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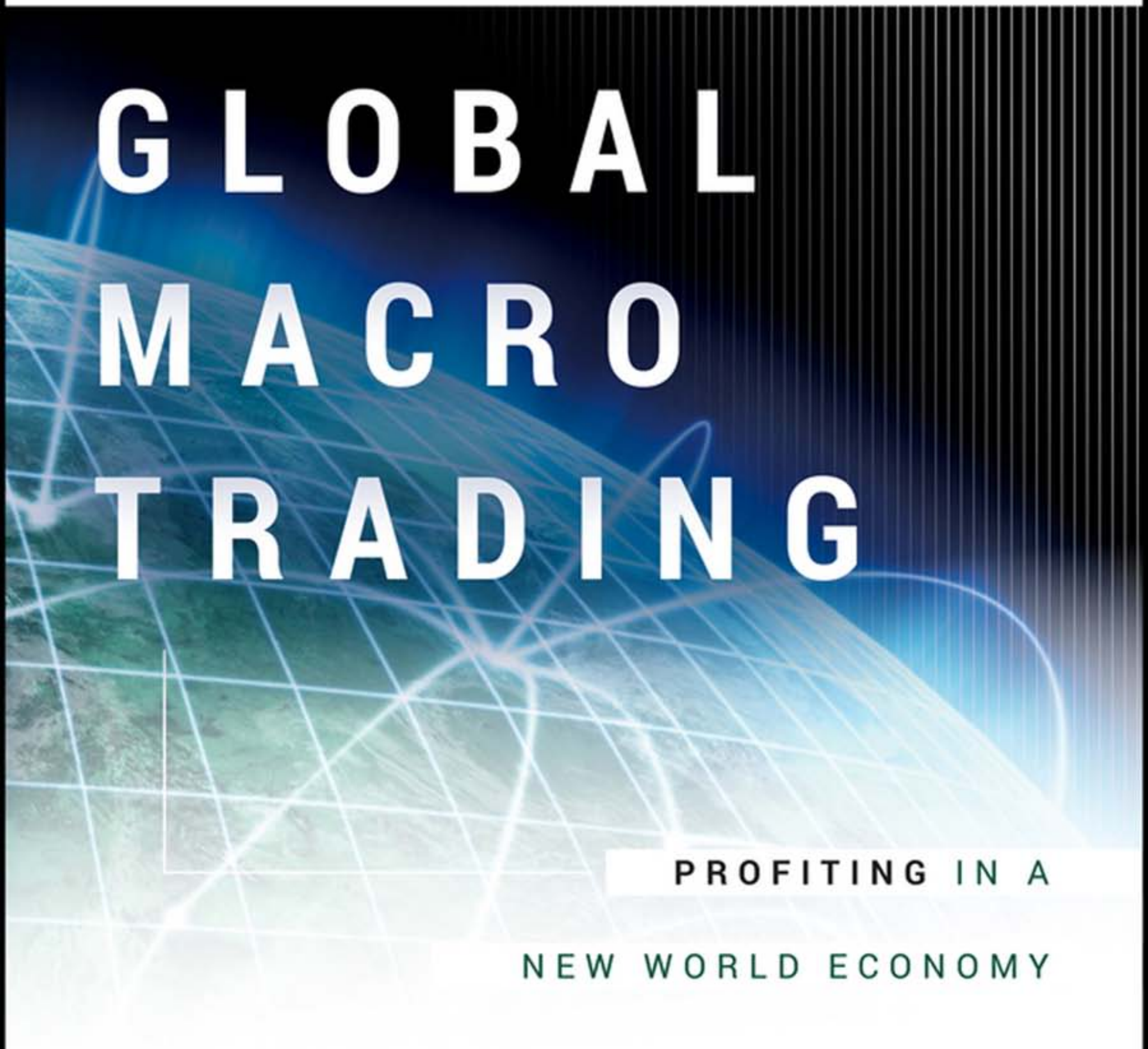

