April 2011 Edition

In This Issue...

- Letter from the Editor
- Revising the Reward-Risk Ratio
- Social Values and Political Fragmentation: Right on Schedule
- Investing With Volume Analysis: Identify, Follow, & Profit From Trends
- Portfolio Simulation to Optimize Trading Systems
- Interview with Jason Meshnick, CMT
- MTA Announcements

Letter from the Editor

We’re featuring a couple longer articles this month, which we think fit well in our newsletter. George Rahal takes a detailed look at quantifying potential rewards relative to risk, an important trading consideration. His contribution is well written and understandable to the novice trading system developer while offering new insights to veteran programmers.

Andy Ratkai, CFA, recently prepared a report for his clients that brought together several interesting macro insights. In a way, he ties wave analysis into behavioral finance and raises a number of thought-provoking ideas.

Buff Dormeier, CMT, continues to share high quality research on methods for applying volume to market analysis. He recently released a book which adds to the Body of Knowledge of Technical Analysis while offering actionable guidance for traders. It’s also that rare book which is interesting and a fun read. Although we never make guarantees in our profession, I am confident that I could guarantee everyone will learn something from this book as Buff combines historical stories with new techniques.

Next month, many members will gather at the Annual Symposium in New York. This event is always well-attended and highly educational. It’s also an opportunity to meet other members, and I hope to meet many of you so that I can learn what you expect from your newsletter.

Sincerely,

Mike Carr, CMT

Revising the Reward-Risk Ratio

by George Rahal

Reward-Risk is a term for the ratio of the potential profit to the potential loss of a trade. In using such analysis, the entry price and the prices at which profits or losses will be taken are predetermined. Measuring the units of reward per risk in advance aids in deciding...
To use a non-market and non-monetary example, say a football player makes two-thirds, or roughly 67%, of his field goals. A field goal is worth 3 points if obtained, or 0 points if missed. For this player, his expected value is 2 points \([=0.67*3 + 0.33*0]\). If in the last play of the game, his team is down by 3 points and he is up to kick a field goal, a strictly rational gambler will bet against the team. If the team is down by 1 point, the gambler will bet for field goal, but one must be careful when making decisions on ERR profiles that have a positive expected value. A positive expected value, however small, will result in long term success, and vice-versa.

Let us return to the example of the $10 stock with the SRR of 3:1. Given the present market conditions, the trader has assessed that either $16 or $8 will be reached first; whichever target is reached first will close the trade. If the analysis ends there, the trader unwittingly assumes that there is a 50/50 chance of a profit (of $6) or a loss (of $2). The expected return is thus $3 \([=0.50*6]\) and the expected risk is $1 \([=0.50*2]\). Observe that the $3 profit to $1 loss remains a 3:1 relationship; the SRR equals the ERR. Any and every reward-risk setup that does not define probabilities assumes a 50/50 chance that its respective targets will be met. Therefore, the classical concept of reward-risk does—and has always—incorporated expected value, but as a passive assumption! Determining an expected reward-risk based on trade specific probabilities is not a supplement to the simple reward-risk construction, but rather, a revision of it.

The passive assumption of a 50/50 chance for a profit or loss has exerted a silent influence on the subject of reward-risk. Literature in Technical Analysis often prescribes a minimum reward-risk of 3:1 for one to remain profitable over time. As discussed above, “over time” is when expected values pave over individual observations. If a risk-reward lower than 3:1 is considered to ultimately result in a trader’s ruin, one can extract the assumed probabilities. The breakeven odds for an SRR of 3:1 are 25/75. Therefore, one assumes that successful traders are profitable slightly over 25% of the time, because anything less than 3:1 will result in a negative expected value. Interestingly, this success rate matches the figure of 30%, which is the percentage of time that the market is estimated to be trending.

A positive expected return can result from various reward-risk proportions and their respective probabilities of success and failure. For example, assume an SRR of 1.25, that is, for every potential profit of 1, there is a potential loss of 2.5. With a probability of success of 0.8, the ERR is 0.8*0.5, or 1.6:1, and the expected value is .30. Over the long term, this reward-risk profile makes .30 per trade—not per every winning trade, but per trade. That’s success. Now, examine a trade with a large profit potential and a “tight” stop-loss, a temptation particular to futures traders. Even with an SRR of 7:1, a 90% chance of being stopped out yields an ERR of 0.70/0.9, or .77:1, and a negative expected value, -.40. Trading only these 7:1 setups ensures a quick bankruptcy. As you can see, even if the SRR is less than 1, any trade with a positive expected value—adjudging for commissions and other frictions—should be undertaken. In this light, the prescription of trading only 3:1 or higher setups is crude, and most likely a result of an implicitly assumed success rate of around 25-30%, which may be related to the fact that markets trend 30% of the time.

Estimating the Probability

Trading is inherently probabilistic. The preceding arguments strongly suggest that if one is to use a reward-risk ratio in assessing trades, an expected value must be calculated and serve as a deciding factor.—Well, that’s the easy part. The real challenge to this model is in determining an accurate measure for the probability that will be used to arrive at expected values. Due to the complex nature of trading in the financial markets, probabilities can only be estimated, not determined. In the examples throughout this article, the probabilities used were assumed to be accurate for the sake of illustration. This section sketched four methods that can be used to estimate the probability of success for a given trade. Note that only one value needs to be calculated, because 1 minus the probability of success equals the probability of failure.

Historical Success Rate

For an individual trader with a consistent style, his historical success rate can be used as a proxy for the probability of success. For example, if he finds that 55% of his trades are winners, .55 and .45 will be the probability of success and of failure, respectively. With these probabilities, an SRR of .82:1 yields an ERR of 1:1, or breakeven.

You will see later on in this article, the probability of success can be inversely related with the reward to risk ratio. As higher price targets are attempted, there are fewer successes and vice-versa. The trader can balance the success rate and reward-risk proportion to see what combination yields the highest expected value. In the example above, the SRR must be greater than .82:1 for profitability. Based on the inverse relationship established above, to maintain a 55% success rate the reward may not extend too far beyond .82:1. Note, however, that if these measures of probability are consistent and accurate all one needs is a positive expected value for a trade to be worthwhile; in this instance an SRR “less” of 25:1 with a breakeven of 10:25 would be adequate.

In expected value, a set of future values, or payouts, are adjusted to reflect the probability that each will materialize. For a stock, given a $10 entry with a profit target of $16 and a stop-loss at $8, the reward-risk is $6 to $2, a 3:1 relationship; these are the set of future values. Additionally, say the probability of prices reaching the target before the stop-loss is 40%. The odds of being stopped out are thus 60% \([=1-0.4]\). To obtain the expected value, one multiplies the chances of a profit by the potential profit, \(4*6 = 24.2\), and the chances of loss by the potential loss, \(6*2 = 12.2\). Thus, the expected reward-risk (ERR) is $2.4 to $1.2, or 2:1. The expected value is the gain minus the loss, or $1.2 \([=2.4-1.2]\). The unadjusted ratio of $6:2, or 3:1 will from here on be referred to as the simple reward-risk (SRR). Note how in this example, the SRR is 3:1 but the ERR is 2:1. With a probability of success of .25, instead of .4, the expected reward is $1.5 \([=0.25*6]\), the expected risk is $1.5 \([=0.75*2]\), and the expected value is 0, or breakeven. Calculating an ERR of 1:1 reveals the odds needed to break even on a trade.

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The historical success rate approach has the following advantages and disadvantages:

**Advantages**

- Based on empirical data
- Quick and simple to calculate
- Requires no estimates
- A long enough track record has some reliability

**Disadvantages**

- Past performance is not indicative of future results; the conditions that have allowed that style obtain a given success rate may change
- Not a scientifically rigorous approach

**Technical Analysis Statistics**

Technical traders use various methods to determine buy and sell signals. These include trendlines, support and resistance, continuation and reversal patterns, indicators, and many more. The statistical success rates of these methods of technical analysis can be used for calculating probabilities.

In Charles Kirkpatrick and Julie Dahlquist's *Technical Analysis*, the authors summarize the results from Thomas Bulkowski's *Trading Classic Chart Patterns*. In his book, Bulkowski documented the success rate of various technical continuation and reversal patterns from a sample of 700 stocks during a span of ten years. I will use his figures for illustrative purposes.

For a rectangle pattern, also known as a trading range, if there is a viable upward breakout, established *after the fact* in Bulkowski's research, 80% of the time there will be a gain of 10%. (*Technical Analysis*, p. 315) That yields an expected reward of 8%. A stop-loss at -4% (2*-4% = -8%) is thus the breakeven point. A stop-loss of less than 4% below the entry price is necessary to obtain a positive expected value. Continuing with this example, 75% of rectangle breakouts are false signals, making the *ex ante* success rate 20% [= .8*(1-.75)]. The expected reward is not 8%, but 2%. A stop-loss at 2.5% yields an expected value of 0. The breakeven SRR is thus 5:1, a 10% gain to a 2.5% loss. Pretty grim. These numbers also assume that the odds already discount the possibility of being stopped-out prior to the 10% gain.

Using technical analysis statistics to determine probabilities has the following advantages and disadvantages:

**Advantages**

- If technical analysis is used to determine the reward and risk targets, this method is the most consistent with the analysis
- Expected values are simple to calculate
- Requires no estimates

**Disadvantages**

- The body of research on the success rate of technical patterns and indicators is limited, an enormous hindrance to this approach
- Based on historical data
- Both the success rates of valid signals and the likely percentage gain prior to a reversal of the signal must be known to properly calculate the probability

**Volatility of Returns**

All else equal, of two price targets in opposing directions, the target closer to the entry price has greater odds of being reached first. To a trader, a stop-loss being reached *prior* to an upside target is not an inconsequential occurrence. The standard deviation of returns, specified for the expected holding period, aids in assessing the chances of being stopped out of a trade due to the proximity of the profit and loss targets to the entry price.

Assume a trade with an expected four month holding period. The security in question has a historical four month mean return of 1% and a standard deviation ($\sigma$) of 3%. The entry price is $10, profits will be taken at $10.70, and a stop-loss is placed at $9.80. Once these reward-risk targets are set, one can determine the distance, in standard deviations, of each from the entry price. In this example, the upside target is 7%, 2$\sigma$ from the mean of 1% and the stop-loss is at 2%,-1$\sigma$ from the mean. On a normal distribution, +2$\sigma$ or higher is reached 2.4% of the time and -1$\sigma$ or lower is reached 16% of the time. The balance for which neither target is achieved is 81.6%. The image below depicts these zones; red is for the loss target, green is for the profit target, and blue is neither.
Two assumptions needed to simplify the example is that the trader will not readjust the stop-loss or the price target and that after the four month holding period, the trade will be exited at the middle of the blue target range if neither target has been met. Since there are three probabilities involved, there must be a third step in calculating expected value.

Expected reward: \(0.024 \times 7\% = 0.168\%\)
Expected risk: \(0.16 \times -2\% = -0.32\%\)
Expected exit if neither target achieved (middle of blue range): \(0.816 \times 2.5\% = 2.04\%\); since the result is positive, must be added to expected reward
Expected reward-risk: \(2.04\%\) to \(-0.32\%\) = 6.3:1
Expected value = \(0.168\% + -0.32\% + 2.4\% = 1.89\%\) profit
The simple reward-risk of 7% to 2%, or 3.5:1, is not a meaningful number

Let’s examine the reverse setup, in which the profit target is 1\(\sigma\), 4%, and the stop loss is 2\(\sigma\), -5%:

Expected reward: \(0.16 \times 4\% = 0.64\%\)
Expected risk: \(0.024 \times -5\% = -0.12\%\)
Expected exit if neither target achieved (middle of blue range): \(0.816 \times -0.5\% = -0.408\%\); since the result is negative, must be added to expected risk
Expected reward-risk: \(0.64\%\) to \(-0.12\%\) = 5.3:1
Expected value = \(0.64\% + -0.12\% + -0.408\% = 0.132\%\) profit
The simple reward-risk of 4% to 5%, or 0.8:1, is not a meaningful number

As you can see, the proximity of profit and loss targets to an entry price, and the resulting probability of which target will be reached first, shapes the reward-risk profile. Also, where the trade is closed if neither target is reached will significantly impact the expected value. If the exit price was assumed to be at breakeven, instead of at the middle of the blue range, the first and second trades would have an expected value of \(-0.152\%\) and \(0.52\%\), respectively.

