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## A BOOK REVIEW & INTERVIEW WITH CHARLES KIRKPATRICK: WHEN THE CLASSIC MEETS THE NEW

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### Book Review

In our last interview with Dr. Tharp, a psychologist who has studied trader's behavior for 30 years, we have seen how emotions can adversely influence a trader's work. Van Tharp affirms that everything revolves around our beliefs, mental states and mental strategies. With that in mind, he claims everything about trading is 100% psychological. To have an edge in investing or trading, we need to raise our self-awareness and eliminate negative emotions like fear, greed or desperation<sup>1</sup>.

I also believe that something that filters and reduces our emotional bias during the decision making process for trading and investing, one possibility that modern times gave to us, is the use of a computer.

In 1965 *Barron's* wrote that "the age of the computer unmistakably is dawning on Wall Street" and that "the potential rewards of the computer, properly used, promise to be immeasurable"<sup>2</sup>.

One of the first computers on Wall Street devoted to technical analysis was at Walston & Co., led by Anthony Tabell, where in the late 1960s Charles Kirkpatrick began the data accumulation that would be used for technical research later on.

In this review & interview we'll have the possibility to read about the latest work of Charles Kirkpatrick, a pioneer in the use of the computer applied to trading and investing, well known in Technical Analysis field for his books, like *Technical Analysis: The Complete Resource for Financial Market Technicians*<sup>3</sup>, written together with J. Dahlquist and used as Chartered Market Technician Level 1 and 2 Exam Reading Assignment, and for his research that lead him to be the only person to win the annual Charles H. Dow Award twice<sup>4</sup>.

The use of the computer in the trading decision process is ruled based approach. It is known as Algorithmic Trading, quite different from

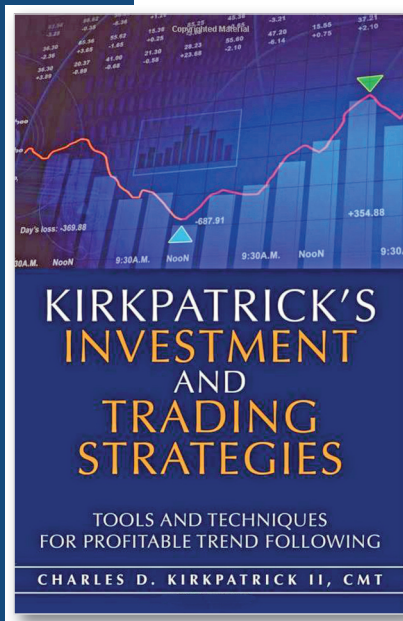
Discretionary Trading where all decisions are made by the investor. With discretionary trading success is rare and depends on knowledge, expertise, quick decision making, and the ability to master emotions, biases, and mood<sup>5</sup>.

Kirkpatrick recognizes that human nature is not compatible with trading markets and that algorithmic trading also needs willpower, discipline, and patience not to waver from it.

The book demonstrates and explains algorithmic systems for both investment and trading.

But there are many original approaches to how the topic is written and explained. First of all, the reason why the book has been written: Kirkpatrick tries to fight against the lack of investment common sense that continuously leads to money loss. He begins with an educational message about the best investment methods he has found over a life time of professional study.

Secondly, this book is a worthwhile read because of the method that Kirkpatrick uses in his approach. He uses classical technical indicators and studies that were created between the 60s and 70s, such as the Relative Strength studies of Levy, some Welles Wilder's indicators, and the Cycle studies of Hurst. He reconsiders those indicators and studies, explains why sometimes they are utilized in a wrong manner and suggests new possibilities on how to utilize them. All these tools are then combined in algorithmic trading systems and tested with a relatively new



backtesting method called Walk-Forward Optimization. Finally, the methods are described as well as tested to verify their robustness and thus the probability of good results in the future.

An examination of how the book is structured will help us to better understand what I've mentioned.

The book is composed of 150 pages organized in nine chapters. While the content is written in a simple, straightforward language and without an excessive number of pages, the content is very dense. There are numerous concepts described in each page, requiring a second reading to understand certain key passages.

After the introduction chapter, the first part of the book is dedicated to investment strategies, that is long term strategies based on weekly data (chapters 2 to 5), and the second part is dedicated to trading strategies, that is long and short trades based on hourly data (chapters 6 to 9). Every chapter dedicated to investment and trading strategies explains the concept of the study starting with backtesting and methods used.

In the introduction, Kirkpatrick explains the basics of Algorithmic Trading, and the three basic elements of any investment method: entry strategy, exit strategy and money management. The last is not treated in the book, but a good bibliography to deepen the topic is included.

There is also an interesting section dedicated to some concepts like drawdown, volatility and diversification that clearly explain how these definitions are often used in a misleading way.

