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TRADING

THE MEASURED MOVE

*A Path to
Trading Success
in a World of Algos
and High Frequency
Trading*

DAVID HALSEY

WILEY

TRADING THE MEASURED MOVE

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A Path to Trading Success
in a World of Algos and
High-Frequency Trading

David M. Halsey

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I would like to dedicate this book to my dad, who taught me that excellence is a habit and that there is no such thing as luck. What others mistake as luck is where preparation meets opportunity.

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PREFACE

In today's financial markets, each time a retail trader places a stock, options, or futures trade, he or she enters a world dominated by massive amounts of capital allocated by algorithms designed by brilliant mathematical minds and running on the ultra-fast computers of the world's largest financial institutions. Through years of research and trading experience I have discovered a means by which an individual retail trader can face that daunting competition and win. This book provides you with both the broad background and the necessary details of how to trade courageously and profitably in today's markets.

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■ Who This Book Is For and Why It's Important

Traders at all levels of experience will benefit from reading this book. Advanced traders will be familiar with most of the book's terminology but most likely will not be familiar with its new and unique approach to the use of Fibonacci retracements within a series of measured moves or with the structure of nested measured moves across multiple time frames. For beginning traders, a glossary provides definitions and basic information regarding all technical terms used in the book. Armed with this information, beginners will be able to understand and implement the methodology detailed in the book's body. Intermediate traders who might have floundered in today's market while testing indicator after indicator and method after method will find relief in this book's clear, precise, and proven methodology. All traders will benefit from sidebars that tell stories of my personal experiences that

lead to specific discoveries and aha moments in the development of this methodology.

Algorithmic trading strategies based on sophisticated quantitative analysis and often employing high frequency trading (HFT) tactics have in recent years given enormous market advantages to the largest financial institutions in the world. Put simply, in the world of trading and investing, the quants, as they are known, have changed the rules for the foreseeable future and have placed the individual retail trader at an unprecedented disadvantage—that is, unless that trader learns a new way of trading that strives to ride the waves created by the quants’ trading activity with confidence and to capture consistent profits along the way. This book offers the individual trader a blueprint for creating such a trading plan built on a dynamic framework of fundamental principles flexible enough to support his or her own trading personality.

■ Fibs Make the Moves

Through years of exhaustive research combined with trial-and-error trading on the playing field of futures, options, and equities, I have identified an undiscovered set of trading rules commonly used by the quants. Armed with this knowledge, I developed a unique and powerful methodology for successfully navigating this new and previously uncharted trading environment. At the core of this methodology is the measured move, as described by Fibonacci retracements. Put simply, Fibs make the moves. The reason that this is so is that the trading activity of the quants makes it so. The methodology here offers a means for the retail trader to ride the coattails of massive amounts of institutional money and to make substantial profits along the way.

My trading methodology surrounds the concept of Fibonacci-based measured moves with a kit of tools specialized for each trading instrument. Through my research I have unveiled the personalities of a wide range of trading instruments, each created by the movement of substantial amounts of institutional capital each trading day. In order for a retail trader to profit from riding the coattails of this capital, the trader must know which market internals the institutional algorithms are tracking. For example, when trading the ES futures contract based on the Standard & Poor’s (S&P) 500 stock index, the quants habitually buy or sell based not on Fibonacci levels alone but also based on New York Stock Exchange (NYSE) tick, particularly at the extremities of its range. The Bank index, which tracks the Nasdaq’s largest

financial components, is critically useful as a gauge of overall market sentiment. Finally, the use of tick charts (not to be confused with NYSE tick) and the fine art of tape reading allow a trader to make accurate judgments on price movement for specific instruments based on institutional participation or lack thereof.

This book makes the case that in today's new trading environment of institutional algorithms and high-frequency trading the traditional lagging indicators such as moving average convergence/divergence (MACD) and stochastics used by most retail traders do not work. The quants don't use them, so retail traders shouldn't use them either. Instead, retail traders who read this book should learn to use what the quants use—Fibonacci-based measured moves and market internals specific to each trading instrument. Armed with a solid understanding of each along with a fully prepared, attentive, and realistic psychological inner state, the retail trader can enter today's trading environment as a successful and profitable participant.

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I would like to thank my wife for helping me along the way in the writing of this book. Without her, it would not have been possible. I would also like to thank my editor Jennifer MacDonald for putting up with me during the editing process and her amazing patience. Without her accountability and motivation, the book would not be possible.

Today's Trading Environment

Descent of the Pit and Ascent of the Screen

In the opening moments of *Floored*, James Allen Smith's incisive documentary about the decline of Chicago's trading pits, two telling statistics flash across the screen:

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- In 1997, more than 10,000 traders traded on pit floors.
- In 2009, approximately 1,000 pit traders remained.

