CHAPTER 1

FX 101

Know this. Technical analysis will not make you rich. It will not turn $1,000 into $1 million in a matter of weeks. It will not allow you to design a computer system that will automatically generate income while you luxuriate on the golf courses of Florida or snorkel in the azure blue waters of Cozumel.

Like every worthwhile endeavor in life, success in trading requires dedication, persistence, and a never-ending desire to excel. Technical analysis is only a tool—albeit a very good one—that if used properly can greatly sharpen and improve your trading in the currency market, but it cannot by itself make you a successful trader.

This book is about the practical application of technical analysis to the foreign exchange (FX or forex) markets. In it, I show you the key advantages as well as some of the limitations of this trading discipline. This book alone cannot guarantee success, but I can assure you of one thing: Your chances of winning will increase markedly if you learn to how to use technical analysis to trade FX.

Before turning to the business at hand, however, it's critical to understand how the FX market works and, more importantly, how it differs from all other financial markets that you may have traded.

TWO TRILLION REASONS TO TRADE

The FX market is the biggest financial market in the world. By the time you read this book its volume will have reached more than $2 trillion

per day in notional turnover. That's right—you didn't misread the numbers. The FX market trades 2 trillion with a T, not 2 billion with a B, dollars per day. Consider that the New York Stock Exchange (NYSE)—the biggest stock market in the world—processes only $60 billion worth of transactions on its busiest trading days of the year, and you can appreciate the scope and the size of the FX enterprise (see Figure 1.1).

Currency trading dwarfs all other markets in size, but it is a quiet giant of the finance field. Most financial media treat FX as an exotic afterthought rather than as the marquee financial market in the world. I am always amazed to flip open the finance section of the *Wall Street Journal* and see a tiny two-inch-square story buried deep on page C5 summarizing the day's action in the FX markets, while the front page of the finance section is entirely devoted to stocks and bonds.

Guess what? Though few investors realize this fact, the currency market has far more impact on the value of your overall investment portfolio than the quotidian events at Dell, General Motors (GM), or Wal-Mart. In a global economy, every major corporation is a multinational enterprise by necessity, and the direction of currencies can often affect these companies' profit margins more than any other input factor. Why do you think the FX market is so large? Because all of these multibillion-dollar corporations are its main customers.

- FX average daily volume of $2 trillion
- Volume has surged 57% over the past three years
- NYSE daily volume of $50 billion to $60 billion
- At least four times the size of the U.S. futures market

FIGURE 1.1 FX—A Growing Market

MARKET RULES

The only rule in the FX market is that there are no rules. Want to short with impunity to mercilessly drive down the value of the currency? Go right ahead. No artificial uptick sale rules will ever stop you. Your next-door neighbor's cousin overheard on the golf course that the Federal Reserve will announce a surprise rate hike next week? Feel free to empty out your bank account and load up on the trade. No one will come after you if you are proven right. In the FX market there is no such thing as insider trading. In fact, key European economic data such as German unemployment figures are often leaked to the press before their official release dates.

Suppose you are an institutional trader and a customer calls you to sell "one yard" ($1 billion worth) of euros in exchange for dollars right away. Suppose further that instead of executing the customer's order first, you decided to sell some EUR/USD from your firm's proprietary account, secure in the knowledge that the size of the customer's order will push the market lower by at least 15 points. Try that kind of front-running on the floor of the New York Stock Exchange or in the pits of the Chicago Mercantile Exchange (CME) and you'll wind up fined, unemployed, and possibly even jailed. In FX? No problem. You want to front-run customer order flow? Feel free to give it a try, but be warned you won't have those customers for long as they take their business to the hundreds of other market makers willing to provide fairer and more accurate execution.

While there is no global oversight for the FX market, there is very efficient self-regulation. Because key members both compete and depend on one another at the same time, any type of overt cheating is quickly eliminated as it poses tremendous structural danger to the market as a whole. You could say that in the case of FX "honor among thieves" works better than the iron fist of the regulators at ensuring that the market performs smoothly and efficiently.

Having said all that, I must note that FX is not the Wild West of finance, and in fact major money centers of the world do have regulatory agencies that oversee FX operations within their own jurisdictions. In the United States the FX market is overseen by the National Futures Association (NFA) and the Commodity Futures Trading Commission (CFTC). In the United Kingdom it is the Financial Service Authority (FSA) and in Japan it is the Ministry of Finance (MOF) that sets guidelines and regulations.

All of these regulators impose strict capital requirement rules for their member firms and audit their books on an annual or biannual basis. If the firm is regulated in the United States, you can see its net monthly capital statements (the amount of capital each firm possesses in excess of the minimum set by the regulators) at http://www.cftc.gov/tm/tmfcm.htm. You

can also visit this webpage and see what, if any, complaints or regulatory actions have been lodged against the firm in the past.

For U.S.-based retail traders, doing business with a non-NFA member firm is like playing Russian roulette with your account. Not only will you not have any idea about the financial health of the dealer you trade with, but also you will have no real recourse if the company absconds with your money. However, any firm that is a member of the NFA must submit to binding arbitration in case of a dispute. So if you have an operational or a trade problem with the firm, there is a well-established legal procedure to adjudicate your grievances. Know this, however: While you have very important protection by dealing with an NFA-licensed firm, it, in turn, has no obligation to deal with you. That's right: If an FX dealer does not like the way you trade or the way you communicate with its dealing room or simply doesn't like your personality, it can ask you to wind up all your positions and close out your account. This, by the way, is true whether you are a small retail account from Toledo or a large hedge fund account from the Caribbean. In the FX market no one is obligated to do business with anyone else. In theory, Goldman Sachs could stop trading with Morgan Stanley, and Citibank could refuse to deal with Deutsche Bank. In practice, however, this almost never happens, but just as restaurants reserve the right to not serve certain patrons, dealers can refuse your business. The huge benefit of FX, of course, is that you can always find a dealer that may be more accommodative to your trading taste and style; just make sure that the firm is a member of the NFA.

MARKET STRUCTURE

Although in the past few years the popularity of FX has exploded among retail traders, the market is quite different from all other financial markets and still retains many of its old-boy network ways (see Figure 1.2).

