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FOREWORD BY **JOHN R. HILL**,
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INSIDE THE

C U R R E N C Y

M A R K E T

**M E C H A N I C S , V A L U A T I O N ,
A N D S T R A T E G I E S**

B R I A N T W O M E Y

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INSIDE THE CURRENCY MARKET

Mechanics, Valuation, and Strategies

Brian Twomey

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*To the memory of my grandfather, Richard Francis Schmidt,
the greatest stock trader I've ever known and a man who
taught me not only valuable lessons of life but foundations
of the markets at a young age.*

Foreword

I met Brian Twomey about five years ago when he came to my office here in North Carolina for a day visit. What immediately struck me about Brian was his “fire-in-the-belly” spirit and go-getter attitude. Brian impressed me with his knowledge of the markets as well as his outstanding analytical prowess. We’ve kept in touch over the years and I was honored to be contacted by Brian’s publisher for the purpose of writing this foreword.

For anybody interested in trading or studying the Forex markets, I would consider this book required reading. I was astounded at the level of detail, especially in terms of the nation-by-nation analyses that is provided. Detailed methodologies, trade strategies, a terrific chapter devoted exclusively to the Libor, and an extensive analysis of currency pairs are also discussed.

At the book’s conclusion, Brian explains “My purpose for this book was to address all the various issues involved that comprise a currency pair not only from a strict trading perspective but to bring an understanding from a whole host of perspectives.” I believe that Brian has achieved this objective tenfold. I predict that this book will serve as an important reference resource for all those interested in the inner workings of world currencies.

I hope you enjoy this book as much as I did.

John R. Hill
President
Futures Truth Co.

Preface

This book answers the question what are the components, the constituent factors that comprise the second side of a currency-pair equation and how should those factors be considered in terms of a trade strategy. A currency pair comprises two sides, a two-nation perspective. In order to understand a currency-pair combination, both sides of the pair must be considered from the two-nation perspective.

The two-nation perspective was fully outlined in this text with not only the trader in mind but researchers, market professionals, and present and future students of the markets.

The genesis of the book framework was derived from the many biases I saw over the years from the academic journals, trader publications, or years of prior books. Each book, each article, and each journal publication offered a point, an insight that would help the reader further his or her knowledge. But each publication taught a perspective, an insight that would eventually lead to the overall understanding of the two-nation operational framework. Yet years may pass before the full learned concepts could actually become operational in a trade strategy and understanding of the market due to the proper knowledge never advanced in one publication. Publications had biases, toward the U.S. dollar side of the currency-pair equation, with no consideration of the second part of the pair.

Spot-currency prices move in the markets based on factors of interest rates but interest rates between two nations rather than one side of a currency pair. The question must then be asked: How does the second nation calculate and factor interest, and what market instruments are available to track the various rates that trade every day in the markets in order to track a trade throughout the various markets?

To trade Australian dollar/Japanese yen, one must understand Japanese TIBOR and Euroyen rates in terms of bank bills and Overnight Cash Rates in Australia. To trade U.S. dollar/Canadian dollar, one must know the U.S. Fed funds rates in relation to Canada's CORRA and OMMFR interest rates. How those specific interest rates trade and direction of their movements can have profound effects on currency-pair prices.

This book sets out to outline the two-sided currency-pair trade from a whole host of perspectives as it relates nation to nation. It addresses currency pairs from the eight major nations because that is where the vast majority of trade occurs.

Chapter One is an outline of the Triennial Survey released every three years by the Bank of International Settlements (BIS). While that is not new to any publication, the historical surveys are addressed and analyzed so readers can understand the historical composition of the market in its proper context as well as the rise of many varied currency pairs and financial instruments associated with the historical rise of the markets.

Beside the Triennial surveys, the BIS offers annual and quarterly reviews of the currency markets and each is addressed in terms of the specifics of the markets, types of topics addressed, and factors for consideration to understand and evaluate the market.

Foreign-exchange committees formed in the late 1970s and mimic the work of the BIS. Each nation has an FX Committee, but that committee is specific to the nation of trade. Each nation's FX Committee is fully highlighted.