The introduction lasts with the explanation of the backtesting systems used to check the robustness of the algorithm: the Standard optimization and the Walk-Forward Optimization. Optimization is the process by which an analyst hypothesizes and tests a set of rules for investing or trading in the markets, and the Standard Optimization takes a range of parameters (the actual values of the variables used in the rules) for the variables proposed in the system and tests to see which combination provides the best results and eliminates irrelevant parameters.

We need then a method that optimizes the algorithm and avoids the problem of excessive optimization of the trading system on historical data. The risk is that the optimized set of parameters that best fit the trading system in the past may not be able to exploit its predictive potential on the real market data in the future.

To avoid this problem, the author exploits the Walk-Forward Optimization. This backtesting technique uses the same optimizations methods as the standard optimization, but it keeps some of the price data separate (i.e., unknown data called *out of sample data*), to be used in later testing of the optimization results.

The performance of the system can be considered realistic if it has predictive value and performs well on unseen (out of sample) market data, and if the resulting performance in the "unknown data" does not provide robustness, the algorithm is discarded.

The chapters about investment strategies explain Kirkpatrick's systematic approach to trading winning stocks based on the concept of relative strength, mainly following and developing Levy's studies on that topic. The author ran his system live for more than 23 years and provided a superior performance relative to major indices, such as the S&P500, since its inception in the early 1990s. The new goal achieved and described in detail in the book is to improve the strategy by raising the profit and reducing the drawdown. To get such results, a new market timing system fully described in the book is added to the original model, and testing with the Walk-Forward Optimization leads to new and

interesting results for the reader. During the process Kirkpatrick discovered that favorable results also can be achieved through a raw ratio system, a new technique for individuals to use in selecting stocks for their private portfolios, that can be calculated easier than the ranking system used in the original trading system.

In chapter 6, Kirkpatrick introduces trading strategies, starting from the basic modes of stock market behavior and describing the trading methods. Chapter 7 is dedicated to the Welles Wilder Directional Movement Index (DMI) and the ADX. Here we can find a theoretical part accompanied by a very useful practice that comes from the long experience of the author on how to use the ADX, even with new techniques not mentioned by Wilder.

In the next chapter we have an introduction to Cycles Theory and how to take advantage of the cyclical nature of the price curves through the construction of an indicator called the Forward Line.

The last chapter, chapter 9, contains a trading system based on hourly data, built with the technical methods described in the previous chapters and backtested with the Walk-Forward Optimization.

For the reader who is looking for a book on how to invest, I would say that the content of the book is clear and concise, and as Kirkpatrick writes in his conclusion, "can be applied directly without expensive computer programming and with data and chart programs available for free on the web"<sup>6</sup>.

For the technical reader who wants to deepen his knowledge, the content of the book has characteristics based on classical techniques of high quality and a good reference bibliography. These techniques are combined in robust trading systems backtested with the innovative Walk-Forward Optimization and used in a practical way, without much loss of time. But that still leaves open the opportunity for personal development, especially for the techniques described in the second part of the book that deal with trading strategies.

## Interview

**Mario V. Guffanti (MVG)** – Good morning Charlie, it's a great pleasure having you in an interview about your new book on investment and trading strategies.

**Charles Kirkpatrick:** Well, thank you, Mario, for your kind invitation. I hope I can satisfactorily answer your questions.

**MVG:** In your book on *Technical Analysis*, you quoted a study by F. R. Flanegin and D. P. Rudd, of Robert Morris University, produced in 2005. This interesting academic research derived from a survey which involved what investments professors teach and what industry professionals utilize<sup>7</sup>. The result was that before 2005, investment professors believed that fundamental investment analysis was more important and gave low importance and rarely mentioned in their courses the topic of technical investment analysis. On the other side of the coin, many professionals indicated that they utilized the subjects related to technical investment analysis in most of their work. The conclusion of the paper was that *current investments courses are giving students only a partial foundation of investments knowledge on which to build their careers*. Even in your new book you quoted that during the time that you worked as an institutional salesman, you met many institutional investment managers who did not trust technical analysis, and this distrust was based on advice they had heard from contemporary managers and courses they had taken at their business schools<sup>8</sup>. Now you have taught technical analysis at Brandeis University International Business School, and in the last decade many studies about the efficiency of technical analysis have been produced, curiously by scholars who come from the academic world, such as Professor Andrew Lo.

What should be still done in 2014 to promote a proper knowledge and a good use of Technical Analysis?

**Charles Kirkpatrick:** Results usually speak for themselves. Excellent results, statistical reasoning and testing, and distribution of these accomplishments should convince students that technical analysis is a worthy study and useful discipline. I found in my classes that the enthusiasm for the course was based on the knowledge that the methods actually make money. Many students mentioned to me that it was the only course in the business school that actually taught how to make money – the primary reason for their attendance at the school. If this can be more widely publicized and taught, the art and science of technical analysis will succeed as an alternative and complementary method of investing and trading.