The FX market trades 24 hours a day, 5 days per week, from about 5 P.M. eastern standard time on Sunday to 5 P.M. EST Friday afternoon. Trading kicks off in the sleepy capital of Wellington, New Zealand, moves over to Melbourne, Australia, and finally starts in earnest in Tokyo, Japan, which accounts for 15 percent of daily volume. At about 1 A.M. EST dealers arrive at their gunmetal desks in tall glass towers of Frankfurt, Germany, followed one hour later by colleagues in London, England, which, with more than 200 major dealing houses and fully 35 percent of average daily volume, represents the heart of the FX market. Finally, at 7 A.M. EST, bank dealers and hotshot hedge fund traders arrive at their desks on Wall Street and in Greenwich, Connecticut, and begin to deal

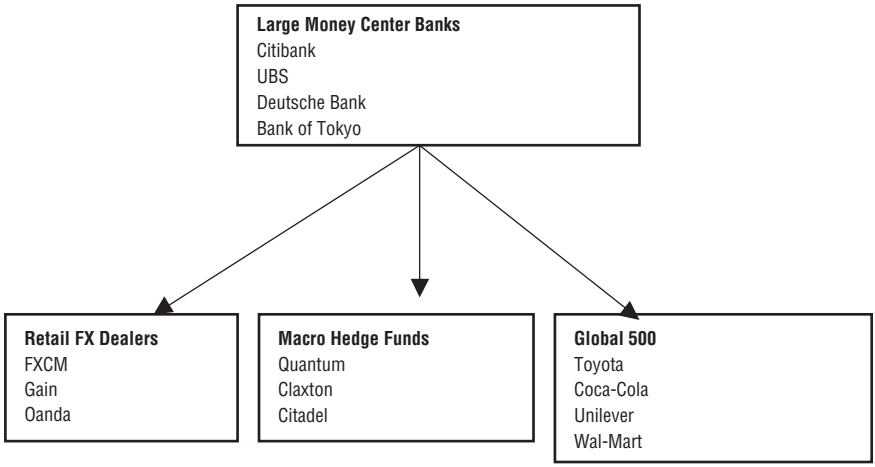

FIGURE 1.2 FX Market Structure

from their sleek multiple-panel-monitor computers, generating 25 percent of the day's volume.

At the core of the market are the primary dealers, including large money center banks such as Citibank and BankAmerica and global trading powerhouses like Goldman Sachs and Morgan Stanley. Slightly on the outside are the *Fortune* Global 2000 corporations—all the usual multinational names from Alcoa and Avantis to Wal-Mart and Unilever. Right behind them are the self-proclaimed masters of the universe—the huge, multibillion-dollar hedge funds (many of which are located in the downtowns of Stamford and Greenwich, Connecticut), which place massive leveraged bets on behalf of the world's most well-heeled investors while charging 2 percent of gross and 20 percent of profit for the privilege.

The market basically works like this: The big money center banks like Citibank, Bank of Tokyo, and Deutsche Bank, along with trading houses like Goldman Sachs, Morgan Stanley, and UBS, act as primary market makers supplying liquidity to the market. They are linked to each other and to the outside world through banks of phones and Reuters and EBS terminals. Although in the past most dealing was conducted by phone, now many billion-dollar trades are settled through screen-based trading with a click of a mouse.

The multinational corporations are the primary hedgers in the market looking to offset their business risk—everything from import and export costs to such mundane matters as weekly payroll management. The hedge funds are the large speculators looking to profit from changes in major economic and political trends. Last but certainly not least are the world's

central banks, which participate in the market for a variety of reasons. Some central banks come into the market just to balance their books and adjust their foreign reserves. Others, like the People's Bank of China, will sometimes day trade billions of dollars at a clip if they think they have an edge, and will often pocket millions of dollars in profit for their reserve vaults. Yet other central banks will come into the market to try to manipulate or defend their country's currency to protect their trade advantage. How committed are they to this task? In 2003 the Bank of Japan spent more than $300 billion in a matter of a few months to make sure that the Japanese yen remained cheap relative to the dollar so that the country's vital export sector could remain competitive on the global stage. In FX, the game is definitely played for keeps.

DECENTRALIZATION

There is no central governing authority that controls trading. There is no central FX exchange. There is no single clearinghouse. Business in the biggest market in the world is basically done on a handshake. If you trade stocks, all of the transactions are settled though a central exchange like the NYSE or NASDAQ; if you trade futures, the CME or the Chicago Board of Trade (CBOT) makes sure that your trades are cleared. It's the same in options, where the two biggest players, the Chicago Board of Trade (CBOE) and ISE (pronounced "ice" on Wall Street), stand to settle your trades. The exchanges' main function is to guarantee that disparate groups of buyers and sellers can come together and make trades without having to worry about whether the guy on the other side is good for the money.

Not so in FX. FX is known as the party-to-party market. You deal directly with your market maker and there is no third party guaranteeing the transaction. Everybody works with everybody else on a credit basis. That essentially means that everybody must trust each other to settle up. Settlement, by the way, is two business days forward, but of course due to modern technology every player in the market knows their true exposure in real time.

Decentralization makes the FX market unique. Unlike exchange-based stock or bond markets, there is no central order book and there is no best bid or offer price. In fact, in FX there is no single price for a given currency at any one time. Just like in a Middle Eastern bazaar where prices for identical Persian rugs may differ from one merchant's stall to the next, so too in FX prices for EUR/USD may vary depending on which dealer's quote you receive. This process may seem bewildering and ar-

cane, but the wide array of participants actually makes the FX market the most efficient and liquid in the world. In reality, competition among market makers is so fierce that the bid/ask difference in the the EUR/USD—the most active financial instrument in the world—is often only 1 point wide, equivalent to only 0.01 percent of the contract value.

BASIC QUOTATION CONVENTION

In FX, currencies are quoted to four decimal points. Whereas in real life products are priced to the penny, so a pack of gum, for instance, will cost you $1.25, in FX the quotation is extended to one-hundredth of a penny. The same hypothetical pack of gum will be quoted at $1.2500 bid/$1.2503 asked. A daily move of one penny is considered a large move in the FX market, and since each point is worth one-hundredth of a penny, that translates to a 100-point gain or loss depending on which side of the market you find yourself on.

