

CHAPTER 1

Absolute Return in a Competitive Market Environment

Trading is a contest of human intelligence in which traders try to gain an advantage over their opponents and to maintain or even increase the advantage over time. The goal of every trader, investor, or market participant is to distinguish between valid and misleading information and to determine whether information used for trading is complete. The shorter the time period, the more important is any information that can influence a price in the short or long term.

Therefore, this chapter will tackle some of the key questions of trading before the core analysis.

PLAYERS IN COMMODITY AND STOCK MARKETS

Exchanges worldwide are loaded with players who strive for positive returns in various time frames. They act in a coordinated manner or one against the other, sometimes in cooperative fashion, but mostly strongly in a competitive manner.

Within the framework of international exchanges, sets of alternative strategies seek to achieve absolute returns on a daily, monthly, or yearly basis. This framework will be highlighted first, and then the key players in the money game will be named.

Exchanges Worldwide: Roulette or a Game of Chance?

Many people think of the market as a game of chance, comparable to roulette. This comparison is completely wrong. In roulette, the player must deal with the bank as the counterpart, and the results cannot be predicted. Furthermore, to guarantee an equal chance for each player, the croupier and the ivory ball are changed regularly. The use of the figure zero guarantees long-term gain for the casino. Every attempt to beat the system

has failed and will continue to do so. The only people who make money consistently are those who sell roulette systems. In roulette, the outcome of the game cannot be influenced. No matter how big the effort is, winning remains a matter of luck, with the chances always the same.

In comparing investment markets to a game, an analogy to horse racing would be much more appropriate. When trading products on the many exchanges in the world, not everything is left to chance, just as with horse racing. With the right information and a certain amount of cleverness, much more can be achieved.

The game investors play is a strategic game whose rules permit both rational and irrational behavior. Problems include incomplete information, lack of intelligence, and highly adaptable opponents. This is where computers and trading models enter the game. Later discussion will become more specific on the influence of computer models in the marketplace.

University professors sometimes incorrectly teach that all prices are in a continuous state of equilibrium. Fresh information discrepancies always come into play because of changes in company policy, new technological advances, or political developments. It does not matter whether a company evaluates specific markets, new products, earning prospects, and the like, or whether an investor can determine the chances of a company by good judgment of a market. Both the company and the investor or trader try to find out whether the chances of both horse and jockey are good.

The decision-making process is risky, however, because it is not enough to analyze the market, have a dynamic company policy, or do any kind of product analysis. It is as important to know what the competition is doing and how competitors will react to their own investment decisions. For example, a company that builds a supermarket in a certain area and accumulates profits will have a problem when—after one or two years—an even bigger company with better financial resources builds an even bigger supermarket in the neighborhood. An investor who correctly predicts the conditions of a company will still lose money if a big investor suddenly rejects this particular stock for psychological or emotional reasons and sells out, and the stock price drops sharply.

Every buyer needs a seller; otherwise markets would not function. The buyer is the seller's opposing player. The winner has to be determined. Just as in a game, not everybody can win in the markets. One can only win what others lose.

Are Price Movements Predictable?

It is common knowledge (again taught at universities) that the soft form of the so-called *efficient market theory* or *random walk theory* is based on the assumption that all information that could be collected based on past market behavior is reflected in the present price. Therefore, the investor cannot profit by knowledge and analysis of past price movements. Pricing follows a pattern that is governed by a random walk.

To support their theory, academics choose the example of coin flipping. The probability of a coin landing heads up is always 0.5 (50 percent). The past pattern does not

change this probability. If the coin landed heads up 10 times in a row, the probability of the next toss being heads remains 0.5. The probability cannot be improved whether we perform a trial run of 100 or 1,000 throws. Theorists have compared the Dow Jones Industrial Average (DJIA) with a simulated random-number sequence established by tossing a coin. Heads was defined as an assumption that the price of a stock would go up by 0.50 point compared to the previous market period; tails, that the price would go down 0.50 point.

The comparison of such a number sequence to a chart reveals surprising similarities. With a high number of tosses, all patterns that chartists consider certain indicators for futures price movements could be reproduced.