**MVG:** Your new book is based on the improvement and increased usability of your preferred investment and trading strategies that are a result of several years of research. Did you write the book with the idea that you wouldn't hold anything back? Is this book somehow a point of arrival in your career as researcher?

**Charles Kirkpatrick:** I have never held anything back, believing that the knowledge I have gained from experience and study is not something unique. The markets are so vast and multilayered that any specific technique can be used by traders and investors without the worry of the markets anticipating their actions or others front-running their trades. While it is true that support and resistance levels, for example, have little value today because insider traders take advantage of the orders built up around them, this sort of behavior is not as common as feared. On the other hand, it means that technical analysis is and will continue to become a little more complicated than the simple interpretations of the past, but the basis of the technical theories, namely that price reflects all knowledge and anticipation, will still hold true. Thus I believe that hiding a particular discovery and successful experiments would benefit no one else. I am a researcher and educator and would feel that I am betraying my subject if I kept information secret.

**MVG:** In your book you quote that you wrote it to describe and test the concepts you use in your favorite investment and trading strategies. Why are these strategies more favored over others?

**Charles Kirkpatrick:** Because they work. There are undoubtedly many other successful methods, but these work for me, and I haven't found any that work better.

**MVG:** When in the subtitle I quoted that "classic meets the new", it was intended that in your new book you show how to combine technical classical indicators and studies that have been created between 60s and 70s (the classics) together with a relative new and innovative method of backtesting that is Walk-Forward Optimization (the new). It's the first time that I read in one of your books that you use this method. Could you explain in more detail what is the potential that you found in the use of Walk-Forward Optimization and if this use led you to discover new hints in your research?

**Charles Kirkpatrick:** To test the effectiveness of an algorithmic system, just as in the scientific method, you must first make a set of rules and parameters, and then test this hypothesis in the future to see if it works. The traditional method was to create a model

and let it run for a few years to see if it worked. I'm getting old now and don't have the future time left to test many theories I have about strategy and tactics in the markets. Thus I have always been looking for a method that would "create the future" right now such that I could test these theories realistically. Walk-Forward analysis has been around for a number of years, and others have used it for stock market studies, so I certainly wasn't inventing a new analysis method. I just came across it in some of the literature and decided that it was worth a try. It certainly has its faults, and no model of markets will ever predict the future, but at least it is a method that given a chance can show results in many different market situations over time and thus give a realistic possible outcome in the future. As such, of course, it doesn't replace stops to prevent loss in case it doesn't work in the future. As a pragmatist, I don't believe that any method of analysis is 100% accurate, and this feeling is borne out by the known fact that most investment systems fail at some time or another. Nevertheless, to me it is a useful method of investigating some of the "truths" of the market and is invaluable in eliminating methods that have no chance of success.

**MVG:** Many concepts and methods mentioned in your book are known by the technical reader. But I think that a person who is not familiar with technical analysis has some difficulty reading a book so full of content: can you give advice to first time readers?

**Charles Kirkpatrick:** I write these books for people who understand the basics of technical analysis and have the capability of honestly thinking about markets. Even the text book that Julie and I wrote is not an easy read for someone unfamiliar with markets. In that context, to simplify the content would do three things that are harmful to the reader. The first is that it would make it seem that technical analysis is easy. This is, of course, not true. Second, it would give the impression that using technical analysis is an easy method of profiting in the markets. Again, this is not true. And finally, it would avoid the implication that the book was the only answer to investing and trading. I want to encourage more study in other books and sources of information. Readers should be inspired to continue their own research, and because most are lazy and want a quick, get-rich solution without work, I want to discourage them initially if they don't have the intrinsic desire to learn more. I also dislike flowery language and repetitiveness when the subject can be covered with few words and many statistics. My publishers kept saying I should write more because there weren't enough pages and that readers tend to believe that more pages means more information. I had to disagree only because I hate wasting my own time while reading lengthy discussions that avoid the subject of interest. They finally, but reluctantly, agreed to the brevity of my writing.

**MVG:** I read in a book written by Professor A. Lo, that one of the first rigorous studies of patterns was initiated by you, who convinced your then employer, Arthur D. Little Corporation, to hire Robert Levy to conduct the study<sup>9</sup>. You knew Levy and also other researchers who have developed their ideas without the use of the current powerful computers. We can therefore say that you have lived in two different worlds. What are the advantages that you feel to have inherited from this past experience in the first part of your working life?