A point in FX is called a pip—an acronym for "percentage in point"—and is essentially equal to one basis point. Currencies are always quoted in pairs, like EUR/USD for example. The first part of the pair, in this case the euro, is called the base currency, and the second part, in this case the dollar, is called the countercurrency. Contract size in the institutional interbank market is standardized at 1 million units of currency. In the retail FX market, standard contracts are 100,000 units in size. However, all retail dealers offer mini-contracts of only 10,000 units, and many also offer even smaller contracts of 1,000 units (micro lot) or even 100 currency units (hundred lot). Because pip values are determined by the countercurrency, pairs such as EUR/USD that have the U.S. dollar at the end of the quote are easy to price. Since each pip is one-hundredth of 1 percent, it is worth $10 on a 100,000-unit contract, $1 on a 10,000-unit mini-contract, 1 dime on a 1,000-unit contract, and 1 penny on a 100-unit contract.

Pairs that have a currency other than the dollar as the countercurrency, such as USD/CHF (dollar/Swiss franc), for example, require a little work to figure out. Essentially, you have to obtain the present market value of the currency in terms of dollars and then multiply it by the contract value. Let's say the Swiss franc is worth 0.8 U.S. dollars. Then in the case of USD/CHF a pip value is worth $8.00 on a 100,000-unit contract, 80 cents on a 10,000-unit contract, 8 cents on a 1,000-unit contract, and only 0.8 pennies on a 100-unit contract (see Table 1.1).

One of the greatest aspects of the FX market is that your cost of doing business will always be proportionately the same regardless of what size you trade. This is a huge difference from all other markets, where the

TABLE 1.1 Value of Pips in Pairs Where the Dollar Is the Countercurrency

Contract	Size in Currency Units	Pip Value
Standard Lot	100,000 units	$10.00
Mini Lot	10,000 units	$ 1.00
Micro Lot	1,000 units	$ 0.10
Hundred Lot	100 units	$ 0.01

smallest trader usually pays the highest proportionate cost. In stocks, for example, a trader who places a 10,000-share trade of a $1 stock may be charged only $10 to buy and $10 to sell the security, making the trader's effective cost of doing business about 0.2 percent, but the same trader placing only a 100-share order will likely be charged the same $10 minimum both ways, making the effective cost of doing business 20 percent! Not so in FX. The cost of doing business whether you choose to trade 1 million units or 100 units of currency is usually between three-hundredths and 10-hundredths of 1 percent, allowing even the smallest speculator in Peoria to go toe-to-toe against a billion-dollar trader in London on totally equal terms.

DEALING VERSUS BROKERING: NO SCALPING ALLOWED

For the retail trader, FX offers an almost intoxicating degree of freedom. You can trade 24 hours a day, 5 days a week (from about 5 P.M. EST Sunday to 5 P.M. EST Friday afternoon). All you need is an Internet connection and your dealer's trading platform. Some dealers require that you download their software, while others simply let you trade through the browser. You can trade with as little as $300 or as much as $30 million in capital for the exact same cost because the market charges no commissions. That's right—traders do not pay commissions in FX, because this is a dealer-based market. Instead of using a broker who charges a commission to take the order to an exchange to be executed by a market maker, traders in FX deal directly with the market maker and simply buy on the offer and sell at the bid. There are no additional fees—no Securities and Exchange Commission (SEC) charges, no exchange access fees, nothing more. Once traders clear the difference between the bid/ask spread, every penny gain thereafter is their own.

Although there are no commissions in the market, there is, of course, a cost to doing business. That cost is the bid/ask spread, and this is perhaps the most important point to absorb about the FX market. Unlike in

stocks, futures, options, and all other exchange-traded instruments, traders are unable to buy on the bid or sell on the ask. In FX, trading is conducted directly with the market maker, so traders cannot assume the role of the market maker themselves.

For traders who are used to making hundreds of tiny day trades on the electronic exchange markets of today, this aspect of the FX market can be a huge adjustment because it means traders cannot effectively scalp the market. Scalping, the art of buying at the bid and quickly selling at the offer or a few ticks higher, becomes almost futile mathematically. Using the absolute best example of EUR/USD, the most liquid currency pair in the world, we can see just how difficult it is. The spread in the EUR/USD is typically 2 to 3 points wide. If traders are scalping for a very modest target of 10 points using a 1:1 reward-to-risk ratio (i.e., they are willing to risk 10 points to make 10 points), their actual reward-to-risk ratio would be considerably worse. They would need to earn 13 points to make a 10-point profit (10 + 3 points for the spread). Conversely, they could not lose more than 7 points (10 – 3 points of spread).

More importantly, most dealers do not like scalpers, whom they essentially view as little more than thieves trying to steal their profits from the spread. They reserve special dislike for traders whom they deem "pickers." These are traders who have accounts with many different retail FX firms and may even have access to the interbank prices disseminated through the EBS system. Because of the decentralized nature of the market, the price feeds of some of the retail dealers may momentarily lag the market. Pickers essentially look for these discrepancies and try to take advantage of the mispricing by hitting the late feeds, which they resell for a quick profit back to the dealers as their price feeds catch up to the general market. To an outside observer this activity may appear as nothing more than plain-vanilla arbitrage, but one person's arbitrage is another person's theft. In a spread-based market, dealers get very cross with traders who try to muscle in on their primary means of earning a profit and will eventually put such traders on manual execution—a process known as dealer intervention. Traders put on dealer intervention must have all of their trades confirmed by the dealer rather than have them instantly executed through electronic dealing. Although in practice the process delays execution by no more than 15 seconds, for traders who are accustomed to harvesting profits from short-term changes in momentum this can be a fate worse than death. They will no doubt experience subpar execution and will suffer substantial slippage costs as dealers may in effect "freeze the clock" on them.

