—letting go of the outcome to the what the market does. Perhaps that's still one of the hardest parts of trading—letting go. What's so interesting is that once you accept this belief, it becomes immediately apparent that there are actually many potential positive expectation systems or methods you can create in all time frames.

What have you learned from adopting that belief?

I'm still learning. As you have pointed out many times, we are so conditioned to finding the right answer, getting 90%+ answers correct and also assuming that some-

where out there somebody knows the right answer. Realizing that there is nobody who knows where any given market is headed with repeatable 90%+ certainty is the first step a beginning trader must pass through. My long term trend system is right approximately 42% of the time, averaged over a year's time. Eight years ago I would have dismissed it without question. I used to assume that at some point I would continually trade with greater than 90% accuracy. Furthermore, I used to assume that the accuracy was the only measure of a method. What's far more important is the long term expectancy you are trading to capture, your money management algorithm, and your ability to maintain discipline through the tough times. Those are all areas where I have had to create my own solutions.

One of the most neglected areas in the system design literature that I have seen (after exit strategies and money management algorithms) is determining what to expect from your method in the future. Your only guide is history, but there is a great deal of room to be creative in looking at historical results in addition to on-going trading results analysis.

This is one area I hope to focus on in future issues of the newsletter. I think it is extremely important to have the best understanding you can get on expectations for the future. Being prepared for the future includes developing those expectations and then mentally rehearsing your actions for each given outcome. Those rehearsed actions must become automatic.

Absolutely.

In terms of exercising discipline, your home study course was a critical step for me in developing the discipline needed to trade properly. The issues that I have resolved through the course, the Peak Performance Seminar and consulting have enabled me to build a substantial base of strength and understanding of myself.

I have to say that it took a strong commitment on my part to seriously do the home study course. If a trader or investor finds that they don't have the commitment to do the course in its entirety or they skim

through it thinking it's not relevant material to them, I would bet that long term success in the markets will not be something they find.

The material you present in the course is so necessary for most people, evidenced by the fact that so many of them find themselves feeling bad during parts of the course. I actually hit a personal roadblock in the middle of Volume 3 and put the course on the shelf for a year. At some point I had to admit to myself that the roadblock was me and not the course. That section of the course turned out to be one of the most important ones for me—primarily from a personal point of view. It was a major breakthrough in how I look at myself and the world.

What was that roadblock?

It was in the section on value elicitation. My initial response was one that I didn't need to waste time on that section. This was a purely emotional response, but I had all these great logical reasons to justify my feelings. I realized that it was going to take several days to complete the exercise too. Off to the shelf it went while I struggled on in my endeavor. A year later when I went back to the course with a renewed commitment, I really enjoyed doing this section. For the first time in my life I pieced together in writing what was really important to me and in what order. I realized, at a very deep level, what areas of my life I needed to place my primary attention —what was really important to me and why. At that point I was ready to accept the course material through a different paradigm. The sections of Volume 3 that follow which cover how you use your brain and parts/values conflicts are fantastic. I've used what I learned there ever since, especially after it was reinforced through the exercises in the Peak Performance Seminar.

Let's talk about the business of trading and investing. What's unique about a trading business?

At its most basic level, trading is a totally honest and pure environment. If you're a dishonest floor trader, you'll be quickly fil-

A true story

'M REMINDED of a story about a small company that sold performance add-ons and accessories for BMWs in the early 1980s. BMWs, ten years earlier, were cars that only real driving enthusiasts knew about but then, the whole yuppie thing got underway and, in my opinion, ruined the BMW name, at least for awhile. People bought them just to be seen in a BMW.

Well, this particular company became famous in the late 1970s for providing BMW performance parts and accessories throughout the country. The only problem was, the guy who ran it was looking for the 90% system. His objective was to make the maximum amount of money as soon as possible. He based his business model on the dishonest notion that there were so many new BMW owners every single year, that there was little need to for customer service. A customer order to him was a one-time shot to get a person's money. They had many orders going out the door at an ever-increasing rate to all of the new BMW owners. All the cash flow allowed more advertising and hence more orders.

This worked fine for about three years until it all came crashing down around him. The company went out of business, never to be heard from again. - C.B.

tered from the system. Off the floor, if you're dishonest with yourself about what you are trying to achieve in trading or investing, your results will be disastrous. In the non-trading business world, people can perhaps cheat their way through for awhile, intimidate other people into accepting their view of things, etc., but in trading, you won't get far trying to fight the markets, and you will surely fail if you are dishonest with yourself.