What happened? In a word, computers. In a phrase, computers replaced people. Actually, it's not quite that simple. Like most sea changes in human activities, the change from *open outcry* trading to a fully electronic, often automated, trading environment has been a gradual one. What was once a cacophonous scene of sweaty humans bellowing buy and sell orders while avoiding the elbows of other traders packed into the pit like sardines in a can has been transformed into a market dominated by the cleanly efficient hum of rack upon rack of digital servers placing millions of orders per second. Since Nasdaq emerged in 1971 as the world's first electronic stock market, the use of computers in trading has marched forward with the crushing momentum of an advancing army passing milestone after milestone:

- 1992: The Chicago Mercantile Exchange (CME), founded in 1898, opened Globex, a 24-hour market for trading futures.

- 1997: The London Stock Exchange (LSE), founded in 1801, opened an electronic trading market. The same year, the Toronto Stock Exchange (then TSE, now TSX), founded in 1861, did the same.
- 2000: New York's International Securities Exchange (ISE) opened the first electronic options exchange.
- 2003–2004: Chicago's Citadel Investment Group unleashed its high-frequency trading (HFT) system for U.S. equity options.
- 2006: The venerable New York Stock Exchange (NYSE), founded in 1863, merged with Archipelago Exchange (ArcaEx), an electronic communications network (ECN) founded in 1997.

Along the way, there were many other milestones—too many to list here—but the implications of this evolution is clear: in the world of *institutional trading*, computers are here to stay, and the open outcry trading pit is nearing its last days.

The implications for you, the trader, are not merely academic. In order to trade today's markets successfully and profitably, a trader must know the lay of the land in order to avoid crevasses, drop-offs, patches of quicksand, and myriad other hazards that come with the terrain. Knowing every detail of every hazard is impossible, but knowing what to look out for is invaluable.

■ Players on the Field

So if the vast majority of trading is done outside of the traditional trading pits, where is it being done and by whom? The answers to these questions are, on the one hand, quite clear and simple, and on the other, very murky and complex. What is clearly undeniable is that most trading around the world today is being done electronically—a buyer submits a buy order that is transmitted to a location where it is matched with a sell order submitted by a seller; a trade then executes. That much is simple. Parsing the terms in that simple statement is where murkiness and complexity lie in wait. The first question is: who are the buyers and sellers? Here are several candidates: banks (commercial, retail, investment, private, and central), insurance companies, pension funds, hedge funds, mutual funds, private equity firms, venture capital firms, brokerage houses, algorithmic trading firms, high-frequency trading firms, sovereign wealth funds, municipalities, government agencies, and, finally, *retail traders* like you. All of these players have their own agendas, their own profit motives, and their own sets of strategies

and tactics. Some of them trade in multiple markets simultaneously, while others specialize in just one market or a very limited selection of markets. Many of them host rooms full of human traders sitting at multiscreen computers placing trades with mouse clicks. Some, but not many (yet), make exclusive use of program trading *algorithms* that place trades with no human intervention whatsoever. While it's not necessary for a retail trader to know precisely who (or what) is on the other side of a trade, being aware of the players on the field (and their *size*) is essential.

Why is size so important? Because large orders move the market. Large buy orders, especially a series of large buy orders, almost invariably cause price to rise. Conversely, large sell orders, especially in a series, cause price to fall. Econ 101 teaches that supply and demand rule in markets of all types. Increasing demand leads to decreasing supply and rising prices, whereas decreasing demand leads to increasing supply and falling prices. It's true for guns and butter, and it's true for every type of trading instrument—stocks, bonds, futures, options, currencies, commodities, you name it. In Chapter 4, we'll see how tape-reading techniques can help the individual trader gauge the presence or absence of large orders. Being aware of this presence or absence can give a trader an edge—an advantage that can be used in placing profitable trades.

The second question raised above is where do trades take place? In the old days of floor trading in cities like New York, Chicago, Philadelphia, San Francisco, and Minneapolis, the answer was simple. Trades occurred on the floor of the exchanges on which buy and sell orders were placed. A person could see with the naked eye where each trade took place. Today, while a small percentage of trades still occur on the few trading floors that remain, the answer is not quite so simple. While most trades still occur at an exchange, each trade is actually made by software known as a *matching engine*, which runs on a digital server hosted by that exchange. Matching engines do just what their name suggests—they match buy orders with sell orders prior to trade execution. Most matching engines for exchanges based on the East Coast are in New Jersey in places like Weehawken, Secaucus, or Mahwah. Chicago-based exchanges keep their servers in their own sweet home Chicago. Beyond the usual stock, options, and futures exchanges are the infamous and shadowy dark pools, which are private exchanges accessible only to investors capable of placing extremely large orders. Dark pools provide markets in which a huge stock order can be traded anonymously and hidden from public view until the trade has already executed. By hiding large trades from the public eye, traders can avoid price moving against their