Is this fair? Most retail traders used to the bid/ask access of electronic stock, futures, and options markets will surely say no. If your game plan involves making up to 200 round trip trades for 1 to 5 points

each in a matter of five to six hours, then FX may not be the market for you unless you are willing to change your approach. You have to make a sobering comparison between the advantages of all-electronic markets that allow you to have the possibility of buying at the bid and selling at the ask, but charge a commission in the process, against the FX market, which forbids bid/ask access but charges no commission fees. Before you jump to conclusions, I urge you to consult your end-of-year brokerage statements. Each trader is clearly different but I know that in my case of very active trading in the electronic futures markets my broker often made three times more in commissions versus what I earned in capital gains. When comparing costs of trading in this manner, the FX market can actually appear to be quite reasonable.

LEVERAGE AND CUSTOMIZATION

If you trade stocks, the standard leverage is 2:1. That is, you need to put up $50 of cash or marketable securities (called margin) in order to purchase $100 worth of stock. If you have more than $25,000 in your account you qualify for day trading rules and can increase your leverage to 4:1. In either case you will have to pay interest on the amount of money you borrow at whatever loan rate your broker charges you on your margin. During the Internet bubble era of 1998–2000 some major Wall Street wire houses made more money on their margin loan business than on brokering commissions. In fact, much like a Las Vegas casino that provides free drinks as long as you stay and gamble on the casino floor, these wire houses could have let their customers trade commission free as long as they margined their accounts.

Moving on to options, the leverage increases 10:1. If you are an option buyer the cost of your trade is limited to the premium paid, and no interest is charged. In futures, leverage increases to 20:1; in other words, a trader needs to place only $5 to control $100 worth of futures contracts. Furthermore, as collateral the trader can put up Treasury bills and effectively receive interest while staying in the trade.

In FX leverage is taken to a whole different level. Standard leverage in FX is typically 100:1, meaning that you need to put down only 1 percent of the face value of the contract. However, many dealers offer 200:1 leverage, and some even extend credit on a 400:1 basis. At 400:1 leverage a trader in essence can use a quarter to control $100 worth of currency. Is that insane? Yes and no. The question of leverage is a personal preference and depends on your answer to the question of how much risk you want to take.

Some people like to drive fast, while some people like to drive slow.

At 400:1 leverage a trader is engaging in the same activity as a driver who flies down the interstate at 150 miles per hour. The thrill is certainly great and so is the speediness of the trip, but even the smallest pebble, the tiniest swerve, or a minimal slowdown ahead can result in instant death. Fortunately, the consequences in FX are not that drastic. The only death traders can experience is that of their capital being consumed by the market.

Yet for many traders the high leverage of FX holds a special appeal. Not only can the trader control a huge position with very little money (at 400:1 leverage $2,500 of margin can control $1 million worth of EUR/USD, for example) but the 24-hour nature of currency trading provides traders with protection found in no other market.

MARGIN CALL

Almost everyone who has traded financial products on a leveraged basis has faced a margin call at least once. A margin call is simply a request from your broker for more funds when the value of your collateral for your trade declines below minimum requirements. That of course sounds so civilized, but in real life it is in fact the financial equivalent of a desperate cry for more money. If you accede to the demand and the trade continues to move against you, this dynamic begins to resemble a black hole as your capital becomes mercilessly absorbed by the market. But if you choose to ignore the margin call, you broker will automatically close out your position, likely for a huge loss, in a process known as forced liquidation. One of the reasons this process is so painful is that it forces traders to liquidate their positions not on terms of their own choosing but on the terms of their broker. Quite often margin calls take traders out of their positions right at the bottom or top of the move—thus denying them the chance to allow the trades to recover.

Yet that is not the worst aspect of the margin call. In exchange-based markets that are open only during set business hours, traders are always in danger of suffering hugely adverse moves because of gaps in price at the open. In fact, though few traders realize it, their financial risk can be far greater than just the money in their accounts. In futures markets especially, where bad weather or geopolitical unrest can cause several days' worth of limit up or limit down moves when price movement is capped by predetermined rules, many speculators have lost not only their accounts but their whole net worth after having to meet massive margin calls from their brokers.

FX is different. Because markets are open 24 hours a day, dealers can

always find liquidity and therefore offer guarantees to traders that they will never lose more money than they put into their accounts. To be sure, margin calls in FX are automatic—there are no circumspect calls from account executives asking for money or even informing the trader of the fact of the margin call trigger. The dealer's risk management software simply closes out all positions the second they breach margin levels as machines perform the task with brutal efficiency. But the advantage is that traders can sleep soundly knowing that their risk is strictly limited.

It is because of this unique feature of the FX market that some traders like to utilize the extreme leverage offered by the market makers. For these traders, the high leverage and the automatic margin call feature turn the FX trading into a de facto option contract on steroids. Imagine the following. You are a retail trader who has allocated $10,000 for speculative capital. However, instead of putting all $10,000 into your FX account you deposit only $1,000 and keep the other $9,000 in your bank account. At 400:1 leverage you can control up to 400,000 units of currency with just this $1,000 deposit. However, under those circumstances even a 1-point move against your position would trigger a margin call, so instead you decide to trade a maximum of 200,000 or two standard lots. With margin set at $250 per lot you will have $500 of available margin for your position:

$1,000 initial deposit
– $500 margin requirement ($250 × 2 lots = $500)
= $500/2 lots = $250 or 25 points of risk

In other words, you have just created a position that acts very much like a long option trade; that is, your upside is uncapped while your risk is limited to capital invested. In reality the risk is even less, since presumably your position would be liquidated with $500 still in the account minus any slippage that may occur. Even better than a real-life option, the position has no expiration date and its delta is 1, meaning that you will participate in any profitable move point for point with price.

Thus, while leverage is clearly dangerous, this particular strategy of judiciously deploying only controlled portions of your speculative capital may work quite well for aggressive traders who like to maximize their trades. After all, going back to our initial example, if the trader was correct on direction and EUR/USD moved 200 points his way, he would be able to bank $4,000 of profit (200 points × 2 standard lots at $10 per point) on risk of little more than $500. Unfortunately, most novice traders do not trade like that. They will instead put all of their speculative capital into their account at the highest leverage possible, take a trade that goes against them without leaving any stop-loss orders, and then watch help-

lessly as their position is finally liquidated with less than a quarter of their capital left.

High leverage presents yet another problem—it leaves the trader with very little room to maneuver. The higher the leverage, the smaller the margin for error. Even in our previous example where you, the trader, use only a small portion of your overall capital, your biggest possible drawdown before margin call liquidation kicks in is only 25 points. Given the fact that the average daily range in EUR/USD can exceed 100 points, you can easily be stopped out of a trade that could eventually move your way. That's why many successful traders use the opposite approach. Taking advantage of mini or even micro lots, they trade with a very small leverage factor and instead scale into trades over large price ranges in order to avoid frequent stop-outs and achieve a blended price closer to actual market price.

LEARN THE CARRY OR PAY THE PRICE

Regardless of how it is used, leverage is a critical aspect of currency trading that leads us to a discussion of the most common trading strategy in the market—the carry trade. In FX every currency carries an interest rate. These interest rates are set by the central banks of their respective countries, and within the industrialized world can vary widely (see Figure 1.3). In 2005, for example, one of the largest interest rate differentials existed between Australia and Japan. The Australian economy, buoyed by a huge demand from China for metals and commodities, has experienced strong growth at the beginning of the new century, with unemployment reaching

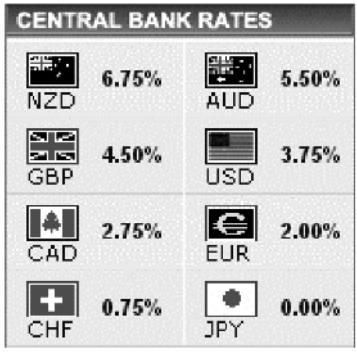

FIGURE 1.3 Central Bank Rates
Source: DailyFX (www.dailyfx.com).

all-time lows and the housing market booming. In order to control growth, the Reserve Bank of Australia steadily increased interest rates until by 2005 they reached 5.50 percent. Meanwhile, Japan's central bank, trying to revive the country's economy after its decade long bout with deflation, maintained an ultra-accommodative monetary policy, setting interest rates at 0 percent. Thus the spread between the two interest rates was 5.50 percent, establishing the groundwork for the carry trade—the most popular FX strategy among the multibillion-dollar hedge funds.

The premise of the carry trade is simple. A trader goes long the currency with the higher yield and short the currency with the lower yield. In the case of the AUD/JPY trade, the trader would receive 5.50 percent annual interest on his long Aussie dollar position while being obligated to pay nothing on his short yen position because JPY interest rates were 0 percent. The net spread on the trade would be 5.50 percent. If the price of AUD/JPY did not change by even 1 point from the time of the trade to one year forward, the trader would still be able to harvest 5.50 percent in profit from interest income alone.

While a 5.50 percent annual rate of return may seem only mildly interesting, the true power of the carry trade comes from leverage. The very same trader on only 10:1 leverage would now earn 55 percent per year, even if the currency pair remained completely stationary. If the trade also generated capital appreciation of 5 percent or more, on 10:1 leverage returns could jump to triple digits!

The carry trade explains the principal dynamic behind hedge funds' outsized compensation schedule, which typically translates to 2 percent of gross assets and 20 percent of net profits. Yet the principles of the strategy are extremely simple, and some may wonder just why these masters of the universe are so well paid. Whatever the reasons, the key question is: Why is the carry trade important to the technically oriented trader? For traders who intend only to day trade and close out all their positions by 5 P.M. EST (the official close of the trading day in FX), the answer is that it is not important at all. However, for any swing or longer-term trader, ignorance of the carry trade can be an expensive lesson to learn. Note that traders who are on the positive side of the carry will receive an interest credit into their accounts every single day. However, traders who are short the carry trade will have interest deducted from their accounts every day. On currency pairs with large differentials the cost per day can quickly add up. Consider the GBP/JPY pairing, which at the time of writing (summer of 2005) had a differential of 475 basis points. Every day a trader who was short the pair would be debited 2.5 points (or approximately $25). That may not sound like much, but note that at 100:1 the trader would need to put down only $1,000 to control 100,000 units of GBP/JPY, and after only 10 days fully one-quarter ($250) of his margin

would be eaten away by the carry trade costs. Imagine the trade lasting 1,001 days during which the trader would pay $2,500 in interest rate costs, fully 2.5 times his minimal required margin! Now perhaps you can appreciate why even the most technically oriented trader needs to know about the carry trade. In FX the dictum is: Learn the carry or pay the price.

In FX even many traders who are pure technicians will not trade against the carry. Yet trading in the opposite direction of the carry can be very profitable as well. Currencies with the widest differentials in interest rates often have the highest-volatility moves. For traders who thrive on volatility this is a tremendous gift. Using tools and techniques that I will show you, you will be able to better time your entries and possibly capture the huge swings in price that result from many speculators exiting the carry trade all at once. However, the key rule about countertrading the carry trade that nobody should ever forget is: Be right or be out.

A few final warnings about practices to watch out for: The carry trade interest is paid at the discretion of the dealer, but carry trade interest costs are *always* charged. Before opening an account with a dealer, always ask what the rules of the house are. Some dealers are terrifically forthright and will pay you interest on any amount of capital you may have on deposit and will even compound it for you hourly. Other dealers will ask that you trade on 2 percent margin or higher but will offer some of the highest carry credits in the business. Yet other less-scrupulous dealers will not pay any credits on the carry and will charge interest on countercarry positions. Finally, the absolutely worst dealers may offer a smattering of interest credit but will charge upwards of 300 percent of actually carry costs for anyone trading the countercarry position. To translate that into actual numbers, if the true carry cost on GBP/JPY is about 2.5 points or $25 per day, these dealers may charge 7.5 points or $75 per day, turning what is essentially a common financial service in the FX world into a surreptitious profit center for the firm.

How do they get away with it? Ignorance. Many traders are not even aware of the interest rate dynamics of currencies that underlie the carry trade. These novice speculators blissfully trade away their capital without even realizing they are being fleeced.