I see a tremendous analogy between the BMW add-on supplier story (*see box, left*) and what's happening now in the marketing of futures, stock, and mutual fund trading/investing systems. The formula for writing a successful book about trading or selling a system is to develop a method and then

Continued on page four

Branscomb - continued from page three

simply select all of the best case examples of how it has worked in the past. Look at more than 90% of the trading books that have been written. Few of them provide much real, objective data on the true outcome of the method in question. They're simply catering to the psychological biases of the enormous amount of new entrants into the markets each year. That's not to say that one can't obtain some good ideas from some of these books—you can. It's just that the material in the book is only a small part of the overall structure you need to build.

What are some components of the structure you need?

You have to look at what you are trying to accomplish with a business frame of mind. For the trading/investing process itself, I start by looking at the risks involved versus the potential rewards. Your method should be as defined as you can make it in this regard. At that point you can put together a plan to make it work considering all other aspects typical of starting any business. The two most important items are capitalization and a sound business plan based on clear objectives.

The structure I'm referring to above incorporates the necessary components required to service each area of the business plan. As in any business, you look at the work flow—how you generate your output—and break it down into logical steps. It was at this point that I realized that I would have to create my own software for futures portfolio management. I haven't found any commercial software that is able to handle the risk analysis I need to do, both on an on-going basis and sizing new positions. So I've created an Excel workspace with linked, multi-sheet workbooks that handle the day-to-day accounting and risk management chores.

As a fundamental part of this structure we're talking about, you need to staff your business effectively with the skills needed to both do the current tasks as well as grow into the future. As a one-man business, I have to perform almost all of these tasks (except those for which I pay for services such as my

brokerage firm). Your work, Van, on parts negotiation/conflict was instrumental to me in developing and working with an internal set of parts responsible for the different aspects of my business.

I don't know that we really have parts, but it's useful to make that assumption. With that in mind, give us an example of some of those parts.

I have a businessman part who is the CEO/President of my company. There are actually two roles with this part: (1) providing leadership for the future course of the business and (2) managing the on-going day-to-day activities. I also have a trader part and an engineer part who work together on trading/investing ideas and systems. The trader part also controls all of the discretionary trading. I have a clerk part who performs all of the mundane chores such as accounting, computer backups, checking data quality each day, etc. I used to absolutely hate those mundane chores each day, and then I created my clerk part. This part is dedicated to performing the best possible job in these areas.

The whole second side of this work with internal parts is how you reward yourself. This is an extremely important element of success. I have combined what I have learned from you along with the work of Jimmy Sloman and Steven Covey in this regard. If I hadn't taken your course with a great commitment and an open mind, I don't think that I would have had the ability to implement Jimmy and Steven's work. This is something that I'm still working on, but it has had a profound affect on my ability to motivate myself.

As we get into the aspects of a trading/investing business in the newsletter, let's spend some time on the issue of internal parts, conflict resolution and reward. I think we all could benefit from revisiting this issue in that context.

Great! You mentioned honesty in trading as essential. What's the key to honesty as you see it?

Being honest with yourself means really looking deep inside at why you are trading/investing and discovering your weaknesses as well as your strengths. You should

honestly identify your true strengths and leverage those as much and as soon as possible. You must accept your weaknesses completely and work on them; otherwise, the markets will expose them in unfortunate ways eventually—at least that's been my experience. It's a lesson that you continually learn to some extent. I don't mean to sound as if I have all this sorted out to perfection. I used to think that someday I would evolve to not having any negative emotions with respect to trading, but now I'm simply able to realize that it's me that's creating the mind dramas during both the tough times and the easy times. I'm able to step back from them most of the time and simply execute my system. This is always easier said than done.

Just looking back on the past year, I can recall how I've ridden the up and down emotional cycles related to what's happening with my trend system in my portfolio of 16 futures markets. Most of the time I've been able to step back and see that it's me creating all of this emotional stuff. Once you're able to do that, then you can much more clearly see all of the options available to you at any given point. Again, this is always easier to talk about and look back on in hindsight.

Give us an example.

Last fall I had a string of some seven losing trades in a row. The losses from these were partially offset by two open winning trades, but one account was down 6% and one account, traded at a higher leverage level, was down 19%. Well, along comes a long entry signal in Natural Gas. At the time, I simply executed the trade. Natural Gas rallied strongly for a few days with an upside breakout, and my thoughts were something like, *All right, finally a market trend getting underway after this draw-down. This one really looks like it may rocket off.*

About that time, the market turned sharply lower and actually retraced below my entry point and the breakout level that resulted in the big burst of buying. My system exit point was still well below these levels. Now my thoughts were, *Damn, another likely loser to add to the string into a greater draw-down.* I was really caught up in the emotions of the moment. I remember do-

ing a feelings release exercise that night, which I learned in the Peak Performance Seminar, after I realized how I was so caught up in my emotions of the situation. That day turned out to be the bottom of the retracement. The next few weeks, Natural Gas had a tremendous rally which allowed me to reach a new equity peak prior to year's end. The story is actually longer since I later found myself caught up in the elated emotions from capturing that trend.

So far, I have been able to realize that it's all *me* creating these emotions so I simply trade my system orders while managing on-going risk. At this stage in my trading career, if I wasn't highly automated, I would likely sacrifice my long term expectancy by succumbing to the affects of these emotional swings.

What's your edge? What are you doing that is unique and different from others?

My edge in my long term system is simply capturing trends in the three week to six month time frame while trying to minimize the draw downs in some unique ways. The primary goal in developing this system was *simplicity*. I started with this basic concept in mind: capturing those sizable moves that occur with reasonable frequency while also ensuring that I'm in any major move that may occur. From an engineering perspective, I have a deep appreciation and understanding of the need for simplicity in a system. We will explore this topic in detail in future newsletters because it is a very important topic to understand, particularly since we tend to have many biases—the need to understand the market, the need to be right, and so on—that influence our judgment in this regard.

The system I developed has a very simple entry strategy and a much more complex exit strategy which incorporates even hourly data at certain times. If I was simply trying to trade one or two markets with this system, I wouldn't be able to generate enough trades in a reasonable time frame to make trading worthwhile. By applying it across 16 markets, it generates approximately 80 trades per year.

I am also trading with a different mon-

ey management algorithm than the majority of traders. I'm much more concerned about managing portfolio risk than being right on any given trade.

I trade with risk position sizing; some people call it fixed fractional position sizing. There is a great misunderstanding in media articles about trading with a fixed percentage of risk. When I say I'm risking 1.5% per trade, I mean that I have sized my position such that, if my market-based exit is hit just after entry, the portfolio will lose 1.5%. It's essentially the % risk model you talked about in Updates 29 and 30.

All the testing I have done using Trading Recipes and Excel indicates that, for the type of system I have developed, this kind of initial money management algorithm yields the highest return to draw-down ratio.

"The primary goal in developing my system was *simplicity*."

Of course there are many on-going money management algorithms that I have not yet been able to program. Hopefully, I'll see how those perform this year with the software you have under development.

We're very excited about that software. Why don't you give us your impression of it?

I expect it to provide us with the ability to profoundly alter the way trading and investing systems are designed. The basic underlying system may not differ much but the software's utility of focusing on initial and on-going money management algorithms will be incredible. I've never seen anything like the software you have under development. I am fortunate to be able to provide my inputs and desires. The sooner it's available, the better.

In future newsletters, we will look at creative, on-going money management methods which use a very simple trend-following system.

Where do you go from here in your research?

Most interesting, right now, is a system I developed which is quite active and short term-oriented. I plan to trade it along with the trend system in a subset of the 16 markets. After a big run, this system will take the opposing position quicker than the trend system's exit will occur. It has a very high rate of accuracy and a reasonably high expectancy on its own. Combined with the trend system, it will help reduce the volatility of my equity curve.

Do you do any discretionary trading?

Yes, I do some, mostly in equities. One area with potential for me is in discretionary reentries in long term trends when my trend system is stopped out. The sugar market this past year is a good example. If a trend is very volatile about its mean, my trend system won't perform as well as I would like. I have devised a number of methods to take advantage of this situation which I can trade easily, due to my relatively small trading size.

When the big funds are getting technical exit signals in a big way, but the fundamental up or downtrend is still intact, there is a big opportunity, such as crude oil this past January. I haven't modified my basic system since it's based on a sound market concept, and I don't want to add any additional degrees of freedom for a situation that is infrequent. However, I am working on a system with its own positive expectancy to trade alongside my trend system, at my discretion.

One area that improved my discretionary trading immensely is having an automated, worst-case exit strategy. That way, at any point in the trade, I know exactly where I will exit. It allows me to quickly assess the marked-to-the-market risk to the portfolio. It's also a number that's generated automatically each day, so there's never a question of where tomorrow's maximum exit is located. Having a strategy like this allows one to more easily let profits run, and it lets you readjust your position size based on your portfolio risk. This is how I currently trade stocks.

Continued on page six

New Editor - continued from page five

What has been your biggest issue in trading?

I am fortunate that I have never had a problem with taking losses. I've always assumed that not to stick to my initial planned exit would be a potential major disaster, so I've never let a loss run. That's probably the main thing that saved me from blowing out in my earlier days of trading—cutting my losses quick. Many times I exited too quickly only to see the trade go zooming off in my favor, but I never blamed that problem on cutting losses. I knew I just needed to learn more about what I was trying to accomplish. The more frustrated you feel, the stronger is the signal that you have a lesson to learn. There's nothing more frustrating than being in a trade, exiting with a small loss and then having it zoom off into a major, trending move. I know many who can identify with that scenario.

My biggest issue was letting profits run—letting go of the need for a desired outcome so that it would have a chance of occurring. Solving this problem required much work on exit strategies, coupled with risk management and working on some psychological issues within myself. I find that reviewing your course material is extremely helpful in this regard, and I have that as a part of my trading business plan.

That reminds me—in my early days of trading, I didn't have a business plan! Perhaps that was my single biggest issue. Sometime I'll relate the story of the four months that I devoted to day trading the S&P which was saved by the Russian coup.

Let's talk about the new newsletter. Why do you want to write the letter, and what are some of your goals for the newsletter?

I have always enjoyed writing. I actually enjoyed writing my graduate thesis, but I sure wish I had had access to the software and hardware we have today! Writing is a great creative outlet for me. I enjoy communicating my thoughts to others and hearing their thoughts.

I want to write about trading to help others over some of the rough spots that I have encountered in the past eight years or so. I also know I will learn a great deal about

"I catch market data errors all the time. In the next issue, we'll look at data quality issues."

myself in the process. I create a lot of positive energy in myself by giving to others. I enjoy helping people to achieve new levels of understanding and growth. If we can simply provide a sane voice in the field of flurry and folly that exists out there in the trading/investing world, then part of the goal will have been met.

We will display a methodology of analysis that's adaptable to all types of trading/investing analysis. My experience is that this is one area that many are sorely lacking: having an overall structure for the method in which they will evaluate and accept/reject ideas and systems. Chuck LeBeau and David Lucas's book (Editor: see book list) is the only one I've seen that has the proper type of approach at building a methodology.

Engineers and mathematicians tend to have great analysis methods, but they get caught up in trying to apply too much traditional physical science theory to the markets. On the other hand, people with great trading ideas but no engineering experience tend to fail in attempting to logically analyze their situation and put all the pieces together. Hopefully, we can bridge these two diverse tendencies with an organized, disciplined approach.

Two years from now, what do you hope this newsletter will have accomplished?

I hope that we will have demonstrated a viable method for designing, testing and evaluating a system. We plan to demonstrate how to assemble a relatively simple trend-following system, showing all steps that are prudent to follow prior to putting such a system into production. At the same time, we will point out the typical psychological biases which could sabotage the system in real trading.

Also, I hope that we will have covered data composition and quality issues in a way that is very useful to all traders and investors. As shown later in this issue and the next, this area has been grossly overlooked as of late,

especially with many of the U.S. markets going to combined electronic and open outcry sessions.

Lastly but perhaps most importantly, I hope that we will have provided some unique insight into various creative money management algorithms and how they affect the results of a basic system. The software you have under development will be a critical component of that analysis, and as far as I know, there is nothing like this in print. We will be providing some insight into an area of portfolio trading that hasn't been published before.

In summary, I believe that the material we plan to cover will be useful to a broad range of potential traders and investors because we will be focused on the basics which are actually hard to find in this industry.

I hope that readers will allow their creativity to be stimulated by the material by realizing that everything we will cover is simply one way of doing things. They can take the pieces that fit them and their particular puzzle and assemble them to advance to their next level of success. I have made some of my biggest advancements when I simply ask *What am I resisting here?* and then listen for a calm answer.

Thanks, Chuck. Give us a quick look at the important issues related to market data to be covered in the next issue.

One of the most important aspects of market data is the quality, the accuracy, of the data in real trading. You don't want to have inappropriate orders generated based on invalid data. However, obtaining quality data each and every single day is harder than most people realize. Often the data is wrong—the exchange makes a mistake, for instance.

Just yesterday, there was a significant error in the data for the low of the May 96 Kansas City Wheat contract. This error was reflected in all three of my sources of futures data, and it was in the newspaper this morning. I catch these types of errors all the time.

Next issue, we will take a look at data quality issues like these and suggest methods our readers can use to help catch errors and save themselves headaches and losses.

By the time you read this, IITM plans to have its web site activated on the Internet.

Our site will include a virtual trading room where you can play a simulated trading game with great prizes for the winner (a game lasts 3 months). In addition, we plan to have educational comments when you regularly make "stupid" trades in the game. Only one trade is played per day and the results are not known until 3 AM, U.S. Eastern Time. The game officially starts on August 15 but we estimate that we'll be running the game for practice in July. Our address will be <http://www.iitm.com>.

In the game, you'll be trading a system that only makes money in about 25% of the trades on the long side and makes money in 75% of the trades on the short side. However, the expectancy is that you'll make an average of 70 cents for each dollar risked on the long side, whereas the expectancy is negative on the short side. Perhaps this already seems a little familiar to some of you.

Each person will start out the game with an equity of \$50,000. Every day you'll be presented with a new trade such as Microsoft stock, gold, IBM series X stock, crude oil or India Telephone. You determine how much you will risk on that trade and if you want to go long or short. Remember that long trades have a high positive expectancy but make you money only 25% of the time. Short trades have a negative positive expectancy—you'll lose money in the long run—but they make money for you 75% of the time. The prices in our virtual trading room should have no correlation to the real world markets, although the game will teach you a lot about trading/investing.

Let's say the first trade is in Microsoft. You decide to risk \$1,000 on the long side. The next day you look at what happened and you got stopped out. You've lost \$1,000. Or if you'd gone short, you'd have made a \$1,000.

Each day we switch instruments unless there is a profit on the long side. Since we were stopped out, the next day everyone is trading gold. You go long again for \$1,000. Once again you're stopped out, but this time it's at 2:1. This is the price went through your stop and you lost \$2,000. Or, if you

WHAT'S NEW by Van K. Tharp, Ph.D.

had gone short, you would have made \$2,000.

The third day everyone is trading IBM series X stock. Again you go long and risk \$1,000. Again you lose a \$1,000. If you've gone long three days in a row, your equity is now at \$46,000. If you've gone short, your equity is now \$54,000.

On day four, everyone is trading crude oil. You again decide to risk \$1,000. This time, people on the long side get lucky and win. You've now made a \$1,000 and the game goes into a new mode of trading. Crude oil is now trending up. Your chances are now about 75% that you will make money on the long side until you finally lose. Your decision is simply whether to risk all your winnings or to raise your stops.

What happens to those who went short on crude oil? They lost 5:1 or \$5,000 if they risked \$1,000. When the longs win, the shorts can lose anything from 1:1 to 20:1. In other words, if you risk as much as 5% of your equity on the short side, you could go broke in one trade and be out of the game. However, at this point you just lost \$5,000. Your new equity is \$49,000 and you are now locked out of the game until a new stock or commodity comes up for trading.

Let's see what happens to the longs. You now have \$2,000 at risk (unless you decide to raise or lower your stops). The market says you're a 2:1 winner at 3:00 AM, so you win \$4,000. Shorts are wishing this opportunity hadn't gotten away from them.

You now have \$6,000 at risk. You decide to transfer \$3,000 into your equity and keep \$3,000 at risk. You now have an equity of \$52,000 with \$3,000 at risk. Again, you come up a winner, this time just 1:1. You now have an equity of \$55,000 with \$6,000 at risk. This time you decide to risk only \$4,000.

Again you win, 2:1. You've just won \$8,000. Your equity is now \$63,000, but with \$12,000 at risk. You decide that you only want to risk \$4,000 now. Crude oil now has a down day, so that trade is finished. You now have an equity of \$59,000.

The next trade is now India Telephone; we're back to the original odds of only 25% of the trades being winners on the long side. However, you now have \$59,000 in equity as compared to the fellow who began by going short and now has only \$49,000. Do you begin to see how our "virtual trading world" works? It pays to cut your losses short, let your profits run, and manage your money.

I guarantee you'll learn a lot. For example, after three straight trades on the short side, our trader would probably get a message about the risks of going against the expectancy.

We'll be publishing the top 10 people in the money standings each day. The winner—perhaps *you*—will win some nice prizes. First prize will be a free set of our new Systems Seminar Tapes, a \$995 value, which will be available for sale to everyone in a few months. The size of the prizes will go up as more people play our game. Once again, the game will start August 15th, but you'll probably get to practice it during July, while we continue to perfect the system.

Our Web site is connected to our Prosperity Club. Although you can play the game for free, we recommend that you join the club. It provides an information service in which you can download quotations and research from around the world on all sorts of investment vehicles, plus many other membership benefits. You'd probably pay as much as \$400 per month for this kind of service, but the Prosperity Club brings it to you for only \$9.95 per month. Our charter subscribers can get three months of service for only \$5.00.

Mindtraps in a newly published version is now available. It's a great book on psychological biases against trading or investing in the market, but it went out of print several years ago. We obtained publication rights and after some updating, now offer it to you for just \$34.95 plus shipping/handling. Order by calling our offices at 919-362-5591.

We remind you to keep sending in those questions. Any question that we actually answer in the newsletter will earn you a free subscription extension.

1996 Calendar of Events International Institute of Trading Mastery

June 21-23

Sold Out!

DEVELOPING YOUR PEAK POTENTIAL SEMINAR will be at Embassy Suites Hotel in Raleigh. It's now sold out.

June 28-30

DEVELOPING YOUR PEAK POTENTIAL SEMINAR. Our first seminar was a sell-out with such a long waiting list that we added this second seminar. This will be at the Marriott Courtyard in North Raleigh.

July 12-14

HOW TO DEVELOP A WINNING TRADING SYSTEM THAT FITS YOU. Chuck LeBeau is the guest speaker at this exciting seminar, held at Embassy Suites Hotel in Raleigh.

Early September

Van plans to be available in Europe for some consulting as well as a vacation. If any of you would like to meet with him, please let us know. His timing and schedule are not yet fixed.

September 20-22

PEAK PERFORMANCE TRADING SEMINAR. This is our core seminar, which explores the essence of what trading is all about. It is also the prime seminar to attend if you're having trouble with self-sabotage. It will be held at Embassy Suites Hotel, Raleigh.

October 25-27

MENTAL STRATEGIES SEMINAR. This is our advanced seminar that we have not held since 1994. One of the following is a prerequisite for this course: 1) a private consultation with Van K. Tharp; 2) attendance at the Peak Potential Seminar; 3) attendance at the Peak Performance Seminar; or 4) Dr. Tharp's permission. This seminar will be at Homewood Suites Hotel in Cary. Lee Coit and Van Tharp will present this seminar.

November 16-24

WEALTH-BUILDING WORKSHOP. We'll be doing this Wealth-Building Workshop one more time in 1996 and we have a sponsor who will help to fill it.

This eight-day seminar begins on Saturday November 16 in the evening. On Monday, you'll be out in the community earning some money and by Wednesday, you'll be forming a new business.

The workshop comes to a close at about 1:00 PM on Sunday, November 24. Once again, presenters will include Lee Coit plus an attorney who will guide you through the process and offer tips about tax savings.

This workshop will be at Embassy Suites Hotel in Raleigh.

Need more information...want to enroll? Simply call (919) 362-5591

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- Course Update 3 – An Interview with Jack Schwager (Jul. 89)
- Course Update 4 – An Interview with David Ryan (Oct. 89)
- Course Update 6 – The Psychology of Taxes (Dec. 89)
- Course Update 9 – An Interview with Tom Basso (Dec. 90)
- Course Update 10 – Tom Basso: Interview with a CTA (Mar. 91)
- Course Update 12 – An Interview with Jim Sloman (Aug. 91)
- Course Update 13 – The Psychology of Organization (Nov. 91)
- Course Update 14 – Peak Brokerage / Agreements (Jan. 92)
- Course Update 15 – Parts and Self-Esteem (Apr. 92)
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- Course Update 17 – Projection: You Get What You Want (Nov. 92)
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- Course Update 33 – Market Making: Part 2 (Apr. 96)

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- Market Mastery 2 – Data Quality in System Design: Part 1 (Jul. 96)
- Market Mastery 3 – Data Quality in System Design: Part 2 (Aug. 96)
- Market Mastery 4 – Rouge Traders: What They Might Mean to You (Sep. 96)
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