GLOBAL MACRO TRADING

PROFITING IN A NEW WORLD ECONOMY

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Greg Gliner

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To My Family

Contents

Preface

Global Macro has been one of the most intriguing and most often-covered trading strategies, and it has also been responsible for creating some of the most legendary hedge fund managers. Conversely, it is also one of the most difficult strategies and possibly the least understood. After working as a Portfolio Manager in London I joined Tudor Investment Corporation as an Analyst, and I recall often feeling frustrated that there was no primer or reliable reference guide I could go to in times of need. Luckily, I was surrounded by extremely talented and brilliant people who gave me so much of their time. As I progressed, I found that more and more friends who worked for other hedge fund strategies had a lot of questions about Global Macro. It dawned on me that there existed a need for an introduction to the strategy of Global Macro and an explanation of how it is applied. The combination of my early frustrations and then becoming aware of this need is what compelled me to write a book on Global Macro Trading that could serve as both an introduction and a handy reference tool.

Global Macro Trading is separated into Part I and Part II. Part I provides a broad overview of Global Macro while Part II offers a deeper look into the foundation for Global Macro Trading. Part I spans Chapters 1 to 6 and Part II spans Chapters 7 to12. Additionally, you'll find Bloomberg Cheat Sheets at the end of certain chapters to help navigate ways to use Bloomberg for that specific chapter and topic.

Part I

Chapter 1 examines the landscape of Global Macro as an asset class. It provides an overview of the strategy and returns and discusses why managers allocate to the strategy. Chapter 2 provides a detailed explanation of the trading process, as well as how to size trades and evaluate performance. It includes information on different types of bias, stress testing, risk utilization, and other risk management tools. Then, in Chapter 3, we tackle the construction of basic backtests and queries and analogs and provide the reader with framework to make trading evaluations. Chapter 4 starts to look at the four product groups, which serve as the building blocks for Global Macro. Part II will cover these in greater detail. Chapter 5 provides detail on technical analysis, including different types of charts, trends, moving averages and various oscillators such as Elliott waves, Fibonacci numbers, parabolics, seasonals, cycles, and crowd psychology. Chapter 6 explores the basic construction of systematic models and trading, as well as some commonly used strategies.

Part II

Chapters 7 through 10 explore the individual product groups: foreign exchange, equities, fixed income, and commodities. Chapter 7 looks at foreign exchange, and Chapter 8 examines equities. These chapters aim to provide the reader with some background, as well as some ways to value the respective asset classes on a macro level. Chapter 9 delves into the different aspects of fixed income. Chapter 10 examines commodities and separates them into energy, precious metals, agriculture, and industrial metals. It also serves as a reference tool about the main producers and consumers, as well as crop calendars. Chapter 11 explores central banking and takes an in-depth look at the Fed, ECB, and some of the recent programs following the financial crisis, as well as the importance of the main central banks in Global Macro Trading. Finally, Chapter 12 looks at important data releases followed by every macro trader, which is also meant for use as a reference tool.

The thorough information provided in *Global Macro Trading* enables readers to navigate Global Macro markets with confidence. After reading this book, you will understand the basic concepts behind the asset class and ways to trade it. You will also have a reference guide that will serve as a valuable tool in navigating the various regimes and market conditions. This information will empower the reader with a confident and competent understanding of Global Macro.

Acknowledgments

I would like to thank Dave Abner, who I met when I started as an analyst at BNP Paribas. He ran their ETF business during my time at BNP, and we kept in touch through the years. Dave has served as both a personal and professional role model for me. He is the author of *The ETF Handbook* and *Visual Guide to ETFs* and is the best-selling author for ETF books. When I ran the idea of writing a book on Global Macro Trading by him, he was more supportive than I ever could have imagined. He helped by connecting me to Wiley and boosted my confidence throughout the entire process, especially at points when my morale was low or I was plagued by self-doubt. He was my mentor throughout the entire process, and I am truly grateful to him and greatly admire his craft. He is the best in the ETF market and one of the greatest people I have the privilege of knowing.