Chapter Two offers foundation and theories of money and interest. It begins with a historical perspective and answers such questions as supply and demand of money from an operational framework, always highlighted nation by nation. Historically, the demand and supply of money begins with

the classical theorist, moves into Keynes, Von Hayek, and Milton Friedman. Theories and perspectives of Purchasing Power Parity are explored in fine detail.

Chapter Three explores trade weight indices from a whole host of perspectives: historical, methodological, index composition, and theories of composition from an economic perspective. Each nation is addressed specifically in terms of formulas, calculations, currency composition, and economic framework, and trade strategies are explained in detail.

Chapter Four begins the open-market valuation and knowledge of interest rates and currency-pair prices from the perspective of repurchase agreements. Each nation is addressed specifically due to the many factors nations consider as they approach their open-market operations. Repo rates establish a floor for interest, yet interest rates rise and fall with markets and economic conditions. Each nation is addressed in all its minute detail to fully understand the operational framework of repurchase-agreement markets.

Chapter Five addresses the most important of open-market interest rates, LIBOR. LIBOR is explained, addressed, and highlighted not only from the well-known British Bankers Association perspective but each nation has its own LIBOR. Each nation's LIBOR is fully explained in terms of factors of interest rates and what moves currency pair prices associated with those LIBOR rates, and historical views are addressed to the best of my ability. Many currency-pair chart examples accompany each nation's LIBOR so readers can fully understand each nation's LIBOR and factors of currency-pair movements and prices.

Chapter Six addresses yield curves first from their historical perspective then each nation's yield curve is explained and calculated with bond examples and historical perspectives offered. The U.S. market is the most important

of the four, so currency-pair chart examples accompany yield curve charts. Factors such as how to trade yield curves are also fully highlighted.

Chapter Seven moves further along the interest-rate curve to address swaps in all their various forms from currency swaps, cross-currency basis swaps, and overnight interest-rate swaps. Each nation's swap market is highlighted specifically due to the varied nuances of every market. The chapter then moves into outright forwards and forward points. Formulas and calculated examples are offered. A forward point calculated example includes a yield curve and spot price calculated to a forward point.

Chapter Eight addresses stock markets as they relate to currency prices and the bond/yield interplay. Each nation's stock market is discussed in terms of time of trade, formulas of each nation's stock market, factors for trade consideration, and relationship to bonds and yields in each market.

Chapter Nine addresses currency-pair conversions, volatility and volatility indicators, formulas, and calculated examples as they relate to currency pairs. A full discussion of volatility is offered not only for currency pairs, but currency options are addressed. Futures contracts in terms of standard versus micro contracts are discussed and fully addressed in terms of currency-pair prices and conversions.

Chapter Ten offers technical indicators, ready-made indicators employed to evaluate trade decisions. Simple moving averages, Bollinger Bands, Ichimoku, and pivot points are addressed due to features specific to the markets. Ichimoku is vital to the Japanese and Asian currency markets since it is not only widely employed but its operational framework must be understood in order to trade Asian markets. Bollinger Bands is important to volatility, simple moving averages to means, and pivot points to support and resistance. Simple moving averages go a step

further, as a simple moving average is converted into a volatility indicator. Trend lines are discussed in all their finer details and histories offered. Volume and open interest studies, COT reports, correlations, and the Baltic Exchange is offered due to its importance to the commodity currencies such as Australian dollar, New Zealand dollar, and Canadian dollar.

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Without the dedicated and efficient help of the Wiley and Bloomberg professionals, this book would not have been possible.

I thank Stephen Isaacs of Bloomberg Press for allowing me an opportunity to write this book. Kevin Commins, Executive Editor of Wiley, assisted in every regard. His decency, dedication, and professionalism is appreciated. Meg Freeborn's dedication to the manuscript deserves my gratitude. A special thank you to Kimberly Bernard who developed the manuscript; she is appreciated more than words would allow. Her efficiency, dedication, expertise, and knowledge in the development process were genius. A thank you to all at Wiley for their work and effort.

I offer my solemn and heartfelt thank yous to many dedicated market professionals who were vitally important in more than one vital detail of this book. My acknowledgments are offered in a nation-by-nation framework.