Note that such an analysis is direction neutral; it simply relies on volatility to characterize the potential profitability of a trade. Someone seeking only to identify statistical setups may find this direction neutral quality appealing; however, a discretionary trader usually buys with the bias that prices will rise.

The volatility of returns approach has the following advantages and disadvantages*:

mta.org/eweb/docs/.../index.html
The volatility of returns approach has the following advantages and disadvantages:

**Advantages**
- Accounts for the randomness of market direction
- Sets more realistic expectations of whether a profit or loss target will be achieved
- Scientifically sound way to extract probabilities

**Disadvantages**
- Does not incorporate the tools of technical analysis, e.g., trend lines, patterns, indicators
- Statistics are imperfect predictors
- Assumes a normal distribution of returns

*Direction neural is either an advantage or a disadvantage, depending on the trading style

**Multi-Factor Model**

Another approach is to use a **multi-factor model** to determine probabilities. Such a model calculates the statistical relationship of various independent variables, called “factors,” to the dependent variable, resulting in the following equation:

\[
P = \alpha + c_1F_1 + c_2F_2 + c_3F_3 + \ldots + c_nF_n + e
\]

where:
- \(P\) = dependent variable (in this case, probability of success)
- \(\alpha\) = intercept term (the value of \(P\) if all factors equal zero)
- \(c\) = factor coefficient
- \(F\) = factor
- \(e\) = error term (due to imperfect statistical relationships)

A trader could determine that the following five factors are sufficient to explain a trade’s probability of success: technical strength, fundamental strength, the entry price’s distance, measured in standard deviations, from the profit target, the entry price’s current distance, measured in the inverse of the standard deviation, from the stop-loss, and the trader’s historical success rate. The coefficient is the degree to which each factor influences the dependent variable, holding all other factors equal. The table below lists the five factors, their coefficients, and the factors’ values for a particular trade. (All listed values are simply illustrative.)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Coefficient</th>
<th>Values for Trade in Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Strength (scale of 0-10)</td>
<td>1.2</td>
<td>7</td>
</tr>
<tr>
<td>Fundamental Strength (scale of 0-10)</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Distance of entry price from profit target, in standard deviations</td>
<td>-1.5</td>
<td>1</td>
</tr>
<tr>
<td>Distance of entry price from stop-loss, in inverse standard deviations</td>
<td>2.2</td>
<td>-.5*</td>
</tr>
<tr>
<td>Trader historical success rate</td>
<td>.8</td>
<td>60 (%)</td>
</tr>
</tbody>
</table>

*This value indicates that the stop loss is negative 2 standard deviations from the entry price \([1/\sigma = 1/-2 = -.5]\). There is an inverse relationship between the price’s distance from the stop-loss and the probability of success.

From the values on the third column of the table, note that the stock is in a strong technical position, a neutral fundamental position, and the trader is profitable 60% of the time. Let us assume the trade in question is from the example used in this article’s section on volatility: the trader aims for a 4% return \((1\sigma)\) with a 5% risk \((-2\sigma)\). Let us also assume that the intercept and error term equal zero. Using the factor model and the values from the table, the probability of success is as follows:

\[
P = 0 + 1.2(7) + 1(5) + -1.5(1) + 2.2(-.5) + .8(60) = .588
\]

The probability of success for this trade is 58.8%. With a 4% return and a 5% stop loss, the ERR is 2.35%/2.06%, or 1.14:1, with an expected value of 0.292.

The multi-factor model approach has the following advantages and disadvantages:

**Advantages**
- Various inputs can be used, including inputs from the above stated methods
Various inputs can be used, including inputs from the above-stated methods:

- Model acknowledges that more than one factor influences probabilities
- Scientifically valid

Disadvantages

- Extremely complex to construct correctly
- Some inputs may require estimates
- Requires a large supply of data
- Model must be properly specified, that is, it must properly account for the factors that influence the dependant variable

Revising the simple reward-risk measure to account for expected value results in a much richer analysis. It may also prove to be more accurate in determining a trader’s long term profitability. As such, research on how to best estimate the probability of success or the probability of failure for a trade with a defined reward and risk would be valuable.

To quickly touch upon two complications not addressed in this article: first, the ERR discussed here was for the onset of a trade; once the trade is executed, the ERR profile will change as a function of price action, changing probabilities, and trader decisions, such as raising a stop-loss. Second, conditional probabilities may be needed to calculate viable expected values.

To summarize the major points of this article:

- Trading is probabilistic by nature
- Expected value should be incorporated into reward-risk analysis
- To determine the expected reward-risk (ERR), first multiply the reward by probability of success and the loss by the probability of loss; the ratio of these two is the ERR
- The expected reward minus the expected risk is the expected value of the trade
- An ERR of 1:1 is a breakeven setup, with an expected value of zero
- The simple reward-risk ratio (SRR) is actually an ERR that passively assumes that the probability of success is .50
- A positive expected return can result from various reward-risk proportions and their respective probabilities of success and failure
- The classical prescription of a 3:1 SRR may have been implicitly based on the fact that the percentage of winning trades was slightly higher than 25%
- The crux of calculating an expected reward-risk ratio is in estimating a viable probability of success or of failure
- I have introduced four possible methods for estimating the probability to be used in calculating the ERR. These are, the trader’s historical success rate, statistics on methods of technical analysis, volatility of returns, and a multifactor model
- Research on methods of obtaining the probability of trade success in the context of reward-risk would greatly contribute to this type of analysis

George Rahal has been writing about financial markets for several years. He began his career in Lazard Capital Markets’ equity research department. He has since been involved in technical research and trading, which he applies in his current role at Landor Capital Management. He earned his B.A. in Literature from NYU, where he also studied psychology. Mr. Rahal is a CMT Level II candidate, and has passed all three CFA exams. Regarding questions or comments, Mr. Rahal can be reached at georgeAralah@gmail.com or on http://www.linkedin.com/in/georgealah

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**GLOBAL EMERGING GROWTH CAPITAL**

**Investment Courses For Professionals**

A sample of a growing list of fundamental and technical courses is shown below. The courses are associated with global destinations.
Note: The Long Wave and Social Values help to explain to me (and hopefully others) the current political fric-tiousness, rise of Tea Party, etc. It’s just a view of the world today, rather than the basis of our investment management process. Our day-to-day portfolio decisions are based on a whole different set of parameters than the Long Wave.

If you think about it, any political or economic system that survives over the long-term must have ebbs and flows because they rebalance the system. No economic sector can indefinitely grow much faster than the economy at large. No asset can consistently have higher returns than its underlying variables. No political system can move forever to the left or right. The ebb and flow is rebalancing, but painful, as we see today.

Karl Marx was a bright man who missed the rebalancing nature of economic systems. He looked at the political and economic scene of his time (mid-1800s Europe) and saw only one side of the cycle. When he looked at capitalism, he saw a mechanism by which the rich got richer. When he looked at the social democracies of his time, he saw moves to the right, then stability, then further moves to the right. He assumed that if this trend continued, eventually the system would implode. It didn’t, because wealth concentration was invariably followed by wealth dissipation. Social modes are neither progressive nor regressive; they are cyclical. Through rebalancing, the system (i.e. capitalism) has prospered in the long term.

In this Market Outlook we track historical ebbs and flows in economics (we have about 150 years of good data) and social mood (through political platforms and elections). This brief history of the Social Value Cycle is based on work done by John Sterman of MIT, Zvi Namenwirth of the University of Connecticut, and Henry Galliot, former chief economist of the Federated mutual fund family.

The foundation of the Social Value Cycle rests not upon traditional business cycle analysis, but on the concept of the “Long Wave” business cycle. This is a concept new to most investors, since the primary focus of economists and academia is on business cycles. Yet for long-term investors, it is the Long Wave which is the most important cycle, and least understood. Like a glacier, its procession is imperceptible to the eye, yet it can change the landscape dramatically over many years. Investors can spend their entire lifetimes in one half of the cycle, not recognizing the changing environment until it is too late.

Figure 1 idealizes the main modes of economic behavior. “Growth” is the relatively steady expansion of society’s wealth due to population growth, technological progress, and the accumulation of human capital (knowledge). For the U.S., the annualized 150-year growth trend of real GDP has been about 3.4%. The Long Wave appears as a slow-moving curve with long-lasting periods of rise and decline. While subject to great variability, it is estimated that peak-to-peak cycles of the Long Wave have lasted 45 to 60 years in the U.S. since the 1800s. The “business cycle” appears more rapid and shallow by comparison; typically a few percentage points of growth from peak to trough. Historically, the business cycle has been three to six years in length. Finally, “random noise” is the weekly and monthly data that Wall Street worries so much about.
The genesis of the Long Wave is the long-term ebb and flow of capital creation. The most recent trough in this cycle was right after WW II, as the U.S. underwent extensive post-war rebuilding. Before we could produce the consumer goods we wanted, the machine tools and factories that produced these goods had to be built. Factories required ways to get raw materials to them, requiring development of transportation systems, which in turn required production of equipment for the transportation industry, etc. The demand for capital stimulated further demand for capital. There was a very powerful self-reinforcing process that continued for many years and pushed the standard of living well above average.

As capacity catches up with demand, the expansion phase peters out, with the result that the capital goods sector is larger than required for the long run. Capacity caught up with demand in this country in the early 1970s. Excess capacity first appeared in heavy industries such as autos and steel, then spread to durable goods industries, services (e.g. airlines), and ultimately to real estate and the government sector. This created a self-reinforcing cycle that cut into demand well into the 1980s, as the same process that powered the upswing worked in reverse to drag the economy below its growth trend rate for over a decade. The accompanying chart shows the marked differences in growth rates during these broad expansions and declines.

The most recent economic recession was brought about by an excess of financial capital, rather than physical capital such as factories and inventory. The long decline of interest rates from 1981 to today has provided ample opportunity for the financial sector to encourage borrowing and refinancing until the capacity to fund the debt merry-go-round was exhausted. Like historical Long Wave troughs, the collapse of the credit bubble has created the current self-reinforcing cycle that is cutting into demand, causing huge dislocations in the financial and housing markets, and exposing major defects in government budgets that have been years in the making. The “creative destruction” of the 1970s took place as factories were shuttered, production increasingly moved to Asia, and talent, capital, and labor was freed up for the age of high technology brought on by the invention and application of the computer semiconductor. Creative destruction today can be seen in the wide swath of bank and corporate bankruptcies, the real estate foreclosure quagmire, and widespread stress among over-leveraged federal, state, and municipal governments.

### Ebb and Flow in Finance

Although there are long-term averages that can be calculated for any economic statistic, when viewed through the Long Wave lens one realizes that hardly anyone experiences the “average.” In reality, there are long periods of above normal returns, followed by long periods below normal.

This effect can also be seen in the returns among financial investments. Stock returns, measured as a 10-year compound annual growth rate (CAGR), show large troughs in the late 1930s in the late stages of the Great Depression, and the mid-1970s as America shifted from an industrial to a service/technology economy and struggled with OPEC’s supply shock. Today, we are at another trough, witnessing the end of the “financial era” of the last 30 years, due to heavy borrowing and a collapse in real estate prices. Clearly, hardly anyone over the past 80 years has gotten the “average” return (about 11.5%). They got way above average, as in the late 1990s, or way below, as you can see from the most recent readings (+2%). These extremely low ten-year returns are consistent with Long Wave troughs in the past.

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As seen in Figure 3, bonds, too, have been subject to the influence of a Long Wave, as interest rates have risen and fallen in alternating cycles of about 30 years from trough to peak. As capital creation got underway in earnest, creating rising GDP and incomes, inflation had also taken root and pushed interest rates up. Note how the long-term trend on bond yields has superseded the much smaller effects of the business cycle. While rates fluctuate with the business cycle, those swings are quite shallow compared to the broad secular rises and falls shown here. To date, the bond market has followed the S&P 500 closely.
Social Mood and the Long Wave

The Long Wave cycle is so powerful that the pressures it creates spill into our social and political institutions. An analysis of social mood by Namenwirth and others was conducted by studying political party platforms, state of the union addresses, key speeches, and major social legislation and is dubbed the Social Value Cycle. It is based on the theory that political parties exist to be elected and re-elected, and therefore, perhaps more than any other institution, have an interest in capturing the mood of the electorate. A social mood is not a theory for them, it is the reason they win or lose elections.