I would like to thank Amit Hampel, who brought me on to join his team at Tudor Investment Corporation. Amit was the greatest mentor and boss I could have asked for. A large part of this book can be credited to the foundation I built while working for Amit. He was always one of the first in the office, and his unrelenting persistence and aim for perfection still resonate with me today. To this day, every time I have an investment idea, I ask myself how Amit would respond to it. I am honored to have worked for him and to call him a friend, an older brother, and a mentor.

I have been fortunate to work beside some of the most brilliant and morally sound associates I could have found in any profession. I would like to thank everyone I worked beside in my professional career. I want to thank former and current colleagues for making me a better person and for being my friends. I want to thank Mark Mitten, Todor Georgiev, Brian Martin, Donn Davis, Frank Leitner, Pat O'Brien, Beau Cummins, and Amit Hampel for being my mentors over the years.

Given the broad coverage of this book, I am grateful that I was able to call on some close friends and former colleagues who were instrumental in getting me to the finish line. I am very lucky to have had feedback from these incredibly knowledgeable industry participants: Dave Abner, Namik Immelback, Josh Smith, Frank Leitner, Kobi Platt, Charley Powers, Ray Fischer, Jay Hammarstedt, and Brett Steenbarger.

The expertise of the dedicated team at Wiley has been invaluable to me throughout the entire process. I want to thank Pamela Van Giessen, who helped me find this opportunity. Additionally, Evan Burton, Emilie Herman, Judy Howarth, Tula Batanchiev, and Steve Kyritz, who helped me take this book from conception to fruition, and I would like to thank Wiley as a whole for making this book a reality. Also, I would like to thank Mary Barbour, who I worked with as my editor for countless hours. I am grateful for all her care and attention; she is an extraordinary professional and I am grateful for her contribution.

Last, I want to thank my family for always being there for me. What they have achieved in the face of their many struggles served as my drive when I wanted to give up. I am so lucky to have parents who sacrificed so much to give me the life they never had. I love them and truly admire the example they set for me—I am so grateful to have inherited such high moral standards and to have had their support and encouragement throughout my entire life.

PART ONE

An Overview of Global Macro

CHAPTER 1

Surveying the Global Macro Landscape

Global macro, short for global macroeconomics, is the strategy of using economic theory, educated guesses about the macroeconomic environment, and geopolitical events to make large-scale investments around the world. It's one of the most important strategies for any global investor, no matter if they are retail or institutional, because global events have a substantial influence on the performance of any type of investment.

Global macro is often considered the most flexible and opportunistic hedge fund strategy, due to the scope of traded products and the number of markets it covers. Its aim is to preserve capital, using stringent risk management to limit drawdowns. Profits are made through trades in equities, currency, fixed income, and commodities. These trades can occur anywhere in the world, hence the term "global macro."

This chapter introduces the basic types of global macro strategies, historical returns of the strategy, and the various reasons why institutions choose to allocate to global macro.

Types of Global Macro Strategies

Like any hedge fund strategy, global macro can be categorized into substrategies. The four basic approaches of global macro are discretionary, systematic, high frequency, and commodity trading advisors (CTAs).

Discretionary and systematic macro strategies both have the potential to be extremely profitable and are powerful methods of analyzing markets and determining investments. These are the two most often used global macro strategies but, because the four are often used together, it's important to understand how all of them work.

Discretionary

Discretionary macro trading, as the name implies, relies on a trader's experience, intelligence, and knowledge to take subjective and often risky bets on various global markets in order to capture alpha and the best possible risk-adjusted return. With knowledge gleaned from studying global data, releases, economic data, and central bank action, among countless other factors, an investor can frame a top-down approach. This allows for a unique analysis of the risks and opportunities offered by industries, sectors, countries, and the macroeconomic situation at large.

Discretionary strategy requires serious organization and processing skills, since it involves such a large amount of data. The ability to analyze data across many different markets aids the trader in assessing whether or not a particular market is fully incorporating all factors into global asset prices.