**Charles Kirkpatrick:** I first learned technical analysis, point-and-figure to be specific, from my father who had me update his charts when I was around 14 years old. He ran mutual funds for Fidelity and others during his career and was always a technician as well as a talented investor. From there I went to the NY Public Library and read Jiler, Elliott, Whelan, Dines, Dow, Helby, and many others, including, of course, Edwards and Magee. I plotted my own charts for many years and still believe that by doing so, one can learn more about the price action of a security than through any other method. Today I encourage most students to keep a set of charts and to be religious about plotting them. I also encourage them to read all the old masters. The concept of technical analysis hasn't changed much, and many of those old ideas are still valid today. Only the mechanics have improved.

But I also had taken one of the first computer programming courses at Harvard as an undergraduate and could easily see how eventually the computer would replace charts. I learned FORTRAN then and still use it today. I also learned how a computer program is strictly logical, unlike the markets, and that very specific instructions must be given. There's no BS with a computer<sup>10</sup>. At Tabell's office at Walston, we had a man named Lester Sugarman who spent every evening on an old-style, hand-crank adding machine calculating moving averages while looking for the secret to the markets. I knew that the computer would eventually release Lester from his machine because it was logical and quick, but it would take a while before it would be available for personal use. Levy used a Control Data 6600, one of the fastest mainframe computers at the time (1970s), and even he had trouble getting time on the computer. In those days you used a deck of computer cards and ran the program overnight. If one comma was out of place, the entire program blew up that night, and you had to correct the card the next day and then submit the program again the following night. It was a laborious and time-consuming process. Finally, with the advent of the PC, I and many others were freed to not only do the work in our own domain but also to live where we liked to live. The advanced personal computers have certainly helped, especially in performing the massive optimization calculations necessary to test new theories (and some old ones, too), but I must say I did enjoy the old days of plotting by hand.

**MVG:** I like your preface to the book, where you compare the market and the ocean as individual forces that have strength beyond our mortal powers, and they are not personal like us<sup>11</sup>. They are both such a challenge to outwit, but we tend to make many mistakes by being emotional in an unsympathetic world. I'm in agreement to remove the negative emotions that can influence our trading skills, but in your words I read also emotion, or better passion for the work you are doing. How you motivate your new students to the technical analysis approach?

**Charles Kirkpatrick:** The passion is for the subject not its use. But again, results speak for themselves. Most investment courses the students are required to take emphasize financial theory including such things as the CAPM and MPT, Sharpe ratios, diversification, and risk as defined by volatility. They never teach the students how the markets work or how to make money. The courses seem to

imply that you can't make money in the markets. Even the courses in securities analysis are biased. The analysis is focused on buying a security. There is no realistic discussion of risk measurement or money management. Because the EMH is so prevalent in academic thinking, the concept of a price trend is dismissed as impossible. But students generally see through this. They know people make money in the markets, and they want to know how. That's why they are so excited about studying technical analysis. Their enthusiasm comes naturally.

**MVG:** *And nothing is so contagious as enthusiasm*<sup>12</sup>, especially among the young students attending your courses that will broaden the group of those who use technical analysis in their investment decisions.

Thank you Charlie.

## Endnotes

1. M.V. Guffanti – *A book review & interview: the unconventional Van Tharp thinking* – SAMT Journal – Winter 2013 – pp. 9-12;
2. A. Lo and J. Hasanhodzic – *The Evolution of Technical Analysis* – Bloomberg Press – 2012 – Chapter 6 – The use of computers;
3. C. Kirkpatrick & J. R. Dahlquist – *Technical Analysis* – 2 ed. – Pearson Education – 2011;
4. 1994 - *Charles Dow Looks at the Long Wave*, 2001 - *Stock Selection: A Test of Relative Stock Values Reported over 17 1/2 Years*;
5. C. Kirkpatrick – *Kirkpatrick Investment and Trading Strategies* – Pearson Education – 2013 - pag. 1;
6. C. Kirkpatrick – *Kirkpatrick Investment...* - pag. 143;
7. Frank R. Flanegin, Denis P. Rudd - *Should investments professors join the "crowd"* - *Managerial Finance*, Vol. 31 Iss: 5 – 2005 pp. 28 – 37;
8. C. Kirkpatrick – *Kirkpatrick Investment...* - pag. 5;
9. A.Lo and J Hasanhodzic – *The Evolution of Technical Analysis* – Bloomberg Press – 2012 – Chapter 8 – Empirical Evaluation;
10. BS is the common American acronym for "bull shit";
11. C. Kirkpatrick – *Kirkpatrick Investment...* - Preface;
12. This is a quote from the poet Samuel Taylor Coleridge.

For additional information about Charles Kirkpatrick and the other books he has written, visit [www.charleskirkpatrick.com](http://www.charleskirkpatrick.com)



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