Under this model, the social mood of a country cycles around four phases:

- The progressive phase—when liberalization occurs with government becoming actively involved in social policy with justice and equity becoming dominant cultural issues.
- The cosmopolitan phase—in which a wealthy, confident nation is outwardly focused, has little hesitation in telling others what to do, and is fairly imperialistic.
- The conservative phase—in which stresses appear, economic issues come to the fore, and the focus turns inward.
- The parochial phase—by far the least attractive phase, and often driven by economics, it is characterized by high social stress as divisive issues dominate, often with moral overtones. It is a very difficult time for political parties.

While these phases are far from exact, and the timing of the cycles occurs with great variability, it is interesting how history follows this model in a broad sense. A brief stroll through U.S. history illustrates the cycles.

| Political Value Shifts During the Long Wave |
|-------------------------------|-------------------|
| **Long Wave Phase** | **Social Value Cycle Phase** |
| Expansion | Progressive |
| Peak | Cosmopolitan |
| Decline | Conservative |
| Trough | Parochial |

During Long Wave expansions, political values tend to become more liberal, as rising incomes and economic security seem to provide a basis for more cultural “risk-taking” in a society. This is the “progressive” phase of the Social Value Cycle. Public mood is focused on civil rights, social equity and justice. Examples include the abolitionist movement (circa 1855), Child Labor Act and women’s suffrage (circa 1907), and the Civil Rights movement (circa 1959). Two of today’s most intractable financial commitments, Medicare and Medicaid, were born in this period as Lyndon Johnson’s Great Society vision was implemented. But business is good, and there is confidence about jobs and spending.

At the peak of Long Wave expansion social mood moves into the cosmopolitan phase. There is an outward-looking, almost imperialistic attitude in society. Wealth creation is in high gear during these periods, and the population is very confident about itself with little hesitation in telling other countries what they should be doing. Cosmopolitan periods have occurred around the time of the Napoleonic Wars (1816), the Civil War (1860s), World War I (1918) and the Vietnam War (1967), and each represented a bid for dominance of their respective continents. In 1969, the ultimate exploration quest was achieved—Neil Armstrong walked on the moon. Fast forward about 30 years to 2001 and 2003, and we find ourselves initiating invasions of Iraq and Afghanistan in the wake of the 9/11 attacks. That period also coincided with the peak in S&P 500 returns (+20%/yr for ten years!)

As the Long Wave declines, the conservative era emerges. Conservative eras have been marked by major economic slowdowns, and rising fears of job security. 1829 marked the beginning of major depression of the 1830s-40s. Late 19th century depressions began in 1881. 1929 saw the infamous stock market peak and subsequent Great Depression. In 1985 we saw a peak of a conservative phase, with the popularity of Reagan and Thatcher and conservatism in economics. A deep recession in the early 1980s was followed by major dislocations in farming, S&Ls, and real estate. Pro-business and anti-government sentiment during these phases has often led to massive tax reductions. In the 1870s, Civil War taxes were reduced to the point where the income tax disappeared by 1880. In the 1920s the highest tax rate was reduced from 73% to 25%, and in the early 1980s rates dropped from 70% to 28%. Many thought Ronald Reagan unique in this regard, but in a sense he arrived right on schedule.
Finally, the parochial phase represents the trough of the Long Wave, and is the nastiest phase of the Social Value Cycle. It is marked by weak business cycles, rather extended recessions, a debt “hangover” as the exuberant lending of previous days is replaced with bankruptcy and falling asset prices. Moreover, the social focus shifts inward. Individuals are out for themselves; the only way of bettering one’s lot in life is at the expense of some other group. Examples would include the rise of fascism in 1920s-30s Europe, America’s isolationism in the 1930s, the malaise of the late 1970s, and the heightened religious tensions directed against Muslims in America today. When we look at the divisiveness today through this model, it’s easy to consider that we may be at the low end of the cycle, that is, somewhere in the parochial phase.

One of the key similarities among parochial periods is the great difficulty the political parties face. For example, between 1836 and 1860 no president was ever reelected. There were nine presidents in 24 years. The period saw the rise of the Know-Nothing party, an anti-Catholic, anti-immigrant, anti-Semitic group that was a kind of secret society.

The next Long Wave downturn was in the 1870s to 1890s. Two parties evolved, the Democrats and Republicans. They became indistinguishable, however, as neither wanted to deal the thorny issues of rising monopoly power (Rockefeller, etc.) and the not so pretty side of capitalism, increasingly violent labor-management struggles, and the decline of the agrarian economy due to rapid and unchecked industrialization. In the five presidential elections after 1876, the average margin of victory was only 1½% of the popular vote, and in three elections it was ½%. During this period the economy was going through weak business cycles and deep depressions punctuated by financial panics. Naturally, these came to haunt the party in power, and they would lose their ability to carry on or get re-elected. Parochial periods are a fertile time for new political parties to sprout, and this period was no exception. The Populist Party rose to prominence and their power culminated in the 1896 “Cross of Gold” speech given by their failed presidential candidate, William Jennings Bryan.

Unlike the 1800s when European problems came to America, in the 1930s our problems went to them. In previous parochial periods, parties had a very difficult time getting re-elected. Roosevelt’s presidency was unusual in the opposite way—he was elected four times! Though the economic stresses were painful, World War II made it a politically stable time.

In the 1970s, we had three presidents in ten years as Nixon’s resignation put Ford in office, who then lost to Carter. Economic issues dominated the headlines this decade, as industrial America gave way to a nation dominated by services and the microchip. This generational dislocation generated racial agitation against Vietnamese immigrants and an increasing number of illegal Latin Americans dominated the headlines this decade, as industrial America gave way to a nation dominated by services and the microchip. This generational dislocation generated racial agitation against Vietnamese immigrants and an increasing number of illegal Latin Americans the early 1980s dawned.

Listening to the quality of political debate today makes it easy to envision we are many of the signs that are consistent with parochial periods of the past. The rise of the Tea Party, the back and forth changes in the control of congress and the unwillingness of its members to deal with our really big problems, the backlash against public sector employees, and the xenophobic tone of almost any discussion of Muslims in America all have precedent in American history. It also says the gains either political party may enjoy will be short-lived as voters seek quick answers to the problems that dog us, which narrowly-focused politicians fail to deliver. This lesson hasn’t been lost on Republican presidential candidates, who are just now hesitantly throwing their hats in the ring. Becoming president today is quite hazardous, to say the least.