The discretionary macro strategy is nimble and can also produce alpha in significant risk off markets. One example of a trader using historical patterns to capture alpha this way is Paul Tudor Jones's prediction of the Black Monday crash on October 19, 1987. Jones observed that the market behavior during that period could potentially experience a catastrophic crash. He expressed this view by going short and made an enormous return on Black Monday.

Global macro managers have the luxury of being able to trade a vast amount of markets and also to go against the trend, shorting the stock market while other hedge fund strategies and mutual funds remain long. Thus, discretionary traders have the potential to make a tremendous profit in a selloff, while equity managers tend to lose significant amounts of capital.

Discretionary macro traders may also determine trades based on direction and relative value. Directional trades are made in hopes of an asset moving in a particular direction. For example, if a manager is bullish he or she could go long copper and hope to capture returns on the move up.

Relative value trades aim to pair or group assets together to capture the relative value differential between those assets, and profit from a divergence or change in the price difference. Looking at the European crisis, if a discretionary macro trader believes that German yields will be less affected than Italian yields, the trader can short Italian five years and go long German Bobls. If matters worsen in Europe and Italy acquires more credit risk, it could see yields rise in relative terms.

Systematic

The second main type of global macro strategy is systematic macro. Systematic managers employ a top-down model that takes various economic indicators into account. By using large sets of quantitative data, systematic macro strategies seek to earn alpha by capturing these dislocations. Systematic macro funds typically employ many PhDs to "systemize" all these quantitative factors in order to produce a model of trading positions that removes the variable of human emotion. Systematic macro prides itself on its stringent process, strong back-tests, and the ability to operate solely on quantitative analysis, hence ensuring maximum returns (assuming that past risk-adjusted returns are predictive). Over long periods of time—several years or more—systematic funds can produce more consistent returns than discretionary strategies; however, in periods of high volatility, they tend to underperform discretionary macro, as they did in 2008. Holding periods for systematic macro can range from days to months, or longer.

Systematic macro hedge funds have significantly changed the landscape in Macro with the amount of capital they have attracted. AQR Capital Management, founded by Cliff Asness, and Bridgewater, founded by Ray Dalio, manage over $80 billion and $100 billion, respectively, and have revolutionized systematic trading. The ability to trade multiple liquid asset classes in systematic macro means that asset managers can oversee large amounts of assets at once. Since equities, fixed income, commodities, and foreign exchange are the most liquid markets, it allows these funds to grow assets to previously unseen levels. Additionally, since strategies are constantly back-tested and improved, large asset allocators such as pensions, sovereign wealth funds, and endowments that have large amounts of capital to allocate, find comfort in using a computer-driven process with predictable drawdowns. Many of these institutions have minimum allocations of greater than several hundred million dollars, so, in a way, size also attracts more capital.

It is worth noting that, while systematic macro is scalable and can take large allocations, it is wise to allocate to both discretionary and systematic macro in a fairly even manner. This will allow an asset allocator to gain the advantages of both strategies and hedge the disadvantages. Discretionary macro is negatively correlated during periods of stress and, since discretionary traders can get short in a nimble way, it can produce profit in economic situations where most people are losing money. Systematic macro, on the other hand, lets traders allocate safely and predictably with more assurance.

A good book on this topic is *Expected Returns* (John Wiley & Sons, 2011) by Antti Ilmanen of AQR Capital Management (formerly of Brevan Howard).

High Frequency Trading

A third type of global macro trading is high frequency trading. This is the process of using highly sophisticated computers and technology to trade very short-term (millisecond) dislocations that may exist in the market. High frequency trading in macro is not as large or scalable as discretionary and systematic macro. Holding periods can range from milliseconds up to a few hours depending on the strategy. In high frequency trading, processing speed is of the utmost importance to ensure that certain dislocations are captured.