GOOD TECHNICIANS KNOW THEIR FUNDAMENTALS

Can you trade FX from price charts only? Yes, but that would like fighting with one arm tied behind your back. FX is a news-driven market, and basic awareness of fundamentals is tremendously helpful to your success as a trader. You may find it amusing that a book on technical analysis is espous-

ing the value of fundamental data, but having a clear idea as to what fundamental factors matter to the market helps the technical trader to properly assess the technical picture. Just as the gastroenterologist will want to know what you've recently eaten so that she may analyze the results of an upper gastrointestinal tract exam in proper context, so, too, a technician will be able to draw more accurate conclusions from price patterns if he knows and understands the impact of economic news. Many technicians like to dismiss fundamental data on the grounds that it is often complex and contradictory and that currencies will frequently react in the exact opposite way from what fundamental data would indicate. This is certainly true, and doubly so for the day-to-day economic releases, which can muddy short-term trading with volatile swings up and down. However, major economic news is vital to understanding and succeeding in the market. Understand the story and you will understand your trade. It is far easier to hold a technical position on both emotional and intellectual grounds if the fundamental picture supports your position.

Bruce Kovner, one of the largest and most seasoned currency speculators in the world, a man so good that other traders give him their retirement funds to manage, summed it up best in Jack D. Schwager's seminal book, *Market Wizards* (New York Institute of Finance, 1989; HarperBusiness, 1993). When asked by Schwager what he thought was more important, fundamental or technical analysis, Kovner replied, "This is like asking a doctor whether he would prefer treating a patient with diagnostics or with a chart monitoring his condition. You need both."

Technical traders who trade price only, so as not to be confused by the news, are simply being lazy in their decision-making process. Price does not form in a vacuum, and a trader who is ignorant of fundamental news will not be able to adjust to or profit from the changing tone of the market. As we'll see later on, indicators that work great in one environment fail miserably in another; the key difference between success and failure is understanding which trading regime the market is in and adapting accordingly. Truly great technical traders are always aware of the news backdrop and know how to exploit it with technical tools.

Although the array of economic data released into the markets by various government agencies on a daily basis can be staggering—and it is easy to understand how some traders can feel overwhelmed—understanding fundamental data in the currency markets is really quite simple. No advanced degrees in macroeconomics are required—really. Four key themes drive the currency markets:

1. Economic growth
2. Interest rates

3. Trade balance
4. Political stability

Economic Growth

An expanding gross domestic product (GDP) will take care of a multitude of sins. The most basic and fundamental fact that FX markets like to focus on is the strength of economic activity. Much like individual company earnings, the country's gross domestic product measures the basic health of the economy. If GDP is expanding rapidly—and most importantly if that growth takes place in a noninflationary environment—the currency market will most likely bid up the currency due to investors' desire to participate in this positive story.

Interest Rates

This factor relates directly to our friend the carry trader. Typically, when economic growth picks up, the country's central bank will begin to increase interest rates in order to prevent too much speculative activity in the economy from creating imbalances and inflation. As interest rates increase, carry traders flock to the currency and bid up its value. The one exception to this scenario is if the central bank raises rates not as a policy response to rapid growth but as a means of curtailing runaway inflation. Such circumstances would suggest that the country is awash in too much money stock, and the FX market would therefore be wary of bidding up the currency regardless of what interest rate was attached, as the fear of further debasement of the currency would outweigh the reward of a higher yield. A good way to understand why that happens is to imagine the following situation.

Suppose your next-door neighbor asks to borrow $1,000 for a month and is willing to pay you 10 percent in interest for the privilege. You've known the man for 20 years. He has always been honest and honorable in his dealings and you also know that he has run a successful business for the past 10 years. Would you take the risk of lending him money for a month? Most likely yes. Now imagine you are approached by a man on the street you do not know. His hair is matted, his fingernails are dirty, and unfortunately his arm displays the unmistakable scars of a heroin junkie. The man asks you for a $100 loan payable in one day with 100 percent interest. Would you loan this fellow the money? You may give him money as charity, but if your decision were based strictly on business reasons, clearly the answer would be no. Although his promised rate of interest is 10 times the size of your neighbor's, his lack of creditworthiness outweighs the potential rewards.

Much in the same way, a high interest rate in a currency does not guarantee appreciation if it's a result of high inflation rather than strong economic growth.

Trade Balance

The flow of goods and services between two countries can have a tremendous effect on currency movements. The idea is really quite simple. Imagine two countries. Country A sells $100 billion more products to Country B than it buys. In order to purchase those goods and services, citizens of Country B have to buy Country A's currency and sell their own. Thus Country A—the country with a trade surplus—will have an appreciating currency, and Country B—the country with the trade deficit—will see its currency decline.

This is, of course, an extremely simplified example. In the real world trade balance issues can become quite complicated. Honda's plants in Martinsville, Ohio, actually *export* some of their vehicles back to Japan, while the United States can pay for its deficits by simply printing more dollars, because the dollar is the reserve currency in FX. Nevertheless, this basic model is critical to understanding the valuation of currencies and can help the trader grasp why currencies decline in value when their trade balance deficits become too large.

Political Stability

If you are a political junkie, the FX market is truly your domain. Unlike the stock market, where it doesn't matter if the U.S. President comes from a red state or a blue state as long as your portfolio is green, in FX politics can have a massive impact. After all, we are trading the fates of nations, not companies, so political as well as economic concerns will influence the market. Even if politics is not your bailiwick, it is very important to understand that the FX market hates political instability because it then cannot rationally handicap future economic growth. That's why countries with strong economic growth will often see their currencies decline if there is even a hint of political upheaval, especially if it involves any sort of corruption within the government. A good example of such a dynamic happened in the summer of 2005 when the Canadian dollar experienced a bout of weakness against the U.S. dollar despite rising oil prices, which were highly beneficial to energy-rich Canada. The reason? Worries over the stability of the ruling Liberal Party government led by Paul Martin, which was embroiled in a political scandal. As soon as Paul Martin survived the no-confidence motion (by one vote, mind you) the Canadian dollar regained its strength.

For technically oriented traders, keeping an eye on these four simple fundamental factors can provide a far better and richer perspective for making successful trades. In fact, just as divergence is one of the key tools in technical trading, so it can be in fundamental trading as well. In 2004 when the U.S. dollar was making all-time lows against the euro, the U.S. economy was actually producing a string of consistent positive economic surprises. Astute technical traders who tracked this data shorted the euro with a great degree of confidence once their technical tools signaled price weakness and were able to stay in the trade as the dollar's fortunes turned in 2005.

TRY BEFORE YOU BUY

One very underappreciated benefit of retail FX is that every dealer offers a free demo trading account that allows the trader to experiment with the trading platform before actually risking any capital. The demo accounts are exact replicas of the dealer's real trading platforms. The dealer simply funds the account with "demo dollars" in amounts ranging from $5,000 to $100,000 and allows the trader to trade to his heart's content. Some demo accounts automatically expire after 30 days, while others can live in perpetuity. Regardless of the specifics, they are all valuable because they allow traders to test not only their strategies but also the execution capabilities of the platform. Since FX is a decentralized market, each platform is unique. Some have advanced charting, back-testing capabilities, and the latest FX news all built in. Others are simply stripped-down execution engines with all the glamour of a Soviet-style factory.

Don't be fooled, however, by pretty candles and fancy indicators. The key value of a sound FX platform is speed and accuracy of execution. It does a trader little good to have beautiful charts and highly profitable back-tested strategies if the dealer cannot provide a smooth and consistent price feed. By watching the demo, a trader can also learn how each dealer makes its spreads. Does the dealer always keep spreads fixed? Or do spreads widen out in times of high volatility? Dealer A may keep spreads in EUR/USD 2 pips wide, while Dealer B's spreads are 3 pips wide. However, during major news releases like nonfarm payrolls Dealer A may widen spreads to 20 pip, meaning that the currency would have to move 20 points in the trader's direction before he could break even on the position. Dealer B may keep spreads fixed at 3 pips regardless of market volatility. Which dealer is better? The answer depends a lot on your trading style. However, if you are a short-term trader, wide spreads could negatively affect profitability.

Another key factor in comparing dealing platforms is determining what amount of currency can be traded in the account. Some dealers only allow

traders to execute mini (10,000-unit) and standard (100,000-unit) lots. Many even require a separate account for each size the trader wishes to trade. Other brokers, in contrast, allow traders to make trades as small as 1 unit to as large as 10 million units all from one platform. (Yes, you could actually buy and sell 1 unit of currency on some platforms! In the case of EUR/USD, if the pair went your way for 1,000 points you would make a whopping 10 cents on your trade.) Somewhere in the middle are dealers who will allow trades in increments of 1,000 units or larger. Again, the importance of small size capability depends on the trader. If you scale into your positions in many small increments, then small lots are a must. If, however, you are a single entry/single exit trader, "flexi-lots" are not nearly as important.

Yet another key fact to ascertain beforehand is how various dealers charge and credit interest on your positions. Every dealer will charge interest, but some will not credit it. Others will credit interest but only if the account is first set to a margin of 2 percent or higher. Still others will simply not credit interest as a matter of policy. Even worse, some dealers will charge interest as high as three times the actual market rate while offering credit at below market rate. In contrast, other dealers will calculate and credit interest on an hourly rather than daily basis and require no account or margin minimums. A decentralized market has decentralized rules. By trading the demo, traders will discover the quirks before they can impact their working capital. How important are these differences in interest payment policy? If the trader trades only short-term, closing all positions every day before the 5 P.M. EST rollover time, they are meaningless. However, if carry trading is a large part of the trader's strategy or he is simply a position trader, dealer interest policy is crucial.

One area that gets completely overlooked by traders because it is so mundane is the reporting capability of the each platform. Granted, account reporting is hardly the first concern of an FX speculator—but in many cases it should be. Understand that in case of an active trader who places 10 trades per day, an end-of-year statement can generate 2,500 entries. Some dealers' platforms have terrifically sophisticated reporting capabilities that segregate every single position, separate interest payments and credits, and summarize the end-of-year equity position in a simple, easy-to-understand format that can literally be handed to the accountant and mailed to the Internal Revenue Service (IRS) with almost no additional work. Other platforms will spit out such confusing mishmash that traders may have to spend hundreds of hours of preparation reconciling their trades before they can conform to generally accepted accounting principles (GAAP). Again, trading the demo allows the trader to test the reporting capabilities of the platform to determine whether they are an asset or a liability (see Tables 1.2 through 1.4). Note how this

Ticket #	Currency	Volume	Date	Sold	Bought	Gross P/L
02362313	GBP/CHF	300K	1/8/04 3:13 PM 1/19/04 11:07 AM	2.2600	2.2483	2,769.12
02366530	AUD/CAD	300K	1/13/04 9:41 AM 1/19/04 12:14 PM	0.9797	0.9935	-3,182.78
02367875	AUD/NZD	300K	1/14/04 10:51 AM 2/2/04 6:35 AM	1.1300	1.1395	-1,913.35
02370237	USD/CHF	200K	1/20/04 8:43 AM 1/23/04 2:32 AM	1.2550	1.2300	4,065.04
02370388	USD/CHF	200K	1/20/04 8:43 AM 1/26/04 1:43 PM	1.2550	1.2550	0.00

TABLE 1.2 Closed Trade List
Source: Forex Capital Markets (FXCM).

Order #	Type	Ticket	Currency	Volume	Date	B/S
09472459	S	04477094	EUR/GBP	100K	7/13/05 6:09 PM	S
09493837	S	04487134	USD/CAD	100K	7/18/05 6:27 PM	B
09493839	S	04487149	USD/CAD	100K	7/18/05 6:27 PM	B
09496497	LE	04489229	USD/CAD	100K	7/19/05 10:05 AM	B
09508811	S	04493888	EUR/GBP	100K	7/20/05 6:51 PM	S
09517404	LE S	04497858	GBP/USD	100K	7/21/05 4:48 PM 7/21/05 4:48 PM	S B

TABLE 1.3 Outstanding Orders
Source: Forex Capital Markets (FXCM).

Ticket #	Currency	Volume	Date	Sold	Bought	Floating P/L	Comm
04477094	EUR/GBP	100K	7/13/05 6:09 PM 7/23/05 2:39 PM	0.6938	0.6853	1,477.26	0.00
04487134	USD/CAD	100K	7/18/05 6:24 PM 7/23/05 2:39 PM	1.2177	1.2190	-106.64	0.00
04487149	USD/CAD	100K	7/19/05 8:52 AM 7/23/05 2:39 PM	1.2220	1.2190	246.10	0.00
04493888	EUR/GBP	100K	7/20/05 6:51 PM 7/23/05 2:39 PM	0.6938	0.6988	-868.98	0.00
Total:						**747.74**	**0.00**
Posted at statement period of time:							**0.00**

TABLE 1.4 Open/Floating Positions
Source: Forex Capital Markets (FXCM).

platform elegantly separates closed trades, outstanding orders, and floating positions and then tidily summarizes all the key activity in the account summary (see Table 1.5).

This platform shows only transaction history, though, leaving traders to their own devices to reconcile transactions by trade. Some platforms provide a trade history listing each transaction (see Table 1.6).

However, the question of whether the platform executes well during times of stress is impossible to answer on the demo platform, as the demo platforms are often assigned to a different set of servers and may perform flawlessly, while the real account servers could experience blackouts due to overwhelming volume.

	Beginning Balance	0.00
Comm	Trading Commission	0.00
Intr	Interest Fee	8,642.42
PnL	Profit/Loss of Trade	-37,036.95
Depos	Deposit	515,174.66
Withd	Withdrawal	-408,977.37
Option	Options Payout	0.00
Comm	Options Commission	0.00
WithdFee	Withdrawal Fee	0.00
MngFee	Management Fee	0.00
PerfFee	Performance Fee	0.00
	Ending Balance	77,802.76
	Floating P/L	747.74
	Equity	**78,550.50**
	Necessary Margin	8,000.00
	Usable Margin	70,550.50

TABLE 1.5 Account Summary
Source: Forex Capital Markets (FXCM).

Click on an arrow or the title link to sort the columns of the table.

DATE	TICKET	TICKET LINK	TYPE	PAIR	UNITS	PRICE	AMOUNT	Account Balance
Fri Jan 14 14:47:06 2005	36930761		AddFunds	USD		0	500.0000	500.00
Fri Jan 14 16:00:00 2005	36948410		Interest	USD		0	0.0264	500.03
Sat Jan 15 16:00:00 2005	36964941		Interest	USD		0	0.0274	500.05
Sun Jan 16 16:00:00 2005	36981636		Interest	USD		0	0.0274	500.08
Sun Jan 16 22:02:36 2005	36993754		SellMarket	USD/JPY	300	102.08	299.9119	500.08
Mon Jan 17 01:16:34 2005	37000095	36993754	ClosePositionS	USD/JPY	300	102.14	299.9119	499.90
Mon Jan 17 01:35:22 2005	37000379		SellMarket	EUR/USD	200	1.31130	262.2600	499.90
Mon Jan 17 03:11:50 2005	37013300		SellEntry	EUR/USD	300	1.31600	0.0000	499.90
Mon Jan 17 05:04:34 2005	37033432		BuyEntry	EUR/USD	100	1.30700	0.0000	499.90
Mon Jan 17 10:35:22 2005	37062036	37033432	CloseOrder	EUR/USD	100	1.30700	0.0000	499.90
Mon Jan 17 10:35:51 2005	37062054	37000379	BuyMarket	EUR/USD	100	1.30810	130.8100	500.22
Mon Jan 17 10:36:25 2005	37062120	37000379	ClosePositionS	EUR/USD	100	1.30820	130.8050	500.53
Mon Jan 17 10:36:40 2005	37062129	37013300	CloseOrder	EUR/USD	300	1.31600	0.0000	500.53
Mon Jan 17 16:00:00 2005	37086750		Interest	USD		1.31600	0.0273	500.56
Tue Jan 18 04:34:34 2005	37156691		BuyMarket	GBP/USD	100	1.86260	186.2700	500.56
Tue Jan 18 04:35:13 2005	37156967	37156691	ChangeTrade	GBP/USD	100	1.86260	0.0000	500.56
Tue Jan 18 04:37:47 2005	37158033	37156691	CloseTradeB	GBP/USD	100	1.86350	186.3800	500.65
Tue Jan 18 10:12:57 2005	37244403		BuyMarket	EUR/USD	100	1.30163	130.1530	500.65
Tue Jan 18 11:25:33 2005	37250815	37244403	ClosePositionB	EUR/USD	100	1.30290	130.3150	500.78
Tue Jan 18 16:00:00 2005	37291047		Interest	USD		1.30290	0.0274	500.80

TABLE 1.6 Trade History
Source: Oanda.

Generally, here are 10 questions the trader can answer by trading the demo first:

1. How active are the dealer's quotes? Do they update smoothly or do they sit listlessly, only to jump 3 to 5 points at a time?
2. How wide is the spread between bid and ask?
3. Does the spread widen or it is fixed?
4. What kind of charting and news capabilities does the platform offer? Are they built in or added on?
5. Does the platform provide back-testing capabilities?
6. Can the platform run automated trading strategies?
7. Does the platform accept wireless trading? How stable is it? What fail-safe measures are there to make sure that orders actually went through? Is the dealing desk accessible by phone or through computer only?
8. What are the interest policies of the dealer?
9. What does reporting look like?
10. Does the platform require a separate software download or can it be traded through any browser via a Java applet?

In the end demo trading not only is important at the start of a trader's foray into forex but it also is a vital tool even after he begins to trade live. Expert traders, just like expert scientists, continue to probe and explore their craft even after having mastered it. Just as accomplished scientists continue to challenge themselves with unconventional experiments, so do seasoned traders pursue and refine new ideas on the demo accounts even as they trade their established setups live. In trading, one truth is incontrovertible: While there is no guarantee that your success in demo trading will translate into profits in a real account, a strategy that does not make money in the demo almost assuredly would be a failure in real life as well. One of the best aspects of forex is that laboratories are free—why not use them?