Based on the economic, political, and cultural environment today, we seem to be moving through the parochial phase of the Social Value Cycle. The bad news is that we can’t tell how far along this phase is, nor how long it will last. The good news is that if the Social Value phases repeat, at least in a very broad sense there may be a more optimistic period following our current malaise.

Can we look forward to a “progressive” phase some time in the next 30 years? It sounds farfetched, but capitalism’s “invisible hand” has proven its adaptability over time, managing to hold together despite lurching from boom to bust and back again. Can our society find the backbone to deal with the daunting challenges of debt, slow growth, reluctant politicians, and threats from abroad? Probably, because we have solved intractable problems before. Is there reason to believe our will to carry on is less now than it was in times past? I don’t think so, but the process of owning up to our self-made problems (precarious debt levels), and then working on solutions for them is a messy, tense, and fractious affair. Political power will vacillate back and forth until the right leaders are found, who will either lead an effort of “shared sacrifice,” or have it thrust upon them. So political fragmentation will continue, along with the negative campaigning, surreal promises, and spineless short-term thinking that goes with it. It’s likely to be frustrating for the left and right alike, but as mere Band-Aid solutions run out, the collective wisdom of voters will grind toward a resolution. And from that a progressive period may emerge. If the Social Value Cycle has any validity at all during these dark days, we can take comfort from Winston Churchill’s comment about America,
The Markets Today

Stock markets had been enjoying a long rally from summer 2010 when they were jolted by the twin crises of rapid Arab revolution and the disastrous earthquake in Japan. The economic landscape thus changed mightily in the first quarter of 2011, and probably not for the better. Tunisia’s fall is the earliest of these events, but happened only in January of this year, therefore it is too early to be certain what effects these upheavals will have. They would seem to argue for higher energy prices as Libya burns and the Japanese make up for lost nuclear power with higher oil imports. We would also expect continued pressure on business and consumer confidence as factories are idled while the Japanese supply chain is rebuilt. Coupled with the struggle to rein in municipal, state, and sovereign spending, growth is likely to be anemic, consistent with a parochial low.

Up until now, the Federal Reserve’s efforts to pump up the economy via “quantitative easing” (QE) were bearing fruit, as industrial production and stock prices were up, and initial unemployment claims were down. In normal times, this extreme of an increase in the money supply by the Fed would have caused a boom brought on by loose money and borrowing. Today, even though liquidity is extremely “loose,” that money is finding its way only grudgingly into the “real” economy (via loans), but quite easily into the “paper” economy of the stock market. Generous Fed liquidity has almost always led to a rising stock market, and that’s been the case over the last six months. But the opposite is true also. With the QE program scheduled to end in June of 2011, we will have to be watchful for the effects of liquidity on the stock market, in addition to the effects from oil prices and Japan.

Andre Ratkai, CFA is President and Chief Investment Officer of Praxis Advisory Group, Inc., an independent investment advisor providing portfolio management and asset allocation services for stock, bond, and mutual fund investors. Mr. Ratkai provides the investment management and research and is the primary client contact for all accounts. Prior to offering Praxis Advisory Group’s services in 1992, Mr. Ratkai served for four years as portfolio manager for Alpine Capital Management Corp., a Denver-based registered investment advisor. He was a member of Alpine’s investment team that was responsible for more than $100 million of managed stock, bond, and mutual fund accounts. For more info, please visit http://www.praxisadvisory.com/contact%20us/default.htm.
Recognized with the Dow Award for his 2006 paper on volume, Buff is already a recognized expert on the subject. In that paper, he introduced the Volume Confirmation Price Indicator (VCPI). With this book, he furthers not only his reputation as probably the foremost expert on the subject but he also demonstrates that he is a talented story teller as he makes the history of technical analysis come alive for readers.

If we are perfectly honest, at least in my opinion, too many technical analysis books devote their first few chapters to the basics of technical analysis with a few comments on its historical perspective. I usually barely skim these sections because I've already read the story several dozen times and wonder why it needs to be repeated. Buff tells it differently, starting in the beginning with examples from Biblical times and moving forward through time to draw on Wyckoff and Schabacker rather than simply the standard facts about Edwards and Magee. He offers a story from Ralph Acampora about how John Magee faced an SEC inquiry where he was forced to defend the principles of technical analysis. While there are few true historians in the field, Buff joins their ranks with his very readable Part 1. Later in the book he references other important but lesser known technicians like Harold Gartley.

Academic research often supports technical analysis but is often overlooked as a reference. Buff provides a complete review of the literature, again in a readable manner eliminating the jargon found in the papers but retaining the main points. His objective seems to be in making the research accessible and explaining practical ways to employ the research.

Volume analysis begins with a basic framework to define the process. Trading volume reflects changes in the supply and demand of stocks. Sellers create supply and buyers provide demand. This simple concept drives stocks prices – more sellers than buyers will lead to lower prices and vice versa. Obviously there is much more to be learned than that, but by explaining the basic idea, Buff ensures a common starting point for novices and experts to comprehend the details that follow.

Behavioral finance theories factor into the explanations of why volume leads price. Technical analysts can appreciate that fact, but many only care about whether or not an idea makes money in the long run. A number of money-making tools are introduced in the book, including volume-weighted moving averages, volume-weighted MACD, and the Trend Thrust Indicator. Practical applications of these are developed, with the underlying logic and strategy explained. Traditional volume indicators are also included, making this a comprehensive review of volume analysis and is the only source needed to gain expertise on the topic. Not surprisingly, the book expands on the VPCI.

Test results are shown for many of the indicators, and the testing is very well designed. That is also different than what is commonly seen in technical analysis books where testing is often overlooked and many times the promised results can’t be obtained. Buff shows what has happened, and does so in a way that inspires confidence that the indicators will work in the future.

Technicians look for ideas they can use to make money. The goal is actually difficult to quantify since risk is such an important consideration relative to returns. Academic treatises tend to rely on measures such as the Sharpe ratio and other mathematically derived concepts of risk. While these numbers have an important role in the literature, Buff boils test results down to what’s important in the real world. For example, when testing volume-weighted moving averages, he uses a simple moving average system as a baseline for comparison and then evaluates how the new idea compares with respect to:

- Responsiveness: are signals more timely?
- Reliability: are signals more accurate?
- Risk: is drawdown, a trader’s measure of risk, reduced?
- Return: are dollar gains bigger with the new indicator compared to the baseline?

Improved and well-defined testing parameters are most likely an untended benefit derived from the book. Buff set out to demonstrate how volume should be incorporated into the technicians’ toolbox. However, the testing regimen demonstrated in support of that premise can be adapted to any work in the field.

This book can be enjoyed as a quick read, or studied as one would use a textbook. Ideas are fully presented and explained, but so many of them could be explored further and each chapter could become the basis of research and testing for technicians. The VCPI turns out to have been only a starting point for volume analysis, and hopefully Buff will continue his research into the application of volume into trading strategies. By writing Investing With Volume Analysis, he provides the knowledge for others to advance that research with him, and create the technical tools for the next generation of technicians.

Buff Dormeier is first vice president of investments and personal investment management (PIM), portfolio manager with Wells Fargo Advisors. Armed with proprietary indicators and investment programs, Dormeier Wealth Management, a group of Wells Fargo Advisors, dynamically advises affluent and institutional clientele on strategies to meet or exceed their specific investment objectives in what are often uncertain market conditions. He is a celebrated source of investment knowledge. Mr. Dormeier received the 2007 Charles Dow Award, which recognizes research papers breaking new ground or which make innovative use of established techniques in the field of technical analysis. The Charles H. Dow Award is...
On May 19, 2006, Rick made a presentation as part of the MTA Education Seminar. It is available in the On Demand Video Archives. The presentation is another example of the timeless value of the material presented in MTA meetings.

Modeling is a basic technique used by many technicians. It usually involves back testing an idea against a security and finding parameters that deliver optimal, or at least acceptable, performance when considering the tradeoff between risk and reward. Rick tackled this subject with some unique and potentially profitable insights. He began by reviewing four commonly seen trading myths.

All too often, even the most experienced technicians will spot something that looks too good to be true. Rick envisions their reaction to be, “I have found the holy grail of indicators. They work great when I overlay them on a chart.” He points out that while the indicator may look good in a handful of markets or in certain phases of the market, weaknesses show up when testing is done on different securities and in different market conditions.

Even when you move beyond back testing, and put real money on the line with an idea, the risk of succumbing to another common myth emerges. This time, Rick hears the trader say, “I have been trading this system for a year and it is profitable…it can’t lose.” Unfortunately a year isn’t long-term in the markets and trading regimes can easily last long, or longer. When the market changes its secular trend, many ‘can’t lose’ systems do in fact show losses.

We all make the mistake of pursuing the perfect entry. “I have optimized a new entry system that will improve my results.” Rick points out that trade exits can have more of an impact on performance than system entries. He reasons that we can’t control trading profits but we can control trading losses, and focusing on what we can control is usually a more useful way to spend one’s time. Traders have long known this and have quoted the well known maxim to let winners run and cut losses, but the emphasis on system entry stands in contrast to this advice.

Less understood is the myth that “only systems with more winning trades than losers will be profitable in the long run.” Rick demonstrates that it really comes down to mathematical expectation and that a system with a winning trade percentage under 50% can be profitable if the average win is significantly greater than the average loss. Mathematical expectation quantifies the proof a high winning percentage is not required for a winning strategy.

This last myth ties the others together. You don’t need a perfect entry if you have good risk management in place. In the rest of his presentation, he develops these concepts more fully and offers practical insights into how to apply the ideas to develop winning systems.

Back testing at the portfolio is important because that’s how clients think of money. They may follow individual trades, but many prefer to see the portfolio balance as an indicator of success. Drawdowns are the client’s most typical way to assess losses, because that is real money they are seeing as losses. Trades matter, and deliver the portfolio level results, but a back test that ignores the interplay between individual trades could present more risk (measured as drawdown) than the client is willing to accept. While these ideas impact clients, the principles are equally as applicable to those trading their accounts where drawdowns are also the important factor determining how long you can stick with a strategy.

A variety of entry and exit techniques are demonstrated in the presentation. The simulations are interesting as Rick shows the volatility of MACD signals and the impressive results of a turtle strategy applied to the NASDAQ 100 stocks. He also offers test results that show a random entry can be profitable when combined with a good risk management technique and a well-defined exit strategy. A Monte Carlo simulation confirms the results shown on the random entry strategy, adding confidence to his central theme that exits are critically important to trading success.

Rick also shows that hyperactive trading is not needed for good results. A weekly signal delivered better results than a daily signal using the same strategy. Obviously this will not be true in all cases but is an idea to bear in mind while testing your own strategies. This applies the traders’ axiom to let winners run, and should not come as a surprise given his introductory comments on traders myths. What may be a surprise is that math supports well known market wisdom which many traders ignore.

Drawdown is also shown in his examples. While the MACD endured a maximum drawdown of nearly 40%, the random entry strategy saw a drawdown of only 4.4% and the weekly strategy was never more than 4% below an equity peak.

**Rick Martin is the founder and Managing Member of SectorBets Group, LLC. He was previously the Director of Research for Ryan Beck & Co. and the principal of Ryan Beck Kronos Fund, LP. Rick has over 24 years of investment and securities experience. In addition to his experience as a hedge fund manager and securities analyst, he has also managed trading, sales, research, and investment banking organizations. He holds various licenses and professional designations, including CAIA, CMT, and CFP. Rick graduated with a B.S.E. in Engineering from the University of Michigan.**
Interview with Jason Meshnick, CMT

by Amber Hestla

How would you describe your job?

I create web-based investment research tools and reports for investors. I work for the Wall Street On Demand division of Markit, which designs, builds, and hosts websites for retail brokers, major financial institutions, and media outlets worldwide. Our work is designed to seamlessly integrate into our client’s sites, so even though you’ve probably been on our web pages, it’s unlikely that you would know it.

One of my key roles involves building models using our SmartText technology to publish dynamically generated commentary on various asset classes and markets. For example, I’ve built several models that read the trend and momentum of a security and return an easy to understand analysis of the technical condition of that security. My number one goal is to make technical analysis more approachable to individual investors. As they learn the correct ways to use the tools, they’ll become more successful when applying them and be more apt to continue.

What led you to look at the particular markets you specialize in as opposed to another tradable?

During the first 10 years of my career I traded listed equities and closed end bond funds as a principal trader and market maker. Later, I spent some time in risk management, where I hedged a global, cross-asset portfolio using futures. Last year, my employer was purchased by Markit, and I’ve been learning more about fixed income products and credit default swaps (CDS). In 20 years, I’ve had experience with nearly every asset class. The concepts in John Murphy’s intermarket analysis book have been invaluable!

Today, I don’t specialize in any one market. Where possible, my work focuses on top-down analysis across asset classes so that investors get a sense of the big picture and are able to control their risk more effectively.

Do you look at any fundamental or economic inputs to develop your opinions?

I’m becoming really interested in CDS, although I have yet to include them in my analysis. CDS contracts provide a market based opinion of credit risk. They are not always leading indicators, but are certainly worth watching. For example, Markit’s North American Investment Grade CDS index broke out to new highs (implying increased risk) in November of 2007, as the S&P 500 was topping. It finally peaked in December of 2008, setting a lower high on March 9, 2009 as the S&P 500 bottomed out. Similarly, it began falling from an intermediate high in June, 2010, more than one month before the latest rally got under way.

What technique do you rely on the most?

When I was trading professionally, I was primarily a tape reader. Today, I trade at longer time frames and have become much more systematic in my investing and trading. In my own accounts, I’m running 3 models focusing primarily on trend and relative strength.

Analysis of market breadth is critical, too. I track advance decline data by hand, entering it into a spreadsheet daily. This discipline keeps me engaged with the market and forces me to think about something more than the major averages.

Can you share any long term market opinions?

My long term market opinion isn’t investment related. Rather, my opinion is about the structure of our equity markets and I’m very concerned. I’m certainly not against progress or technology but the May 6th flash crash highlighted the dangers to investors of a decentralized market where liquidity providers have no responsibility to maintain a fair and orderly market. It’s great for traders but I’m not convinced that investors are getting better executions than they did a decade ago. We need to get back to a model where all investors are in the same room (which need not be physical) at the same time, with fewer price points to hide inside, and a market making body that is accountable for the quality of executions. Our present system works great in bull markets but fails in bear markets when it’s actually needed.

What advice would you have for someone starting in the business today?

1. Learn how to take small, quick losses. And not just when investing!
2. Always keep the big picture in mind. Read everything you can and seek out intelligent points of view that disagree with your own.
3. Don’t focus on the money early on. Some of the most successful people I know started by working for free or nearly so. Find the right fit.
4. Surround yourself with smart people.
5. Be willing to make mistakes. Experience is the best education you can get.
6. Complete the CMT program and get involved with the MTA!
enhance transparency, reduce risk and improve operational efficiency. Its client base includes the most significant institutional participants in the financial marketplace.

These questions and answers have been compiled by Amber Hestla, an independent market researcher. If you’d like to participate in a future interview, please contact her at hestlaresearch@gmail.com.

MTA Announcements

Board Elections Underway - Vote Now!

Members, Honorary Members and Emeritus Members, please note the following: Online proxy voting for the upcoming election of MTA At-Large Board positions (3) is now underway! If you haven’t voted, you can do so by clicking here.

You will need your MTA Member ID Number to vote. When entering your Member ID Number, please leave out the first four zeros and the last "I". This will leave you with a five digit ID number. If you have any questions regarding the proxy voting process, please contact Marie Penza, MTA Director of Member Services, at 646-652-3300. We welcome, and appreciate, your participation!

Spring 2011 CMT Exam Administration - Level 3 Closing Soon

Registration for the Spring 2011 Administration of the CMT Level 3 Exam closes on April 8th, 2011 at 5 PM EST. If you plan to register for the CMT Level 3 Exam this administration, please make sure you sign up as soon as possible.

Registration for the CMT Level 1 and CMT Level 2 Exams does not close until April 22nd, however we suggest signing up as soon as possible to ensure your preferred time, date, and location.

Contact Marie Penza, 646-652-3300, for information on the CMT Program or if you are having trouble scheduling your exam with our outside test center administrator, Prometric.

For detailed instructions on how you can register online, please click here.

2011 Annual Symposium - With Over 250 Registrants, on Pace for our Largest Symposium Attendance Ever!

With just under two months to go until the 2011 Annual Symposium, we have seen an unprecedented number of registrants and are on pace to see our largest attendance ever! Space is limited for this event and all members are encouraged to sign up today.

This will truly be the most memorable in MTA Symposium history. In addition to some of the world’s most recognized presenters, this two day event also includes two networking cocktail receptions: one on the floor of the New York Stock Exchange and the other at the Museum of American Finance.

Included here are a few resources that will help to provide you with more information:

- To view the event brochure, click here
- To view the entire agenda, click here
- To register online for the 2011 Annual Symposium, click here
- Discuss the Annual Symposium on MyMTA

The 2011 Annual Symposium qualifies for 15 MTA CE credits.

Northeast Regional Seminar (Boston) - Archives Coming Soon

The MTA Northeast Regional Seminar on March 10th, 2011 was a huge success! This event, held at Bingham McCutchen, LLP, drew a crowd of over 200 attendees for a full day of presentations. The MTA would like to thank Bill Kelleher, CMT, Boston Chapter Chair, for his efforts in organizing this event, and of course, our presenters.

The video archives for each of the presentations at the Northeast Regional Seminar will be available online in the On Demand Video Archives and in the MTA Knowledge Base shortly.

MTA Knowledge Base (KB) - New Search Functionality!

The MTA has implemented a more extensive search functionality into the Knowledge Base. Rather than concentrating on keyword suggestions, this new search functionality scans through each resource thoroughly to produce the best possible matches for your queries.
MTA Library - New Additions

The MTA recently added the following books to our library:

- "Conquering the Divide: How to Use Economic Indicators to Catch Stock Market Trends" by James B. Cornehlsen, CFA and Michael J. Carr, CMT
- "The Step-by-Step Guide to Profitable Pattern Trading" by Al Coppola

For more information on the MTA Library or a complete listing of all available books, click here. If you have any additional questions, please do not hesitate to contact Cassandra Townes at 646-652-3300.

MTA Annual Meeting

The MTA Board of Directors has established May 13th as the date for its Annual Meeting. The meeting will commence at 4:00 PM, immediately following the Annual Symposium and will be held at a New York Stock Exchange (Symposium location) conference room. The Secretary of the Board will put out an agenda and any proxy material for voting at this meeting shortly. If you have any questions regarding this upcoming Annual Meeting, please feel free to contact Marie Penza at marie@mta.org or 646-652-3300.