Commodity Trading Advisors (CTAs)

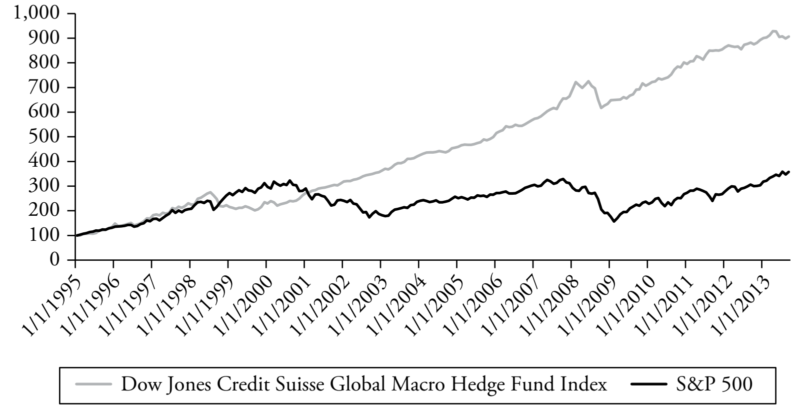
According to the National Futures Association, a Commodity Trading Advisor (CTA) is an individual or organization that advises others as to the value or advisability of buying or selling futures contracts, options on futures, or retail off-exchange foreign exchange contracts. Since futures are traded on most global macro markets, CTAs are considered a global macro strategy. Many larger CTAs employ a model-driven approach that can be technical or fundamental. However, most CTAs utilize a highly automated trend-following strategy that is in some ways similar to systematic macro. The methodology on position sizing used by most CTAs, which we'll also be using in this book, originated with the Turtle Traders.

As with other trend-following strategies, CTAs perform very well over longer periods of time—as long as several years. They are, however, subject to large drawdowns (peak-to-trough) as a result. Man AHL and Winton Capital Management, both based in London, are widely regarded as the premier CTAs, each managing approximately $20 billion.

Return Profile and Allocations

Global macro as a strategy is very attractive because of its return profile. The Barclays Global Macro Index has achieved annualized returns of 10 percent from 2002 to 2012 compared to the S&P 500, which has been 2 percent over the same period. Additionally, the Barclays Global Macro Index has experienced lower volatility on an annualized basis compared to the S&P 500 over the same time period. As a result, global macro as a strategy has a higher Sharpe ratio, with the attractive investment characteristics of higher returns and lower volatility relative to other hedge fund strategies. Figure 1.1 demonstrates the outperformance of the Dow Jones Credit Suisse Global Macro Hedge Fund Index versus the S&P 500.

FIGURE 1.1 Global Macro versus S&P 500 from January 1995 to September 2013



Source: Dow Jones, Credit Suisse, and Bloomberg.

Global macro has shown a low correlation to S&P 500 returns, particularly in periods of market stress. Since many macro traders short during bear markets, this allows global macro funds to make money even when the market drops precipitously (Figure 1.2). Having a low correlation to the S&P 500 and a negative correlation during market collapses is also a very attractive return profile, and one of the reasons money managers tend to like global macro. While global macro returns have come down from the 1980s, 1990s, and 2000s with fixed income yields at historical lows and an atmosphere of economic uncertainty, global macro has still seen profit in all markets, which is why it remains a popular hedge fund strategy.