Test of this kind have also been made in an attempt to show that all stocks follow a random walk. In other words, the price moves of a stock are unpredictable and are not related to past price movements. This thesis is supported by statistics that have shown no clear correlation between past and present price movements. Statisticians have concluded that prices have no memory and that yesterday's prices have nothing to do with the prices of tomorrow. However, when they compared a chart to a number sequence determined by coin flipping, they detected differences when a product was in a trending position. But this is what chart analysis is all about.

However, trend detection is the topic of this book. There are trends in every product, at all times. All trend followers believe in this, and there is enough proof that profits can be made in the markets. The only difference in the opinions of the millions of investors, traders, and analysts is in the definition: What is a trend, and how can a trend be identified?

University research on forecasting price moves is missing one important point: Investors who have constant and consistent trading rules that will help them outperform the markets will keep this knowledge for themselves. Statistics professors will never have information that will help them outperform the market for test purposes, and most likely they cannot produce it because they do not have enough knowledge about the market.

Players in the Money Game

No other markets are subject to as many events, arguments, and discussions on so many economic and financial levels as the stock and commodity exchanges. They reflect not only the daily economic situation, but also the successes and failures of government. The stock market is considered the arena of capital supply and demand; other people see it simply as a playground for speculators.

All pricing on the exchanges depends on supply and demand. If the demand for a certain stock or commodity is high, the price will go up, and vice versa. The state of supply and demand is reflected in the tactical behavior of the investors. This behavior includes emotion and intuition, the use of rumors, and the systematic publishing of information, whether it is correct or manipulated. It also includes buying and selling by computer models, which, in the commodity market, is about 50 percent of the volume traded.

Buyers and sellers are engaged in a continuous confrontation. Only this diversity of interest makes it possible to maintain a liquid and functioning market and determines the price of a stock or commodity at any moment of the trading session. Chart patterns are created by the different market participants. To show the diversity of interests of the players in stocks or commodities, some of the groups will briefly be named.

Firms Firms have different reasons to invest in other companies, such as vertical integration, distribution of risk by diversification, strengthening of the company in economic competition, or ousting a competitor from the market. Quite often the acquisition of such interests is less risky and less expensive than building up a new production line from scratch.

Long-Term Capital Investors and Funds Long-term investors and funds consider stocks as stable investments in order to achieve a rate of return on invested capital, a combination of price appreciation and dividend returns, which is expected to be above the average return from bonds or treasuries. Investment funds and insurance companies belong to this group.

These companies invest income from premiums or financial reserves in obligations, stocks, commodities, and so on according to the legal regulations and statutes. This group of investors especially must change its investment style, because average annual rates of return on invested capital between 5 and 8 percent in a diversified portfolio are much more difficult to realize under current market conditions.

Speculators, Traders, and Small Investors Speculators, traders, and small investors try to make a quick profit in stocks or commodities, keeping their eyes solely on their own interests according to their psychological makeup and readiness to take big risks. They bring liquidity into the products.

Most of these investors lose money, because often they do not have the discipline, patience, and sophistication necessary to survive in the sometimes brutal market environment.

Brokers and Members of the Exchanges Brokers and members of the exchanges include floor traders, specialists, and market makers who have been bound by the exchanges to guarantee continuity and liquidity of trading. Because of the rules of the exchanges, specialists, for example, must continually bid and offer prices on a particular stock and be willing to take assets that have found neither a buyer nor a seller within their own orders.

Hedge Funds and Quantitative Computer Models Some of the biggest players in the stock and commodity markets are hedge funds with quantitative computer models, which are very well diversified and can trade almost everything with fully automated trading signals. Up to 2000, these funds generally generated above-average returns; however, the financial crisis that began in 2003 and peaked in 2008 caused big problems for almost all of them.

Hedge funds lost an average of 22 percent in 2008, a number never seen before. But even more interesting is their performance in 2009 and the first half of 2010. Although the stock markets recovered dramatically from the losses in 2008, hedge funds on average did not return to the profitability of the 1990s. Something seems to have changed.

Sooner or later, quantitative trading models are likely to buy and sell to each other. Reliable figures indicate that on some business days, up to half of all trading or even more on the international futures exchanges is already done by automated computer systems. If this is true, it becomes only a question of time until trading signals based on quantitative analysis and generated by computers become a zero-sum game.

Four types of computer models become more and more influential on the exchanges:

1. *Algorithmic trading* (computers decide how many stocks will be bought or sold at what price)
2. *Co-hosting* (exchanges and big computer platforms offer to place their biggest clients' computers as close as possible to the exchange servers in order to shorten the time in which an order is confirmed)
3. *High-frequency trading* (HFT; ultrafast computerized trading executes orders within microseconds)
4. *Predatory algorithms* (computer programs identify large blocks of orders of institutional investors and try to squeeze in their own orders within the block execution in order to get a better price compared to most market participants)

When the flash crash happened on Wall Street on May 6, 2010, and the DJIA dropped within minutes by about 1,000 points, supercomputer trading became visible and suspicious to regulators.

Many traders on the exchanges fear that ultrafast trading may cause such enormous swings in stocks that the whole financial system and international trading network may be seriously damaged. No one can stop the computers when huge orders add to each other within parts of seconds and wash like a tsunami over the exchanges.

Is this what trading is all about? It's highly doubtful. Interestingly enough, when some companies try to make money on the exchanges not by timing trading signals but rather exclusively by using ultrafast computer models, other companies stop the proprietary trading of their own accounts.

All of these different types of investors seek absolute return in their respective market environments. They differ, however, as to the extent of their knowledge, character, time horizon, and financial resources and the role they play in the market.

Most speculators (short-term traders) count on market shortcomings and want to benefit from them. Differences in the level of information, evaluation of the market situation, and risk preferences cause price movements. Aside from these factors, experts do not agree on what constitutes profit and at what point one should be satisfied. The desire to hit the jackpot often makes investors take risks they would never take in normal life.

Many short-term traders do not even intend to stay with their positions, long or short, overnight. They rarely bother about the specific conditions of a company or commodity, and they are not particularly interested in the long-term fundamental development of the company, just as long as the price trend goes in the right direction. But speculation is an absolute requirement for the markets, not only because it creates volume and liquidity, but also because it brings the necessary diversity of opinions into the markets.

Many investors still rely on the advice of brokers, bankers, newspapers, or hot tips when making investment decisions. They rarely consider that this information must be outdated, and they are surprised when the expected price movements do not occur. Investors who have discovered that following the news media alone is insufficient to accurately judge the market in general as well as specific products tend to ask not only one but several advisers before taking a position. Now the final decision becomes really difficult, because it is extremely unlikely that all of the advisers will have the same opinion.

Such investors are usually optimistic. For this reason they tend to follow advisers who tell them exactly what they like to hear. Brokerage houses and banks are normally slightly more interested in commissions than in customers' net profits.

Because advisers all want the business, investors will, for psychological reasons, in most cases get the answers they want to hear. They will forgive any adviser even if the prices do not move in the expected direction, just as long as the adviser has agreed with the investor's opinion. If, however, prices rise as the investor has foreseen and the adviser had talked the investor out of the deal, the investor will never forget this.

In 2008, stock funds performed so badly that investors barely received the fixed interest rate. The question is, why did the biggest and best fund companies lose so much money? With all of their research and with all of the money they spend to get the best advice possible, if the performance is that bad, what are these people doing? Being as good as an index does not take a rocket scientist. Benchmarking is the only explanation for being unable to generate good trading results. Simply put, benchmarking means that the company does not have to bother about performance and can charge a lot of money.

An investor looking for absolute return has only two options:

1. Finding an investment company aiming at absolute return results and showing a performance profile consistently much better than an index.
2. Conducting a do-it-yourself analysis based on sophisticated strategies based on reliable performance profiles.

Investors of the second type who are unhappy with the performance of their advisers and want to outperform the markets themselves will love the trading tools offered in this book as long as they are willing to put some effort into working with them.

Furthermore, the speed of computer models and executions will not determine winners and losers in the markets in the long run. It is the idea and the stability of the trading concept that will survive. Some people try to replace good timing with the pure speed of computers. This will never work long term.

THE ROLE OF RISK IN COMMODITY AND STOCK MARKETS

Even the most widely accepted and most complicated methods of forecasting and the best available sources of information do not guarantee a correct prognosis of price movements in any product analyzed. Qualified prognosis methods can help reduce investment risk but will never completely eliminate it. Risk is therefore an important factor that must be taken into account when choosing an investment strategy.

The Concept of Risk

The concept of risk tends to create quite a bit of confusion. For example, there is no principal risk with treasury bills, for which the rate of return is guaranteed for the length of maturity unless the nation declares bankruptcy. The investor will receive the specified rate of interest until the final maturity date. Quite often, however, the investor is not satisfied with the return from government issues. An alternative, then, is to invest in stocks or commodities.

For decades, investing in a combination of government bonds and stocks worked very well, because the stock markets went up with very little drawdown. Returns on investments of more than 6 percent annually were easy to achieve. But those times are gone.

Methods of Estimating Risk

With the help of more powerful computers, the methods of estimating risk became more sophisticated over the years. Investors who want above-average returns must be willing to take above-average risk. In order to choose rationally among various investment alternatives, investors must know exactly how great a risk they are willing to take.

The risk structure of the individual investment form must be taken into account, but also the individual and personal attitude toward risk and how much the investor is willing and able to take. Significant elements include financial resources, the investor's knowledge of the form of the investment, and the investment horizon. Speculators who are willing to assume risk and have profound knowledge of the markets or products they invest in are unlikely to be interested in the same investment for the same time period as conservative investors, who are more concerned about security. This will become more than obvious in later chapters, which will describe, compare, and discuss the dominant investment strategies of the recent past.

Markowitz and the Capital Asset Pricing Theory

Harry Markowitz in the early 1950s was the first scientist to seriously study and formulate the systematic basics of opportunities and risks in a portfolio that holds stocks of various companies. He based his work on the fact that the price movements of each

stock can be represented by a probability distribution. He established the name *efficient frontier*, which represents a curve showing that an increase in the expected return always includes a disproportionate increase in risk. Investors who are averse to risk will therefore prefer to move toward the left area of the efficient frontier, whereas investors willing to take high risk will try to realize efficient combinations toward the upper right side of the curve. The efficient frontier established by Markowitz reflects his theory that portfolios with optimum diversification (i.e., combinations of stocks with the highest expected returns at a certain risk) are placed on an efficient frontier line. Markowitz won the Nobel Prize for his work.

The reason we go back to Markowitz's theory is very simple: Is it worthwhile to combine treasury bills with stocks in a portfolio?

For conservative investors with enough capital to hold a highly diversified portfolio, the answer is "Yes." It is the only possible way to reduce the basic market risk, which cannot be eliminated with a portfolio that holds only stocks. At the same time, it offers the opportunity of a higher return than can be realized by holding treasury bills alone. Most of the large conservatively managed portfolios are invested in both treasury bills and stocks. The capital asset pricing theory (CAPT) provides the reasoning behind this successful strategy.

Markowitz's theory did not work in the financial crisis in 2008. Followers of the theory claim that the losses resulting from the financial crisis do not prove that the CAPT does not work. Because all strategies and mathematical models failed to function properly at this time, the CAPT is still correct.

The problem with this argument is that the world is focused on computer models and will always find an excuse when they fail to work. But investors who follow and trust computer models because they are designed by the best and brightest brains in the world have to live with the losses in their portfolios.

It was not the financial crisis that caused huge losses in most portfolios, but poor structuring of products.

The financial crisis resulted because the best and brightest brains in the investment industry forgot to include in their calculations the fact that after rising for more than 20 years, real estate prices in the United States might go down. Banks and investment companies throughout the world jumped on these products because high bonuses were guaranteed. Greed and ignorance led to the financial crisis, nothing else. And again, investors who trusted their advisers had to absorb their losses, and no one helped them out.