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Switzerland:

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Naohiko Baba is one of the most prolific scholar/writers on not only Japan and their markets but his work spans many markets over many years. His work is appreciated.

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but I've looked forward on a daily basis to reading his expert market commentary.

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Ron Griess at thechartstore.com I offer my many thank yous.

York County Library:

Special thank you to my friend Troy Beckham, whose computer skills and knowledge helped guide me through well over a year while working on the manuscript. Without Troy's assistance, this book would never have seen the light of day. Kyle Merck as well deserves my gratitude and thank yous for assisting me with my many chart examples. His computer skills are expert and his devotion to my cause gratifying. My friend Page Hendrix, a research librarian, is thanked for her dedication in compiling research for many, many days. Her attention to my research efforts over these many years is appreciated. And thank you to the many dedicated professionals at the library who have a sincere love for books and information.

CHAPTER 1

Foreign Exchange Reports

Foreign exchange (FX) reports are market-intelligence documents that comprise many facets. Bank reports for example address direct and sometimes short-term market variables such as a short- or long-term trade, a possible central bank interest rate change, or economic variable that directly relates to the market.

Institutional reports address bigger-picture issues that comprise market intelligence in terms of overall trading volume, types of instruments traded, and a fundamental or technical aspect that must be addressed in order for the market to function. Yet these reports address overall market fundamentals and functions so traders and market professionals can understand the big picture as it relates to their overall trade plan. Institutional reports are always forward looking and written by market professionals with the ability to understand and analyze big-picture issues. Much information can be derived from professional reports in terms of strategies, risks, and highlighting of possible scenarios with future implications to profit. The key is to understand the various reports and their implications because some reports are nation specific while others address the overall market as it relates from nation to nation.

This section addresses a variety of market-intelligence reports that relate both to a specific nation and overall market picture. This section incorporates not only reports from a market-intelligence perspective but institutional

histories, frequencies of reports, and types of information released and addressed.

Bank of International Settlements

Before we discuss the much-publicized implications of the Bank of International Settlements' Triennial Survey and the not-so-publicized quarterly report, here's a quick and basic overview of the role, functions, and historical aspects of the Bank of International Settlements (BIS) due to its profound importance to not only world banking and economic stability, but the markets in particular, both yesterday and today.

Established in 1930 as the world's banker, the BIS today is much more than the facilitator of gold and FX transactions for the 54 central banks that contributed to its 2007 report. It was originally established to repatriate German monies to the Allies after the war at the behest of the Bank of England, which called for its establishment. How to implement further Treaty of Versailles' arrangements between nations after World War I further heightened its need as intermediary to facilitate multilateral payments and currency conversions. Its location in Basel, Switzerland, attests to not only its neutrality but its commitment to carry out its mandate (BIS 2010).

The real existential challenge to the BIS came during the 1930s at the height of the currency wars, when the Bank of England suspended its gold standard in 1931 and the United States did the same in 1933. Gold-backed nations sought stability due to currency price fluctuations by the United States and the United Kingdom as trade imbalances seriously deviated from the norm of gold-backed nations and threatened their economic existence (BIS 2010).

The resolution was the Tripartite Agreement signed by the United States, France, and England in 1936 to ensure price stability and to abstain from competitive economic devaluations of currency prices as long as currency prices didn't destabilize the economic balance of trade. While the world prevented a crisis, the BIS maintained its existence until the bank was rescued by President Truman in 1948 when the United Nations voted for its dissolution in 1944. Ironically, Franklin Roosevelt died shortly after in April 1945, so Truman assumed the presidency and, with the help of the United Kingdom, ensured the bank would remain today as one of the oldest world institutions (BIS 2010).

Moreover, the BIS provides short-term collateral loans to nations through their respective central banks and settles trades every trading day at 5:00 p.m. eastern standard time through its Committee on Payment and Settlements (BIS 2010). Closing spot currency, outright forwards, currency options, and swap prices are established at the 5:00 p.m. settlement to end a full-cycle trading day. Trading institutions must then reflect these changes to all accounts the world over through their respective central banks.

The Committee on Payment and Settlements ensures that world markets not only function properly but further ensures this functionality replicates itself every trading day. Rollover debits and credits are marked to market at the 5:00 p.m. close. Market bid/ask spreads tend to change dramatically at times as traders begin the new trading day during the Asian session. This however depends on the liquidity provided to markets based on trading activity. Robust trading means decreased spreads as liquidity is provided to the markets.

Triennial Survey

Since 1989 and every three years thereafter, the BIS publishes its quite detailed Triennial Survey through its Markets Committee and the Committee on the Global Financial System—established in 1971—that focuses on daily turnover in U.S. dollar amounts and outstanding contracts in FX for the last three years.

Information is reported to the BIS by central banks—54 at the 2007 count up from 52 in 2004, 48 in 2001, 43 in 1998, and 26 in 1995 (BIS 2007 Triennial Survey). Surveys covered data on amounts outstanding of over-the-counter (OTC) FX interest rate, equity and commodity, and credit derivatives. FX, spot, outright forwards, foreign exchange swaps, and currency and interest-rate derivatives are surveyed. Interestingly, the 2007 report included for the first time credit default swaps (CDS).

These surveys feature quite detailed reports that serve as important guides for market professionals and traders because they determine where money flowed to seek its best yield and the types of instruments utilized to facilitate those returns. All have important implications for the spot trade.

Triennial Survey 2007 versus 2004

From the 2007 report provided in [Exhibit 1.1](#), Global Foreign Exchange Market Turnover, we learned that daily turnover of all spot, outright forwards and swap transactions increased to \$3.2 trillion, up from \$1.9 trillion in 2004, a 69 percent increase. Based on types of instruments from [Exhibit 1.1](#), swaps rose 80 percent in 2007, an increase of 45 percent from 2004. But notice the number of up-to-seven-day swap transactions in [Exhibit 1.1](#) that increased since its full reporting period began in 1995.

[EXHIBIT 1.1](#) Global Foreign Exchange Market Turnover¹:
Daily Averages in April, in Billions of U.S. dollars

Source: Bank of International Settlements.

	1992	1995	1998	2001	2004 ²	2007
Spot transactions	394	494	566	387	631	1,005
Outright forwards	58	97	128	131	209	362
—Up to 7 days	—	50	65	51	92	154
—Over 7 days	—	46	62	80	116	208
Foreign exchange swaps	324	546	734	656	954	1,714
—Up to 7 days	—	382	528	451	700	1,329
—Over 7 days	—	162	202	204	252	382
Estimated gaps in reporting	44	53	60	26	106	129
Total traditional turnover	820	1,190	1,490	1,200	1,900	3,210
<i>Memo: Turnover at April 2007 exchange rates³</i>	<i>880</i>	<i>1,150</i>	<i>1,650</i>	<i>1,420</i>	<i>1,970</i>	<i>3,210</i>

¹Adjusted for local and cross-border double-counting. Due to incomplete maturity breakdown, components do not always sum to totals.

²Data for 2004 have been revised.

³Non-U.S. dollar legs of foreign currency transactions were converted from current U.S. dollar amounts into original currency amounts at average exchange rates for April of each survey year and then reconverted into U.S. dollar amounts at average April 2007 exchange rates.

From 1995 to 2001, the number of up-to-seven-day swap transactions doubled to the over-seven-day counterpart, while those same transactions doubled from 2004 to 2007 with the number of swap transactions on a continual rise. Why? A swap is primarily an agreement to exchange cash flows. One can look at swaps as a bank simultaneously buying or selling a currency for one maturity and selling or buying the equivalent amount at a later date. They trade OTC and were once employed primarily when normal markets couldn't offer financing, but their popularity has increased year over year as a regular form of finance. A swap can be an interest rate swap, a commodity swap, an equity swap, or a currency swap.

Yet swaps can be employed as a hedge against an interest rate swap, a currency swap, a commodity swap, or an equity swap. As noted in [Exhibit 1.2](#), a trend developed from 2006 to 2010. As interest rate spreads tightened, implied volatilities decreased and carry to risk rose.