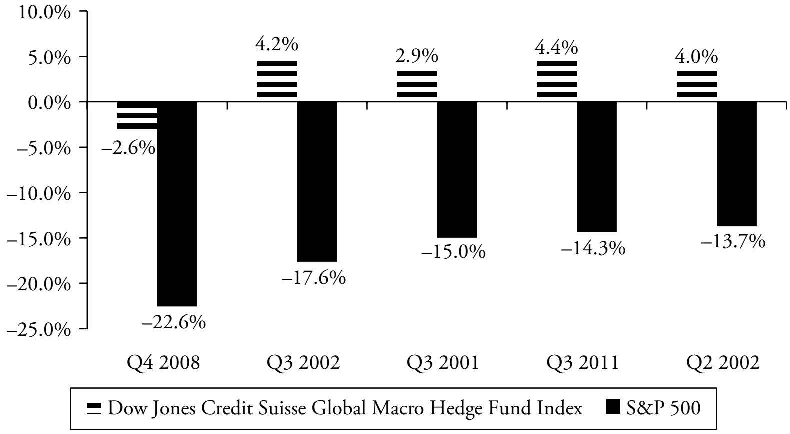
As a result of the attractive uncorrelated return profile of global macro, investors have allocated to the strategy. Another attractive aspect of global macro is that it is one of the most, if not *the* most, liquid strategies in the hedge fund universe, considering that the assets traded are the most liquid to begin with. As a result of the very desirable return profiles and liquidity, global macro is the most popular hedge fund allocation by pension funds, as shown in Figure 1.3.

Hedge Funds and Global Macro

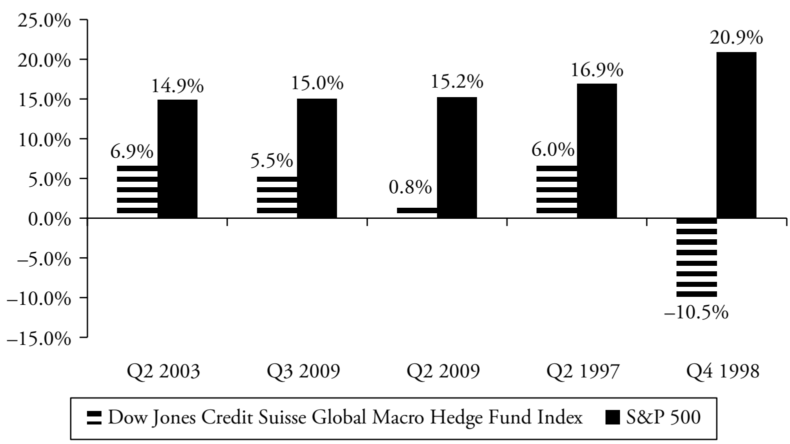
Some of the most famous hedge fund managers have emerged from global macro. In 1992, George Soros earned his fame on Black Wednesday, where

FIGURE 1.2 (a) Performance of Global Macro during the Top Five Losing Quarters in SPX since January 1995 and (b) Performance of Global Macro during the Top Five Best Quarters in SPX since January 1995

(a)



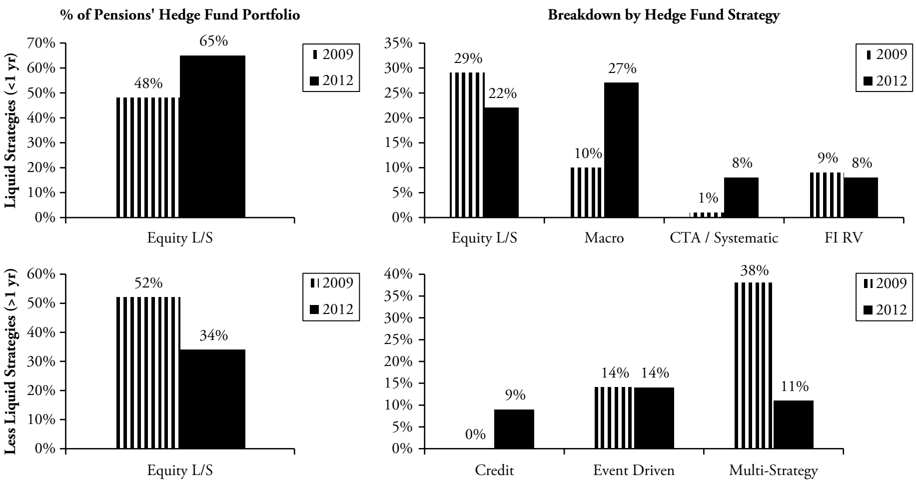
(b)



Source: Dow Jones, Credit Suisse, and Bloomberg.

he accurately predicted the devaluation of the British pound, making over $1 billion dollars in one day and earning himself the title of "The man who broke the Bank of England." As mentioned previously, Paul Tudor Jones also successfully shorted the stock market prior to the October 19, 1987, crash, characterizing the week preceding the crash as one of the most exciting weeks of his life.