In summary, no other markets are subject to as many events, arguments, and discussions on so many levels of economics and finance as the stock and commodity exchanges. The stock market is considered the arena of supply and demand, but some people see it simply as a playground for speculators.

Each participant in the exchanges—corporations, long-term capital investors, funds, speculators, small investors, brokers, members of the exchanges, hedge funds and companies using quantitative computer models—may have at some point similar or different opinions on the market action. These opinions come together during every single second of trading hours in the bid and ask prices for every product traded on an exchange.

The big problem with the efficient frontier is that it works only in normal market conditions. In the 2008 financial crisis, it failed completely. This leads us to the question of whether there are other key factors that must be considered when dealing with the competitiveness of today's market environment.

DIVERSIFICATION MATTERS

Diversification must be viewed in contrast to concentration. It also must be analyzed with respect to investors' specific time horizons. Both aspects will briefly be discussed in the following sections.

Concentration versus Diversification

Most small investors aim at reducing overall portfolio risk through concentration instead of diversification. Concentration consists of investing in a few selected products that promise high returns at little risk. Investors hope for profits from price gains rather than from dividend payments.

The disadvantage of concentration is that it works only as long as the strong price trends in selected products continue. Dreams of an instant fortune turn many investors into speculators because they forget the fundamental principles of investment strategy. Concentration became another expression for more risky investment.

Concentration works only if the selection, timing, and inherent risk of a product can be analyzed. Very few investors, analysts, or rating agencies have mastered the art of timing or risk evaluation of a product; otherwise, the financial crisis would never have happened.

It is stunning that none of the fundamental analysts are able to produce absolute return results over a longer period of time. They all come up with little more than smart comments. An analyst who shows up with the best performance on the financial instruments he recommended over the past 12 months becomes the Trader of the Year. None of the highest regarded fundamental analysts has ever repeated exceptionally good results in two consecutive years. Why? They were just lucky once.

Key parameters of successful diversification are the following:

- Identical trading concepts applied to every single stock or commodity in a portfolio
- Continuous annual profits on historical test runs on every portfolio constituent
- Combination of long and short strategies
- Strict application of stop-loss and profit-taking rules
- No optimization of computer models; no smoothing and overfitting of parameters

These parameters are ideal, of course, but they must not be neglected when aiming at absolute return strategies. They become especially important when diversification depends on correct timing of trading signals.

Diversification and Correct Timing

Absolute return results can be achieved only with portfolio structures in which every position in the portfolio is controlled with a timing model. This is why many hedge funds come close to absolute return results.

If a portfolio is structured and traded based on the principles of diversification, long and short trading, stop-loss protection, and profit taking, and in the absence of optimization and overfitting, absolute return results are possible, at least on a yearly basis and even in a year like 2008, considering the financial crisis. Such a portfolio structure works best in strong price movements, as happened in the financial crisis. It is as simple as that: Trends following trading models and the trading signals derived from them depend on strong trends in the markets, either up or down.

Diversification works best if uncorrelated products are analyzed using an identical trading concept. Each product should make a profit almost every year on the historical data tested. The reason: If uncorrelated products are analyzed with the same trading approach, the trading signals come at different times. If there are a high percentage of profitable trades, the total risk of every individual losing trade will be reduced by diversification.

And that is what this book is all about: showing that it is possible to generate absolute return not only in commodities, but in stocks as well.

Price movements in single stocks as observed through 2008 cannot be analyzed by fundamental analysis. Who would have believed that a company like Lehman Brothers would ever go bankrupt? Within two years the stock dropped from USD 180 to zero. None of the fundamental analysts cried foul when the stock dropped like a stone. Even the simplest technical indicator would have at least sold the stock outright flat or would have given a short signal.

In sum, most small investors and speculators *say* diversification, but they *mean* concentration. The disadvantage of concentration is that it works only as long as a strong price trend in selected products continues. Concentration became another expression of more risky investments.