FIGURE 1.3 Changes in Pension Funds' Allocations to Different Hedge Fund Strategies from 2009 to 2012



Source: Barclays Prime Services.

Louis Bacon, Stanley Druckenmiller, Bruce Kovner, Colm O'Shea, and Julian Robertson all earned their fame as discretionary macro traders able to profit in both bull and bear markets using the disciplined approach, stringent process, and analytic insight that are characteristic of global macro trading.

Summary

The goal of this chapter is to provide the reader with a brief introduction to the concept of global macro, the four basic strategies it encompasses, and why global macro is important to the macroeconomic situation at large.

CHAPTER 2

Trading Process, Sizing Trades, and Monitoring Performance

Regardless of what hedge fund strategy you are trading, there are implicit risks involved. The first rule in any kind of investing is to understand how much you stand to lose, rather than how much you stand to gain. Having a stringent trading process that fully accounts for risk is critical to a trader's long-term success. Like the old adage about pilots says: "There are old and bold fighter pilots, but rarely both." The inescapable fact is that any time a global macro trader puts a trade on, things can go wrong. Some of these risks can be stress-tested while others are unpredictable, but a global macro trader should be as educated as possible on potential outcomes of any given trade.

This chapter will examine some of the tools one can use in the trading process, as well as some implicit human biases that make us more prone to potentially catastrophic risks. No process is perfect and each trader must find the one he or she likes best. With that said, just as humans evolve over time, one's trading process should also evolve. This chapter will also outline some of the initial methods one can use to monitor and improve performance.

Understanding the different types of trading strategies and learning to monitor one's own performance serves many important functions. Whether one is trading discretionary macro, systematic macro, or high frequency, having a process in place is the key to success. The greatest traders of all time used a variety of different strategies, but what they all had in common was a stringent process and the ability to take losses and recover.

Maintaining a Stringent Process

The biggest advantage of systematic and high frequency strategies is that once the systems and algorithms are in place, the variables of human emotion and psychology are removed. Trading discretionary macro, on the other hand, requires having a stringent process to ensure that we avoid our human impulses as much as possible. As mentioned before, all of these strategies can lead to profit, but it's important for a trader to choose (and stick with) the strategy that feels most comfortable. For example, many people are skeptical of technical analysis; however, technicians can't live without it since it gives them the discipline to know when to get in and out of positions. There is no right or wrong strategy when it comes to trading; it's just important to figure out which one is the best for you and make sure your process is consistent.

A process should always evolve and improve. No one system or person is perfect and since the world of trading is constantly evolving, one's process must as well. Evaluating one's performance in a nonbiased and numeric fashion is an important part of driving process improvement. Oftentimes particular strategies may be making money while other strategies are not—so it's statistically probable that there is opportunity for process improvement.

For example, many fixed income traders who systematically trade the 2s/10s yield curve might want to adjust the way they trade flatteners and steepeners since, in many countries, there is a zero lower bound (ZLB) and the two-year likely won't react as much as it used to in years prior. This means that going further out in the yield curve will likely be a more effective move. If you aren't continuously evaluating and updating your process, you might miss out on simple moves like this that can help your profits.

One of the best ways to maintain a consistent process is to log all of your trades in a journal or spreadsheet along with your thesis, conviction level, and the outcome of the trade. This will be an invaluable reference for you when it comes to future trades and will help you develop objectivity by finding patterns across both profitable trades and losing trades.

Objectivity and Bias

Gut feeling in discretionary trading is a lovely gift, but the fact remains that having objective procedural indicators relies far more on process than instincts. This section looks at the following types of bias: