FxDialogue

Online Trading

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Understanding Foreign Exchange

What is Foreign Exchange?

Foreign exchange has existed in one form or another for millennia, whenever different cultures needed to figure how to convert what they considered money into what the neighboring tribe considered money. As man became more mobile and the more these societies interacted with one another, the more a need for a formal system grew, and metals and precious stones rose to the task, since they were recognized as scarce and durable and therefore able to substitute for the teeth, feathers or stones that may have been used earlier.

Eventually, coins, which were simple to carry and could be fashioned to represent smaller amounts, were minted from the gold, silver or copper that were primarily used as exchange. In the Middle Ages, as societies and governments became more politically stable and recognized one another, paper money was introduced when government IOUs began to be accepted and traded.

Basically, foreign exchange consists of buying the currency of one country while simultaneously selling the currency of another's. The value at which this sale is set then becomes the "exchange rate", the rate one currency was exchanged for the other, and of course, since the money was from another, foreign, country, it became "foreign exchange". Foreign exchange is also known as currency trading, Forex and FX. The terms are used interchangeably and all refer to the foreign exchange market.

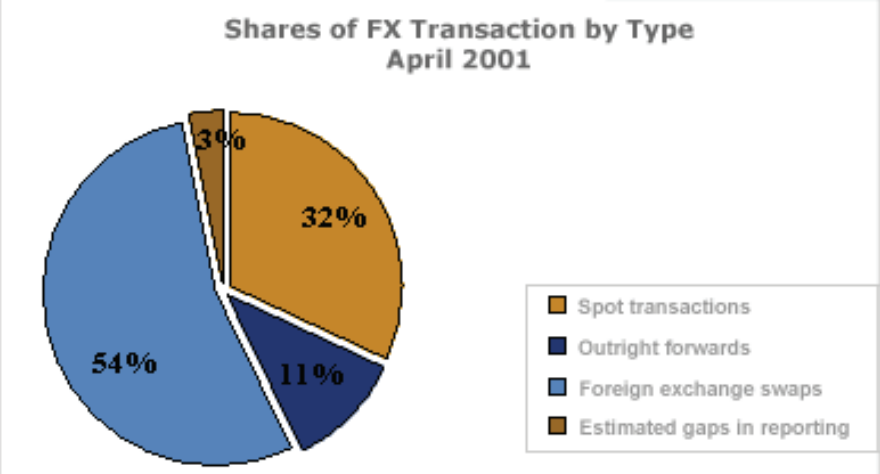
Foreign exchange trading covers the full gamut of any operation that involves obtaining the currency of one country for that of another, or, in many cases, protection against fluctuations in its relative value, without actually obtaining it. The most basic transaction is the vacationer who buys some Euros for his upcoming holiday in France. He goes to a bank or exchange dealer and gives him his US, Canadian or Australian Dollars and gets a certain number of Euros in return. As simple as that seems, he has performed a foreign exchange trade. He traded in the "cash market" (received whatever the going rate for the other currency was on that given day) that probably "settled" two days later. This is also known as a spot transaction. In a spot transaction the delivery, or cash settlement, date is two business days. (Canadian/US dollar business is cleared in one day (because Toronto and New York are in the same time zone). Most banks do not

carry a large supply of euros and so he probably had to wait to have his euros delivered (settled). He unknowingly imitated another aspect of the wider global forex market, for the traders who deal in billions of dollars every day also take delivery days, weeks or even months later, with each trader designating the precise periods for settlement, depending on his needs. Simple commercial transactions like this occur every day, on this, as well as much greater scales. The most common purposes for trade in foreign exchange are:

- for the import and export needs of companies and individuals
- for direct foreign investment
- to profit from the short-term fluctuations in exchange rates
- to manage existing positions
- to purchase foreign financial instruments

There are three types of foreign exchange markets: the spot market, the forward market and the futures market.

Spot transactions are the largest market and account for about 1/3rd of all foreign exchange transactions. Spot transactions represent the underlying real asset that is traded in the forwards and futures markets, so this is no surprise. Before the advent of electronic trading, the futures market was the most popular one for individual investors, but new trading platforms have allowed more participation and now the spot market is the most popular for both investors and speculators. The forwards and futures markets are used more extensively by hedgers, the companies that need to protect themselves against adverse currency moves and so when most individual speculators speak of the foreign exchange market, they are usually referring to the spot market. The spot foreign exchange market is by far the largest foreign exchange market.



The spot market is where currencies are

bought and sold according to the current price. Two parties agree on an exchange rate and trade currencies at that rate. It is a two sided transaction in which one party delivers an agreed upon currency amount to another party and receives a specified amount of another currency at that agreed upon rate of exchange.

The buyer holds the currency until he sells it or spends it. Spot transactions are settled in two days, except U.S./Canadian transactions which can have same day settlements. When a deal is finalized, this is known as a "spot deal". In a spot transaction, the buyer is exposed to any downward movements in the currency he has bought. A spot transaction is actually three simple steps:

1. A trader calls another trader and asks for a price of a currency, say British pounds. At this point, he is only expresses an interest and usually he does not indicate if he is interested in buying or selling, so
2. The other dealer will quote him the bid/ask rate.
3. When the traders agree to do business, one will send pounds and the other will send dollars two business days later.

Spot transactions are the type of foreign exchange trading that is most susceptible to risk. If a company contracts to purchase equipment from a foreign company at a given price in the foreign currency, the buyer may wait until the delivery of the equipment to buy the currency on the spot market. But if the foreign exchange rate has moved against him, his purchase will cost more than budgeted for. Suppose a machine manufacturer needs tooling equipment from a Japanese company. Suppose he budgets $135,000 for the tools because they cost ¥14million and the yen rate is 103.75 (14,000,000.00 at 103.75=$134,939.75). If, in six months when the equipment is ready, the dollar has fallen to 92.835 against the yen, the equipment will cost him $150,805.19. A $15,000 may be a sizeable loss for a small manufacturer.

One of his alternatives is to buy the yen as soon as he contracts for the equipment, but then he has all those funds tied up for six months. To avoid this risk, companies that have to deal in another currency may choose to enter into a forward transaction.

Forward transactions eliminate the risk of dealing in foreign exchange since the buyer and seller agree upon an exchange rate for any future date. Neither the forward nor the futures markets trade in actual currencies, but in a contract amount that represents the currency. This is obvious in a forward contract, since you obviously cannot "deliver"

a currency in six months time; you can only contract to deliver it at that time. In the forward market, contracts are bought and sold over the counter (OTC) between parties, who work out the terms of the agreement between themselves. These are called outright forwards and will involve the delivery of the currency at least two business days after the contract.

What happens to the rate of the currencies in the interim is not important since there is a contract in place that guarantees that the agreed upon rate becomes the exchange rate when the settlement date arrives. Forward transaction dates can be days, months or years in the future. If the manufacturer in the above case decided to buy the yen six months forward, for the projected delivery date of the tooling equipment, he may receive a rate of 98.225 (the forward yen will be at a premium to the dollar because interest rates in Japan are higher than interest rates in the United States). Higher than the spot rate, yes, but better than the risked rate of 103.75 and, better yet, locked in for him for the six month period. So the manufacturer can now count on paying $142,530 and budget for that amount instead of risking the chance of having to pay an unbudgeted $150,805. There is always the argument that if the hedger did nothing, that foreign exchange rates may have moved in his favor. But business runs on projections, and businesses do not want to risk that costs will be substantially higher, if there is any means to protect against them. In addition, when costs are known and fixed, businesses can incorporate them into their price of goods.

As in most of the foreign exchange instruments that have been designed as hedge protections against unfavorable foreign exchange movements, forward transactions also make perfect vehicles for speculators, who buy and sell forward contracts in the quest for profits.

Foreign Exchange Derivatives

The foreign exchange futures market is separate from the cash foreign exchange market, and operates in a parallel manner to other futures markets. A futures contract is a promise to buy or sell a certain amount of an asset (in this case foreign exchange) at a certain set amount for delivery at a future date. Futures transactions are forward transactions with standard contract sizes and maturity dates, for example, 5 sterling for delivery next November at 1.47323 would represent 5 contracts of pounds sterling. These contracts are traded on exchanges, just as stocks are traded on the New York Stock Exchange or the NASDAQ and commodities are traded on the various commodity exchanges. Currency futures markets were established by Chicago Mercantile exchange

in 1972 and were modeled after commodities futures. Because of this, futures prices are for contracts applicable to a specific calendar dates (Third Wednesday of June, September, December and March). The fundamental concept of futures is that you are buying a good that has not yet been produced, or that your counterparty does not yet own, or selling a product that you have not yet produced or do not yet own. The concept of futures is more readily understood in the commodities market, where (at its most basic level) farmers sell the crops they will harvest at a fixed future price rather than take a chance on the price being lower when the crops come in. Commodity futures, however are traded at fixed central exchanges: cotton at the New York Cotton Exchange, corn and wheat at the Chicago Board of Trade, etc. Foreign exchange futures are traded on several different exchanges, both in the United States and around the world. Most foreign exchange futures traded in the United States are handled by the Chicago Mercantile Exchange.

The foreign exchange futures market functions in a similar manner to the commodities futures market. In the futures market, contracts of standardized size and settlement date are traded on public exchanges which are regulated by the National Futures Association (NFA) and it is the exchange, not the other party as in a forward contract, that acts as counterparty to each trade and each trader, and provides the clearance and settlement operations. Both the commodity and foreign exchange futures markets are based on the concept of standardization. The size and maturity of the futures contracts are standardized, so that every trader knows that one yen contract represents ¥125,000 and one British pound contract represents £62,500. They trade with fixed quarterly periods as well and you will therefore hear of trades such as 3,000 December euros, or 5,000 March pounds. Because of these standardized amounts and time periods, foreign exchange futures can never be a perfect hedge. The concept behind futures is to limit foreign exchange exposure. Eliminating it altogether is next to impossible. If an investor knew in February that he had a £100,000 bond maturing in December, he could sell 2 pound contracts and be over hedged, or only sell one, and be under hedged. Likewise, if his bond matured in November, he could either sell September or December contracts, and risk the currency movements before or after the maturity of the bond.

Foreign exchange futures, just like other foreign exchange transactions, must be traded in pairs, and the most commonly traded futures contract pairs on the Chicago Mercantile Exchange, one of the largest exchanges in the world are the Euro/U.S. dollar (contract size 125,000 euros), the Japanese yen/U.S. dollar (contract size ¥12,500,000, the Swiss franc/U.S. dollar (contract size CHF125000), the British pound/U.S. dollar (con-

tract size £62,500 and the Canadian dollar/U.S. dollar (contract size C$100,000).

Futures markets also exist in some other currencies such as the Russian ruble, the Mexican peso, the Australian dollar, the New Zealand dollar, the South African rand and some Asian currencies.

The Chicago Mercantile Exchange is the largest trading exchange for foreign exchange futures, but foreign exchange futures are also traded on the International Monetary Market (IMM), the New York Mercantile Exchange (NYMEX), the Intercontinental Exchange (ICE) and the U.S. Futures Exchange (USFE).

Futures contracts, as we have seen, are for standardized amounts and fixed delivery. For this reason, they are not a perfect match for hedges, since the dollar amounts that required to be hedged may not be even amounts equal to contract sizes, and the dates that the foreign currency is required may not match delivery periods of futures contracts. In any event, foreign exchange futures contracts eliminate the better part of the risk in transactions and so are still used extensively for this purpose. Futures contracts are also used extensively as speculative instruments, for although foreign exchange futures are a good way to hedge against true exposures in the foreign exchange market, speculators are just are likely to use them to reap short term profits from the movements in the currency markets.

Both forward and futures contracts are binding contracts and upon expiry, are usually settled for the cash difference on the exchange where they were traded. Contracts can and frequently are, bought and sold before they expire.

In addition to the currencies themselves, foreign exchange operators deal in other instruments based on foreign exchange. Most of these instruments operate much like their namesakes in the other parts of the financial world, such as the bond and equity markets.

Options are similar to forward transactions. A foreign exchange option is a derivative instrument that gives its owner the right to buy or sell a specified amount of foreign currency at a specified price (exchange rate) at any time up to a specified expiration date. For this specified price, a market participant can maintain the right, but does not have the obligation, to buy or sell a currency at this price on or before an agreed upon future date. The agreed upon price is called the ***strike price***.

Depending on whether the option rate or the current market rate is more favorable,

the owner can exercise his option or let the option expire, choosing instead to buy or sell currency in the market. This type of transaction allows the owner more flexibility than either a swap or a futures contract. The option to buy a currency is called a "call option" and an option to sell a currency is called a "put option".

The concept works very much like stock market options, where a trader in a stock can buy an option on a stock, the right to buy it some time before the option period expires. Just as in the stock market, foreign exchange traders use options as a hedge against the currency they may have an exposure in.

Just like forwards, swaps and futures, options work as insurance policies against the price of a foreign currency moving in an unfavorable direction. As an example, suppose a forex trader buys a six month call option on EUR 1million at .78. During the six months, he can either purchase the euros at that rate, or he can buy them at the market rate at any time in the interim. Since options can be sold and resold many times during the option period, many people use options as a trading vehicle to earn profits.

A foreign exchange swap is a hybrid between the cash market and the futures market and is another type of derivative instrument used extensively as a tool by Forex traders. A swap involves the exchange of two currencies for a certain length of time and the automatic unwinding of the position at the end of that time. A swap has two "legs": a transaction in the cash market and a simultaneous transaction in the futures market. The two transactions offset each other, except for the time differential. An example of the use of a swap would be a company that may have euros on it balance sheet, but has a requirement to fund dollars for a short period of time. Since the euro is its base currency, it may not want to take the foreign exchange risk of selling the euros now, buying the dollars, and then selling the dollars when they no longer need them. A Forex swap meets this need perfectly, since the company will merely sell their euros and buy them back simultaneously, although for a different due date. No need to own dollars, or even futures in dollars for any length of time.

In general, financial futures expire every quarter in March, June, September and December. This is the reason that so many market participants watch the so called "triple witching days", which are the third Fridays in each of these months, because options, index options and futures all expire on those days, which leads to increased volatility on that day. There was even a "triple witching hour", when all three of these expired at the same time, but the rules were changed to eliminate this extremely concentrated volatility.

In the ever evolving world of financial instruments, many more foreign exchange derivatives are used by traders and hedgers and the novice trader would probably have a hard time understanding them, never mind trading them[1]:

- Currency Swaption: OTC option to enter into a currency swap contract.
- Currency warrant: OTC option; long-dated (over one year) currency option.
- Interest rate swap: Agreement to exchange periodic payments related to interest rates on a single currency: can be fixed for floating, or floating for floating based on different indices. This group includes those swaps whose notional principal is amortized according to a fixed schedule independent of interest rates.
- Interest rate option: Option contract that gives the right to pay or receive a specific interest rate on a predetermined principal for a set period of time.
- Interest rate cap: OTC option that pays the difference between a floating interest rate and the cap rate.
- Interest rate floor: OTC option that pays the difference between the floor rate and a floating interest rate.
- Interest rate collar: Combination of cap and floor.
- Interest rate corridor: 1) a combination of two caps, once purchased by a borrower at a set strike and the other sold by the borrower at a higher strike to, in effect, offset part of the premium of the first cap. 2) A collar on a swap created with two swaptions-the structure and the participation interval is determined by the strikes and types of the swaptions. 3) A digital knockout option with two barriers bracketing the current level of a long term interest rate.
- Interest rate swaption: OTC option to enter into an interest rate swap contract, purchasing the right to pay or receive a certain fixed rate.
- Interest rate warrant: OTC option; long-date (over one year) interest rate option.
- Forward contracts for differences (including non-deliverable forwards: Contracts where only the difference between the contracted forward outright rate and the prevailing spot rate is settled at maturity.

[1] Definitions: The Foreign Exchange and Interest Rate Derivatives Market: Turnover in the United States 2007. The Federal Reserve Bank of New York.

The Size of the Market

Commercial transactions are only a piece of the enormous foreign exchange market. Inter currency transactions between companies, banks, governments, central banks, hedgers, speculators and investors total over $3 trillion per day. It is the largest asset class in the world, at ten times the size of the bond market and fifty times the size of the equity market. The reason for this is simple. The international debt of most trading nations is denominated in dollars; as a matter of fact, all of the debt held by the International Monetary fund is held in dollars. Any country that needs to stabilize its currency or settle any of its debt must trade in dollars to do so. This makes the dollar the most traded currency partner in any currency pair, and assures that institutions trade in the forex markets. How did the dollar get to be the major component of the foreign exchange trade?

The U.S. dollar is the de facto common currency of the petroleum business. The global oil market and most commodities markets trade and settle in U.S. dollars, primarily because the three major types of oil, West Texas Intermediate, North Sea Brent Crude and UAE Dubai Crude trade in dollars. This "tradition"-there is no law that says oil has to be paid for in dollars-came about through the United States' domination of the industry when it began to boom after the Second World War. Rapid development fed the demand for oil, but the Arab world, the only other large scale producer, was almost as unstable during the fifties and sixties as it is today. Strong Arab nationalism, socialists programs and civil war in Yemen, supported by other Arab states but opposed by monarchist Saudi Arabia induced the Saudis, the largest and most cohesive oil power in the region, to ally more strongly with the United States by denominating its oil production in dollars.

This contributes to the global demand for dollars, and since the constant flow in these markets is in fixed dollars, it does not affect the foreign exchange market as much as it would if currencies were continuously traded for oil dollars. If this were the case, global foreign exchange trading numbers would be truly astronomical. And what would happen to worldwide trading in U.S. dollars if the dollar were replaced as the de facto currency for oil would be an interesting speculative point, although there have been some threats in this area. Russia has been toying with the idea of establishing a market in rubles for certain types of oil ("Russia quietly prepares to switch some oil trading from dollars to rubles", *International Herald Tribune*, February 25, 2008) and in February of 2008, Iran opened the Kish Bourse, originally trading oil derived products, such as the kind used in pharmaceuticals, but with an aim to eventually trading in crude oil, with all settle-

ments in currencies other than the dollar, primarily the euro and the Iranian rial.

The Currencies Traded

The most actively traded currencies fairly closely profile the most active trading countries in the world. They are: the United States dollar, the Euro, the Japanese Yen, the British Pound Sterling, the Swiss Franc, the Australian dollar and the Canadian dollar. At this point in history, the foreign exchange market is primarily US- based, with the U.S. dollar involved in over 80% of the trades world wide. The most traded pair of currencies is the U.S. dollar against the Euro, which makes up 28% of all foreign exchange traded. The U.S. dollar against the Yen and the British Pound against the U.S. Dollar are the second and third most actively traded pairs. As we discussed above, there are many reasons that the dollar dominates foreign exchange trading, though many pundits see that changing dramatically as a result of recent economic upheavals.

The abbreviations used in the most commonly traded currencies are: EUR for the Euro, USD for the US dollar, GBP for the British pound, JPY for the Japanese yen, CHF for the Swiss franc, AUD for the Australian dollar, CAD for the Canadian dollar, and NZD for the New Zealand dollar, although you may see A$ and C$ and NZ$ for the latter three. Many currencies have their own symbols, the most famous of which is the dollar sign:

Currency	**US dollar**	**Euro**	**Yen**	**British Pound**
Symbol	$	€	¥	£

You will not usually see these symbols when you are trading forex. Forex dealers usually use the three letter initial system we see above, or even nicknames when discussing a currency or a trade. The initials are determined by the country (first two indicate the country, the last the currency). The abbreviations and nicknames for the most commonly traded currencies are:

Abbreviation	**Currency**	**Country**	**Nickname**
USD	Dollar	United States	Buck
EUR	Euro	Euro Zone	Fiber
JPY	Yen	Japan	Yen
GBP	Pound	Britain	Cable
CHF	Swiss Franc	Switzerland	Swissy
CAD	Canadian Dollar	Canada	Loonie
AUD	Australian Dollar	Australia	Aussie
NZD	New Zealand Dollar	New Zealand	Kiwi

If you wonder why all of the abbreviations except Switzerland are clear reflections of the country or region the currency is used in, it is because Switzerland goes by the old Roman designation of Confederation Helvetia. The nicknames are obvious except for fiber (what euros are made out of), cable (how pounds were transmitted way back when), Loonie (a well known Canadian bird called loon is depicted on the Canadian dollar) and the Kiwi (a bird found only in New Zealand and has become the nickname for New Zealanders in general).

Commercial traders use their own shorthand to transact trades. Here is a typical conversation that might take place between traders and although most transactions may occur electronically, traders still get the feel of the market through interpersonal contact. This excerpt is courtesy of the Federal Reserve Bank of New York:

Conversation in Shorthand: *"Yoshi, it's Maria in New York. May I have a price on twenty cable."*

Translation: *Yoshi it's Maria in New York. I am interested in either buying or selling 20 million British pounds."*

Conversation in Shorthand: *"Sure. One seventy-five, twenty-thirty."*

Translation: *"Sure I will buy them from you at 1.7520 dollars to each pound or sell them to you at 1.7530 dollars to each pound."*

Conversation in Shorthand: *"Mine twenty."*

Translation: *"I'd like to buy them from you at 1.7530 dollars to each pound."*

Conversation in Shorthand: *"All right. At 1.7530, I sell you twenty million pounds."*

Translation: *"All right. I sell you 20 million pounds at 1.7530 dollars per pound."*

Conversation in Shorthand: *"Done."*

Translation: *"The deal is confirmed at 1.7530."*

Conversation in Shorthand: *"What do you think about the Japanese yen? It's up 100 pips."*

Translation: *"Is there any information you can share with me about the fact that the Japanese yen has risen one-one hundredth of a yen against the U.S. dollar in the past hour?"*

Conversation in Shorthand: *"I saw that. A few German banks have been buying steadily all day…."*

Translation: *"Yes, German banks have been buying the Japanese yen all day, causing the price to rise a little…."*

Notice that the shorthand becomes less shorthand as the deal is being consummated: *"All right. At 1.7530, I sell you twenty million pounds."* is pretty clear to all parties concerned. Also that the finalization of the deal is confirmed on both sides: *"Done"* and *"The deal is confirmed at 1.7530."* As hectic and fast paced as trading foreign exchange can be, no dealer wants to take a chance on a misunderstanding in rates or quantities.

If you are surprised that China, one of the biggest trading partners of all developed and many developing countries does not show up on the list of most traded currencies, it is because the Chinese Yuan (sometimes called the Rimihmi) is pegged to the dollar. This means that every time the dollar moves up or down, the Yuan moves in conjunction with it, within certain bands. Consequently, there is no Yuan/Dollar risk to be managed, since, unlike other currencies, these two always move in conjunction with each other

China maintains its official exchange rate for the yuan pegged at a rate of 8.277 to the US dollar. This is good for Chinese manufacturers, since it keeps the yuan undervalued towards the dollar, by keeping Chinese wages artificially low in dollar terms. This, of course, requires massive foreign exchange intervention on the part of the Peoples Bank of China to keep the dollar peg at this low level. There are certainly trades in the yuan against the dollar as a secondary currency, and this rate fluctuates at more market adjusted rates, but because the bulk of the official trade is in dollar weighted yuan, and because the Bank of China holds heavy dollar reserves to fund its intervention, the Chinese economy can be said to be almost dollar donominated.

If the world trades in dollars, euros, yen, Swiss francs and pounds, what about that small shoe manufacturer in Brazil who wants to get his great leather products to the American market? Yes, he has to sell dollars too, and he will receive the Brazilian cruzeiros (at the current exchange rate) in payment. But the cross currency volume between cruzeiros and dollars is miniscule compared to that between euros and dollars.

These currencies are called "exotics", and not because Brazil is such an exotic destination, as much as it may be. Exotic currency markets are those that have very little liquidity because of lack of demand, which means low trading volume. Trading in illiquid commodities can be very expensive because of the wide bid-ask spread. (We will discuss bid-ask spreads in depth later.) The foreign exchange market, like the stock market and the commodities markets, relies on market makers to inject the needed liquidity for the

market to function effectively. These market makers cannot offset the usually small trades in these currencies and are not willing to take the risk of being stuck with them.

The Brazilian real/U.S. dollar pair is not as difficult to trade since one side of the pair is still the U.S. dollar. It gets even more cumbersome when both sides of the trade are exotics. Let us say our ambitious shoe manufacturer found a great market in New Zealand? He would not be able to make a direct sale of his New Zealand dollar for his Brazilian reals. He would have to engage in a cross transaction; sort of like finding the lowest common denominator in mathematics. He would have to find a major currency against which he could trade both his NZ dollars and his Brazilian reals, most likely the U.S. dollar. This might not even be the best trade for him, since New Zealand's trade, and therefore foreign exchange reserves, might be stronger in yen. In this case, he would find himself in the middle of a real/U.S. dollar, U.S. dollar/Japanese yen, Japanese yen/NZ dollar transaction. Let's face it; life is easier when you are one of the big dogs!

Where and When Foreign Exchange is Traded

One of the biggest selling points for foreign exchange trading is that it is an almost continuously trading market. Not quite 24/7, but one can begin trading on Sunday evening and continue non stop until Friday evening, if one so desired. The same exact trade can be kept "live" throughout each day and night until it finds its level and settles. This is not true of the stock or bond market. If an order to purchase a stock is given, good until cancelled, this means that at the close of each business day at the exchange the stock is traded, the trade lies dormant, until the broker starts trading again the next day with the same order. Not so with foreign exchange. One can actually follow a trade around the world. If an order is given to a broker in New York to sell dollars against yen at *xxx*, the New York broker will pass the order on to his Californian office when he closes, who may pass it on to Hawaii then Sidney, then Singapore, then Mumbai, then Dubai, then Paris and London and back to New York again if it is not settled.

Trading actually starts each Monday morning in Sydney, Australia and then slowly slips through the world to Asia, the Middle East, Europe and the Americas as the earth, and day turn. The most active trading time is the morning hours in Europe, when the United States opens and joins Europe, already into their afternoon trading hours and even overlaps with some Asian centers. As the U.S. shuts down for the evening, The Australian and Asian market pick up where they left off. This goes on 24 hours a day, until business closes for the weekend at 5:00 p.m. on Friday in New York.

This seamless transfer of trading responsibilities is usually not halted even by holidays, although the reduced number of participants can mean that the market is much less liquid than usual. Extended holiday periods, such as the end of summer when many Europeans are on vacation, or the Christmas and Easter vacation can also mean slower, although not closed markets. Some traders, especially those who rely on a great deal of volatility and liquidity, such as short term or day traders, tend to be wary of these holiday markets, but there are speculators who feed on such lulls in the market because they can use this reduced liquidity to push the markets in a certain direction because their trades temporarily have more weight.

But the normally almost limitless hours of foreign exchange trading mean that traders can react to and trade on global political or economic events regardless of what time of day or night it occurs in their time zone. The liquidity created by this large number of active traders doing business at the same time is one of the features that attracts speculators to the foreign exchange market. The foreign exchange market is effectively an OTC (Over the Counter Market) since brokers and dealers can negotiate directly with one another, which means that there is no central clearing market.

The Foreign Exchange Markets

How Today's Foreign Exchange Markets Developed

As nations colonized and then industrialized through the seventeenth, eighteenth and nineteenth centuries, formal world trade developed, and a need for a more formal system of foreign exchange developed as well. Britain was the greatest world power during this era, and, with the world's largest and strongest navy, was able to spread and protect its commercial interests throughout the world. It is no surprise, therefore, that Britain, with its vast colonial empire and industrial progress, led the way in the world of currencies, and that the pound sterling became the benchmark against which other currencies were weighed, and ultimately exchanged.

Prior to the creation of the gold standard in 1875, countries would use gold or silver as a means of payment. Under the gold standard, governments guaranteed the conversion of their paper currency into a specific amount of gold. By the end of the 19th century, all of the major economic powers of the time had converted to the gold standard, with a defined amount of their currency to gold. This was the precursor to exchange rates, as the difference in the price of an ounce of gold between the currencies became the exchange rate for those currencies.

The stability in international transactions created by the gold standard was disrupted by the breakout of the First World War. At this point, the major allied powers needed to embark on large military projects in the war against Germany. There was simply not enough gold to back all of the currency that was being created to finance these projects.

Once currencies were no longer defined by a gold standard, relatively modest foreign exchange trading gave way to mass speculation in foreign exchange. The Great Depression signaled a halt to this activity, as a result of the dwindling trade between nations during this period. The pound sterling also suffered a major blow during the Second World War, when the Germans masterminded a counterfeiting campaign that eroded the British currency. Greatly as a result of this, as well as the United States emergence as an industrial and commercial power, the U.S. dollar emerged as the new benchmark currency. After the Second World War, the economies of Europe and Japan were in a shambles. The United States emerged as the only major power not to be

destroyed by the war, and its industries remained intact. In addition, because of this political and economic upheaval, a great deal of gold was transferred from European countries to the United States. As a result of these two factors, after the war, the United States dominated 40% of global production and possessed 80% of the world's gold.

Even during the Second World War, the governments and financial leaders of the trading nations of the world realized that a new stability had to be reintroduced into the foreign exchange markets. The result of this realization was a meeting of the United Nations Monetary and Financial Conference that took place in Bretton Woods, New Hampshire in 1944, while the war was still going on. At this meeting, delegates from all 44 Allied nations formed the "Bretton Woods Accord", which established a peg for the U.S. dollar to the price of gold at $35 per ounce.

Other currencies were then also pegged to the U.S. Dollar, and were allowed to only deviate from this rate by a margin of 1%. This Accord also established the International Bank for Reconstruction and Development (now a part of the World Bank) and the International Monetary Fund (IMF) which is still a powerful force today. The IMF was charged with supplying the funds to bridge temporary imbalances in the exchange rates of the participating countries. In 1971, the United States suspended its convertibility to gold, and this led to collapse of this fixed system of convertibility of currencies. Letting the dollar float freely was intended to be a temporary measure, necessitated, according to President Nixon at the time, by attacks by speculators. Ironically, this break from the link with gold led to unprecedented and ever growing foreign exchange speculation. This converted the dollar into a "fiat" currency, a type of currency whose value is only that a government has given it that value by decree (fiat). (The other type of money is commodity or representative money, which the dollar was before 1971. Commodity money is money based on a commodity such as silver or gold.) Fiat money is simply a promise by the issuer to pay and has no intrinsic value, other than the creditworthiness of the issuer.

After the convertibility of the dollar was suspended, a number of other agreements were subsequently formed in attempts to reestablish the stability that existed under the Bretton Woods Accord, but they all ultimately failed, and this failure led to the free floating exchange rate system we have today. Ironically, all of the nations that signed the original Bretton Woods agreement continued to use the U.S. dollar as the global reserve currency, despite the fact that it was no longer backed by gold.

Today, most governments have one of three exchange rate systems: *dollarization*,

pegged *rate* and *managed floating rate*.

Dollarization means that a country does not issue a currency at all, and simply uses a foreign currency as its own. This normally gives more stability to the currency, but it does not allow for any monetary policy on the part of that country's government. Less developed countries would be more likely to opt for dollarization. El Salvador, for example, uses the U.S. dollar as its currency.

A *pegged rate* is when a country fixes its exchange rate to a foreign currency to allow it more stability than with a floating rate. The currency is usually fixed at a set rate with one other currency or a basket of currencies. The country's currency falls and rises with the pegged currency. One of the most famous examples of a pegged rate is China's peg to the U.S. dollar.

Managed floating rates is the system most of the developed countries of the world use, and what we discuss throughout this book.

Under this new "non" system, each country's currency floats freely against the all the other world currencies that are traded. The rate that they are traded at is determined solely by market forces such as supply and demand, the political and financial stability of each country, and, one of the most important determinants, comparative interest rates. However, governments or central banks may intervene to stabilize currencies. We will see later how these and other factors have an influence on how one country's currency trades against another, but in a nutshell: countries that print more currency to meet internal demand will see the value of their currency drop on the foreign exchange markets because there is too much supply; higher interest rates attract investors, raising demand for the currency and pushing up its exchange rate; and political unrest or economic instability will render a currency unattractive to hold, and this will force down its foreign exchange rate.

Currencies and foreign exchange continues to change and evolve, and many governments or groups of governments find manipulation of their currencies and easy panacea to their domestic problems, even though they may cause long term international problems that can ultimately further damage their economies. Witness the devaluations of the Zimbabwe dollar through 2008. To combat the highest inflation rate in the world (said to be 165,000% in February of 2008, but reported by analysts to be as high as 1.8million% in May, 2008), the Zimbabwean government revalued the currency by knocking 13 zeros off it. The Zimbabwean dollar trades at about 6,000 to the U.S. dollar, 60,000,000,000,000,000 to one in terms of the original Zimbabwe dollar.[2] Today, even

[2] Final humiliation for Zimbabwe dollar as foreign currency legalized" *International Herald Tribune*, February 25, 2008

shops in Zimbabwe refuse to accept their own country's currency.

In an extreme example of these manipulations, let us look at Brazil, where, in the eighties and nineties, the government wiped the slate clean every time inflation got out of hand by issuing a new currency. This is an extreme example of how a government manipulates its currency for its own purposes. Brazil, throughout the eighties and nineties, not only changed the value of the currency, but the government kept renaming it as well. Currently, the currency used in Brazil is the real, but this name is relatively new, adopted in 1994. Every major upheaval in Brazil seems to have brought about a new value and a new name to its currency. Brazil was the victim of very high inflation in the eighties and nineties. During the early eighties, the currency was called the cruzeiro, and in 1986, it was changed to the cruzado. A few years later, the government introduced the Cruzado Novo (new cruzado) but it was quickly replaced in 1990 by the returning cruzeiro! Wait, we are not finished!

In 1993, in an attempt to control rampant inflation, the government lopped three zeros off the cruzeiro and turned them into cruzeiros reals. Only a year later, after a new monetary plan was developed, a new currency, now christened the real, was introduced in Brazil.

So we can see how aggressively governments can and do use their currencies to mask problems in their own economies. However, unless the underlying problem is addressed, these measures not only represent short term solutions, they do nothing. Inflation issues have to be addressed by systemic, usually painful, fiscal measures. Most governments do not want to be the one in power when the pain is introduced, so they simply find the expedient solution and wait for posterity to handle it. Changing the name of a currency or the number of zeros in it is really just a panacea to make people feel better about what is happening in their economy. It is difficult to carry around 60,000,000,000,000,000 Zimbabwe dollars, so the government just takes off a lot of zeros so that 6,000 (still a lot) represents the same thing.

Some governments justly avoided tinkering with the underlying currency and simply let the prices adjust to reflect inflation until market or fiscal forces stabilized both the inflation and the currency. Countries such as Japan and Italy have prices that astonish the new visitor because the numbers are so high, but this is because inflation has forced prices to float up naturally until they found a resistance level (based on relative prices, supply and demand, interest rates, falling inflation, balance of trade and the host of other factors that are at the core of price theory) and stabilized. This is why the

numbers seem astronomical, but they are just numbers, and what really matters is how much the prices are relative to the prices of other goods or the prices of similar goods in another economy. (See our discussion on Purchasing Power Parity when we discuss the fundamentals that affect foreign exchange rates.) The exchange rates used here are from xe.com. One U.S. dollar, for example, is a bit more than 95 yen, so if a pair of shoes cost ¥5,700, it can sound like an exorbitant figure if you are not thoroughly familiar with the exchange rate. As a further example, look at the most recent rate available for the Italian lira (which no longer exists since it was replaced by the euro in 1999- see the development of the euro, below), which was 2,205.585 per one U.S. dollar at that time. Our hypothetical pair of shoes in Italy at the beginning of the twenty-first century would have cost lira 132,332. It only seems like a lot of money. It cost so many lira to purchase them because the Italian government has never made the superficial adjustments to their currency that other governments have made.

This concept is called the nominal exchange rate. The "real" exchange rate takes into account the purchasing power of each currency in the equation. We see that the purchasing power of the lira is much less than that of the dollar when it takes 132,332 lira to purchase a pair of shoes that would cost about USD60. This "parity" example has to be taken one step further however, since an average Italian worker might make lira 44,000 an hour. Where economies suffer, is when the price levels spiral upward while salaries remain stagnant.

The Euro

There has been one development that was not at all a whitewashing of an internal crisis through monetary manipulation, but was truly one of the most significant events in the recent economic history of foreign exchange: the emergence of the euro.

The European Union consists of 15 countries that have formed an economic alliance with one another. They have studied the possibility of a common currency between them for many years until finally, electronic trading in this new currency, called the euro, was introduced on January 1, 1999. It officially replaced the paper currencies of twelve of these Eurozone countries on January 1, 2002.

The concept of a common currency between European nations has existed for some time, and its roots lie in the various trade organizations and agreements that have formed and grown since the mid twentieth century.

In 1957, the European Community, the EC, was established by Belgium, France,

Italy, Luxembourg, the Netherlands and West Germany, when they signed the Treaty of Rome. The Treaty of Rome proposed the creation of a common market and the abolishment of customs tariffs between the member nations of this market. This organization was the basis of the European Union. (Today, this original union of fifteen countries has grown to include twenty-seven European countries that are members of the European Union—Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany (originally West Germany), Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden).

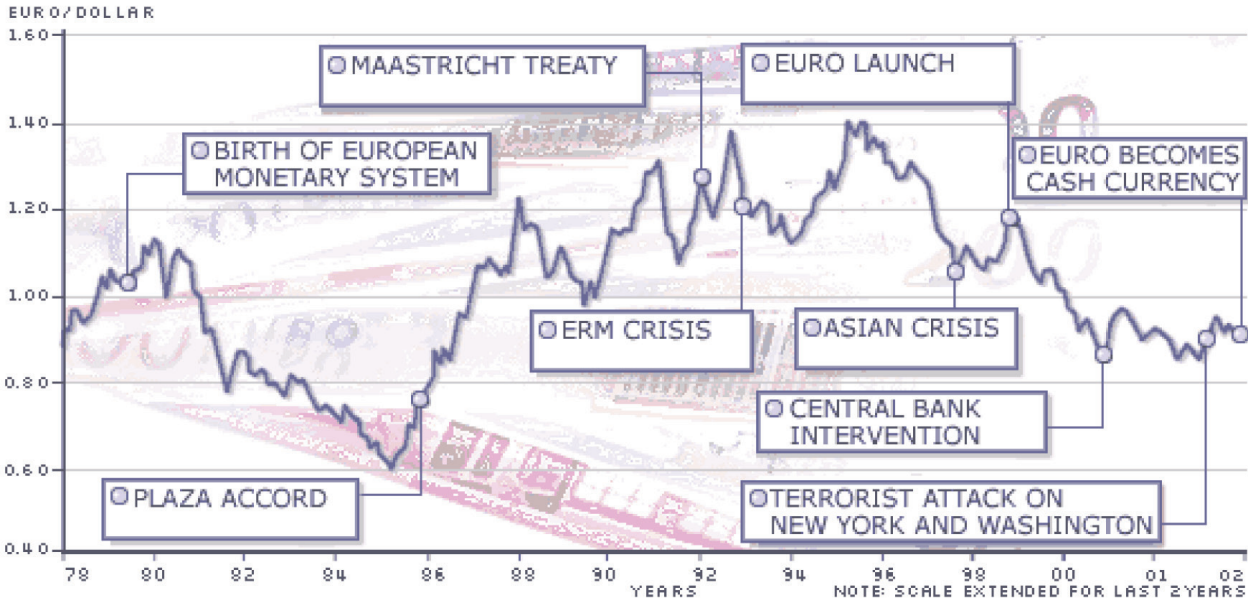
The European Union provided for a host of provisions that made trade easier and freer between its member nations, but did not eliminate the problem of the value of each currency against the others. The concept of a single monetary unit was first discussed in 1969 at an EC summit in the Hague, the Netherlands. Due to the creation of their trade and tariff union, trade between these nations was growing rapidly. A committee was established as a result of the Hague summit to study the question of a common currency. The committee was headed by Pierre Werner, the prime minister of Luxembourg. The Werner Report, as it became known, was presented in 1970 and it outlined how monetary unity could be introduced to the European Community over a gradual period. The initial stages would consist of measured coordination of these countries' economic policies, and reduction in exchange rate fluctuations between their currencies. At some final point, according to the Werner Plan, these exchange rates were to be fixed against each other permanently. This initial plan, however, never came to fruition, in great part due to the fact that the international monetary system suffered such an upheaval when the Bretton Woods Accord was scrapped and the dollar was no longer fixed to gold.

Instead, a series of various systems of stable exchange rates was introduced. The first of these was the "snake", an agreement between most members of the European Community to keep their currencies within a narrow trading band in order to maintain a degree of order in their trade transactions. The snake became the forerunner of the European Monetary System (EMS). In this system, each currency had a central exchange rate in relation to the other currencies in the system which was fixed within bands, but could be adjusted upon agreement of all parties. The early 1990s saw considerable unrest in the foreign exchange markets, causing the band to be widened significantly, to such an extent that the system was completely undermined. This is because, once the band is widened too much, rates float relatively freely in any case, so it is as if there is no fixed rates.

Meanwhile, at an EC summit in Hanover, Germany in 1988, another attempt was made towards a common currency. Another committee, headed by Jacques Delors, then President of the European Commission, was established and charged with preparing a report with proposals for the introduction of economic and monetary union, and thereby a single currency, in a series of stages. The first stage of this proposal, the Economic and Monetary Union, EMU, was to start on 1 July 1990. A new European Union Treaty, introducing close economic cooperation and a single currency, was signed at Maastricht, Netherlands, in 1992. The Maastricht Treaty formed the basis of the second and third stages of the Delors proposal.

At an EU summit in Madrid in December 1995, it was decided that the third stage was to start on 1 January 1999, and would introduce a single currency to be known as the euro; Euro banknotes and coins were to be introduced by 2002 at the latest. At the inception of electronic trading in the euro in 1999, the exchange rates of each of the EU member states was locked to each other. Since the exchange rate between these currencies was fixed, they effectively no longer existed as separate currencies and were no longer traded separately on foreign exchange markets. And thus Europe went from completely separate currencies to the snake, to the EMS, to the EMU to the euro.

This is how, after a very long and difficult labor, the Euro was born. Below, we see a time line of this very long, complicated and involved process.



Source: BBC.co.uk

Considering the incredible upheaval in economies, pricing and national pride that was involved in introducing a new single currency to so many countries, it is small

wonder that the pioneers of a single European currency took such careful baby steps through five decades to bring its new creation to the world!

Exchanges and Other Ways of Trading

As we have seen, the foreign exchange market itself is actually a worldwide network of traders who are connected by telephone lines and computer screens—there is no central headquarters. When people speak of the foreign exchange "market", they are talking about the worldwide network of large banks, central banks, governments, corporations and other institutions and speculators (private individuals and companies such as investment funds or investment managers who trade foreign exchange for profit) who deal, directly or indirectly through broker/dealers, with one another to exchange currencies. Exchanges do exist that regulate the futures market in foreign exchange. But futures are a derivative of the underlying asset that is foreign exchange: actual currency trading is largely a vast, unregulated world of buyers and sellers who, in working towards their own best interests, maintain an orderly system.

The Players

Most people don't even think about what their currency is worth in comparison to another currency. Except if he wants to take a trip to the Algarve, the average Londoner would never consider what the pound is worth in comparison to the euro. Foreign exchange rates, however, have an effect on just about everything in our daily lives, from the price for goods that may have been imported from another country, to the value of the portion of a retirement portfolio that is held in international stocks. So there are plenty of people who have to think about these things every day.

There are four major classes of participants in the foreign exchange markets:

Banks and financial institutions account for about 2/3rds of all foreign exchange transactions. They settle outstanding positions with one another, and they also attempt to earn profits from their foreign exchange trading. Their transactions with one another are called the interbank market. This is the market in which large banks deal with each other and these trades are primarily responsible for the rates that all other traders will see quoted in their trading systems. The banks themselves almost never exchange currencies, but work within their credit relationships. The larger a network of credit relationships a bank has, the better access it has to the best foreign exchange rates. By dint of its network of relationships, it has more institutions to bargain with and its sizeable

credit lines give it more bargaining power. Banks act as agents for their customers in facilitating the international movement of funds in all currencies, but they can also act on their own account. Banks act as dealers in the foreign exchange market as they buy and sell currencies at bid/ask prices, and through this mechanism they can make a profit by the premiums they earn through the spread.

Foreign exchange brokers or dealers act as the intermediaries between the financial institutions by finding the best price in the market for a given currency. They earn their profits by charging a commission on transactions, just as a stock broker earns a commission on each stock transaction he handles.

Commercials are mainly large companies who need foreign exchange in order to conduct their business. If their foreign exchange needs are large enough, they may have entire departments devoted to managing this portfolio. They may require foreign exchange to purchase raw materials for products, or they may buy foreign exchange to expand in new overseas markets.

Central banks participate in the foreign exchange market, frequently to intervene to maintain stability in their countries' economy. They are essential to the markets because of the liquidity they add and also because of the stabilization strategies they may use. They create an important balance in the markets as they try to manipulate their currency. At the request of a country's central monetary authority, a central bank will buy its country's currency and sell foreign currency to support the value of the currency. It will sell its country's currency and buy foreign currency to try and exert downward pressure on the price of its currency. For example, the European Commission could instruct the European Central Bank to manipulate the euro, the U.S. Treasury may work with the Federal Reserve Bank to support the dollar, etc., although most nations prefer to allow a somewhat autonomous role for their central banks. The central banks will also work in tandem with each other to maintain international stability, but most of the time the central banks are involved in supporting or devaluing their own currency. Some countries have special arrangements with other countries to help them keep their currencies stable, which may involve intervention on the part of both banks. Some central banks are more prone to intervention and some countries take a conservative and laissez-faire attitude and only respond in unusual circumstances. Monetary authorities in general, who are represented by the central banks, prefer to use trade, interest rate and capital

flows to regulate economies.

But transactions in the intervention are small compared to the total volume of trading in the FX market by central banks because the bulk of activity on the part of central banks is in settling balances between one another. This is a natural extension of the flow of trades between nations and the associated flow of international capital

Speculators are a special type of foreign exchange trader, rather than a class. Any of the above (except perhaps central banks) can be speculators in the foreign exchange market. Speculators trade foreign exchange for profit, and may be hedge funds, investment management firms that try to maximize profits for their pension or funds clients, banks that take FX positions in addition to hedging international portfolios and may also trade for their customers, as well as individual companies and individuals.

Most of the participants in the foreign exchange market, except for the central banks, have the same goals in mind: they are either trying to acquire the necessary currency to purchase goods and services from other countries or they want to protect themselves from fluctuating exchange rates, or they are trying to make money through these fluctuating exchange rates; many times all three. There is an overlapping relationship between commercials, banks, hedgers and speculators.

Speculators in the foreign exchange market seek to profit from the price swings in the market. They do this by consistently buying and selling currencies on the foreign exchange markets. For the most part, they have no commercial risk that they are protecting; they are just in it for the money. But banks, brokers and commercials can also fall into the category of speculators.[3] Many banks actively manage a foreign exchange profit center and commercials have been known to hold positions larger than is necessary for a pure hedge, in order to realize a profit. It is estimated that between 85% and 90% of all volume traded on the foreign exchange market is for speculative purposes.

But most of the speculators in this market own up to being pure speculators and buy and sell any currency that they see a potential profit in. Whereas a commercial operator such as a German manufacturer cares that the dollar does not get too strong, rendering the raw materials that he must import from the United States more expensive for him, a speculator does not care which way a given currency goes-he seeks to profit from any movement in currencies. An arbitrageur is a specialist among speculators, who seeks profits from irregularities in different markets. He would normally try to buy a currency at a cheaper rate in one market and sell it at a higher rate in another. Theoretically,

[3] Much to the banks' dismay, in many instances. Scandals at Irish Allied Bank, where a foreign exchange trader ran up losses totaling $750million, and at Barings, which bankrupted this private bank, are tragic examples.

some anomaly would have to exist in the markets to allow this, since the markets move at such lightening speeds and price adjustments are made instantaneously across the board.

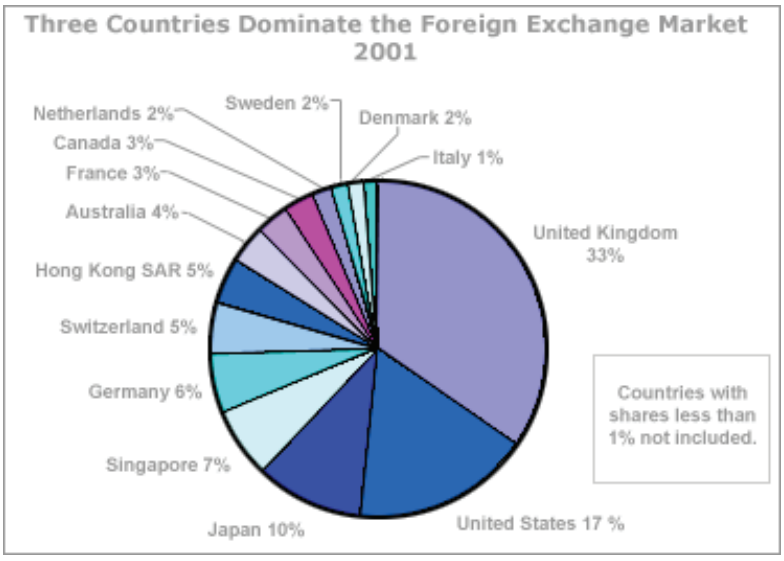
Hedgers protect themselves against adverse moves in a market where they have some exposure. This may be the German manufacturer we mention who needs a constant supply of parts sourced in the United States. His constant demand for dollars to purchase these supplies will be an added cost to him, and if he does not manage it properly, it can wipe out the profit on whatever he is manufacturing. This business would run a constant "book" of foreign exchange to manage its ongoing risk, continually purchasing dollars to hedge this risk.

Another example might be an American company that may be planning an expansion to their plant in Ireland, and will need a million euros to fund the construction of the expansion in six months time. This company does not want to own euros until the construction starts, so it would probably have only one foreign exchange "operation" in the futures market to accept delivery in euros when the time comes. The company will have a number of options to manage this hedging operation, as we shall see later when we discuss the various types of foreign exchange instruments that are traded. This company may not engage in foreign exchange transactions on a consistent basis as the German manufacturer who is constantly sourcing raw materials, but may only enter the market periodically for specific foreign exchange needs.

Individual traders are becoming more active in foreign exchange as electronic trading makes it easier for the small speculator to participate in the market. The traditional participants in the foreign exchange market, and the ones who comprise the majority of trades, are large traders such as banks, commercials, hedgers and speculators. But recently this market has seen a shift in participation to more traditional investors such as funds, institutions, and the managers of pension funds and money markets, as well as individual investors. American individual investors are just beginning to explore this market. As other investment opportunities, such as the real estate market and the stock and bond market continue to be fraught with difficulties, more and more investors are starting to look into foreign exchange as an investment opportunity.

Foreign individual investors have been more likely to dabble in foreign exchange for a number of reasons. For one thing, most Americans have stayed pretty much close to home when it comes to investing. Americans primarily invest in the American stock

market and in United States government or corporate bonds. Europeans, on the other hand, perhaps because of the relatively small size of their economies limiting the scope of available investments, or perhaps because of the proximity to and knowledge of other countries and their economies, have traditionally crossed borders for investment purposes. It is not a major exercise for a German investor to compare the rates of return on a Swiss government bond versus a German government bond, calculate the cost of a futures contract in Swiss francs to protect against currency risk and decide on the best investment. (Frankly, the rate of return is likely to be very close, since the exchange rate will factor in the difference in interest rates, unless the investor fell into a fast little discrepancy that the market has not yet corrected for.) But smaller economies such as Portugal may pay higher rates on their debt to attract investors. Europeans are less fearful about his kind of investment, since they feel their money is right next door. Individual American investors have not been as aggressive in seeking out foreign investments that may yield a higher return, and consequently have not dabbled in the forex markets to the same extent. (In addition, there are other issues involved in buying and owning foreign bonds, but the concept that individual Europeans are much more at ease in cross border transactions than individual Americans is a strong support for their traditional comfort in trading foreign exchange.) But that may be changing. Many recent developments in foreign exchange trading have made it more attractive for the private investor to diversify into the foreign exchange market.

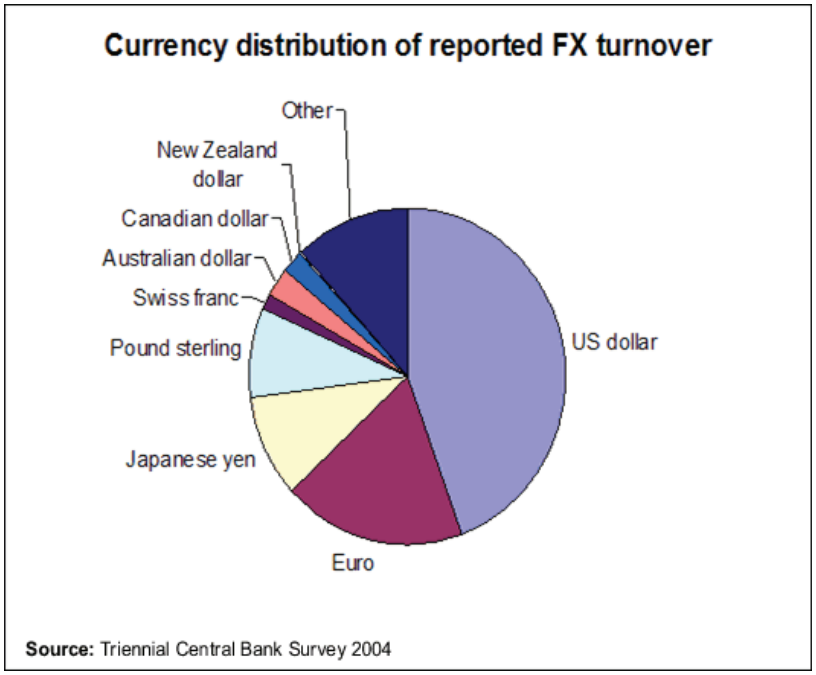


Source: The Federal Reserve Bank of New York

Individually or on a governmental or corporate scale, the market for participants in global foreign exchange are concentrated in three countries. Britain, the United States and Japan dominate the foreign exchange markets. These three account for 60% of the

global trade in currencies as we see in the graph above.

The currencies of the world's large, industrialized nations are always in demand and are actively traded. These four, the U.S. dollar, the euro, the Japanese yen and the pound sterling are called hard currencies, and these four currencies represent the vast majority of FX trades:



The United States is one of the largest participants in the foreign exchange markets, both in terms of total transactions traded in the United States and the total amount of its currency traded. Over four fifths of all foreign exchange transactions and half of all world exports are denominated in dollars. In addition, the U.S. dollar accounts for two-thirds of all official exchange reserves.

Not all currencies are traded or at least not easily traded. The demand for the currency of smaller, less developed counties is weak and there is not much of a market for them. They are called soft currencies.

The Size of the Market

The turnover in the global foreign exchange market was reported to be $3.98 trillion in April of 2007, according to the Bank for International Settlements. The world's main financial markets, as seen above, accounted for $3.2 trillion of this. Forex swaps, where traders, dealing in different delivery dates of the same currency, comprised the biggest segment of this market:

- $1.714 trillion in forex swaps
- $1.005 trillion in spot transactions
- $362 billion in outright forwards
- $129 billion estimated gaps in reporting

These official statistics are only available after the fact, of course, once all of the governments and financial institutions report their transactions and the totals are tabulated for the reports. But *Euromoney*, a respected industry periodical, has conducted a poll that indicates that the foreign exchange market has grown at an additional rate of 41% between 2007 and 2008. This would put the global foreign exchange market at more than $5.5 trillion in 2008. This astonishing rate of growth is very likely to slow in the face of the global recession that is shaking the world in 2008, but even in shrinking economies, the foreign exchange market remains a formidable force.

There are a number of reasons that the foreign exchange market has been growing as quickly and to the extent that it has.

Foreign exchange trading has experienced spectacular growth in volume ever since currencies have been allowed to float freely against each other. While the daily turnover in 1977 was U.S. $5 billion, it increased to U.S. $600 billion in 1987, reached the U.S. $1 trillion mark in September 1992, and stabilized at around $1.5 trillion by the year 2000. Compare that to the $3 trillion already being traded and the expected $5.5 trillion in 2008.

Many factors influence this spectacular growth in volume:

Volatility- Profits can only be made in markets that move. The increased volatility in world markets has made this segment of investing more attractive to a larger number of investors. Recent volatility has been a prime factor in the growth of volume in the FX markets. In addition, interest rate volatility has grown considerably in recent times. Static interest rates were the norm for many years, but as economies grew and interrelated more, interest rates adjusted more frequently because of different economies' affect on other economies. As we shall see, interest rate differentials have a substantial impact on exchange rates.

Globalization- Trade between nations has exploded over the last few decades, and this

has a snowball effect, as companies and countries hunt all over the world for new markets and cheaper sources of raw material and labor. The fall of the Soviet Union at the end of the nineties created many new economies in one fell swoop, all automatically becoming trading nations and anxious to do so. The spectacular growth of the Asian tigers, countries in Southeast Asia such as Korea and Thailand that became economic superstars in a short time, also fed this enormous growth for the need for foreign exchange. The more inter-country transactions there are, the more the need for foreign exchange to settle them, and the bigger the total foreign exchange market.

Corporate awareness- Firms all over the world became more aware of the impact that adverse foreign exchange conditions could have on their bottom lines. Proper management of the foreign exchange risk of a corporation will have a substantial impact on total returns. Added to the growing exposure to foreign exchange risk because of increased globalization, foreign exchange requirements grew exponentially. In addition to hedging risk, many international corporations actively use foreign funds to meet their capitalization requirements, further feeding the need for foreign exchange**.** No longer do large firms limit themselves to the domestic capital market. International debt offerings are the norm rather than the exception today, and even equity trading has become a cross border affair.

Sophisticated traders- The modern world has brought a wave of technical improvements and access to information. These improvements have made it simpler, less expensive and more interesting to deal in foreign exchange. The lightening speed with which information can be transmitted and gathered has put research techniques at the finger of "every man", whereas in the past, vast research departments were required to gather all of the information necessary to make informed trades.

Improved communications- New technologies introduced in the field of foreign exchange that enhanced trading techniques had a very strong impact on volume. In the eighties, automated dealing systems were introduced. In the nineties, matching FX systems were introduced. These online electronic computer systems that link banks, traders and brokers allow traders to process trades more quickly and reliably. A further element of safety was also introduced by these systems, as traders instantaneously viewed and confirmed their trades. Electronic trading systems played a major role in the expansion of global foreign exchange trading**.**

Computing- Besides the trading systems that instantaneously match all trades and traders, new programs produced streamlined back office operations for accounting functions, trade confirmations, reporting and risk management. And on the customer side, there is currently a mind boggling array of software that allows the professional and neophyte trader alike to generate and analyze charts mapping the behavior of currencies.

Reserve Currency

The global reserve currency is the United States dollar. It has been this by tradition since the beginning of the twentieth century and by fiat since the Bretton Woods Accord. What does this mean? A reserve currency is a foreign currency that central banks and financial institutions use to settle debt among one another. It is a currency that many trading partners have agreed to use in common as an international pricing currency for certain products. Oil and many of the world's major commodities are priced in U.S. dollars.

Because so many countries have to hold dollar reserves for both interbank settlement purposes and for the major category goods, such as oil and commodities that are traded only in dollars, the demand for dollars is supported by its role as reserve currency. This allows the U.S. government to borrow at a lower rate because of the market for the currency, and it funds the United States deficit because entities that hold dollars will invest in interest bearing instruments with those dollar holdings. All of this has been cited as an unfair advantage that the United States has over other economies as a reserve currency.

There are many who now feel that this role will not continue. Despite the supposed unfair advantages, the dollar has been steadily weakening, and a growing school of thought sees a strong argument that the Euro may emerge as the new reserve currency.

The Euro as the New Star

The euro's rise to a major trading currency has been swift, (yes, it took decades to develop, but its growth in strength since its inception in 1999 has been phenomenal), but the creation of a new currency out of a dozen or so strong, active, stable currencies was an unprecedented event. Could anyone predict what the combined strength of these currencies would be and how much this combination would affect global foreign exchange trade? The euro's status as a global force does prompt the question of whether it could replace the dollar as the leading international currency.

Two thirds of all currency reserves in the world are held in U.S. dollars, but according to economists Papaioannou, Portes, and Siourounis, [4] the emergence of the euro alongside the rising current account deficits and the external debt of the United States may force central banks to move away from the U.S. dollar as the predominant reserve currency. The potential increased use of the euro as a currency peg finds a strong rationale in two comparable factors that exist between the two economies: total size of GDP, and inflation levels. According to the cited study, a 2005 survey of central banks indicated that they "intended further diversification away from the dollar". Granted, these are probably smaller economies (South Korea, Venezuela and lawless Sudan have been said to be on the verge of shifting their investments away from dollars), but the Papaioannou et al. study looked into how the invoicing of international trade transactions may affect the composition of international reserves. According to them, the choice of reference currency and currency pegs of foreign exchange market intervention strongly influence the reserve composition of central banks. With the dramatic growth in reserves recently (fueled by emerging markets and rising prices for oil), the smallest shift from the dollar as a reserve currency could result in sizeable reserve positions in alternate currencies.

The study looks at a "theoretical representative central bank" with an increasing international role for the euro, which leads to higher reserve holdings in the European currency. At this point, their studies show that increased internationalization comes primarily at the expense of the yen, Britain's pound sterling, and the Swiss franc rather than at the expense of the dollar. They perform some simulations for the famous four emerging market countries (Brazil, Russia, India, and China-known collectively as the BRICs) that have recently accumulated large foreign reserve assets. They found a larger bias for the euro than the aggregate estimate for the "representative central bank." According to their estimates, this indicates that the euro's challenge to the dollar might occur sooner than imagined.

But one of the most important aspects of the argument for a shift in reserve currency is that any country's reference currency is the currency to which its own currency is currently pegged. This is circular reasoning, of course, to say that you need more of the currency that your own is pegged to and you will need less as you move away from it, but as more countries adopt a euro based standard the snowball effect can be obvious. A major increase in the euro's share of central bank reserves will mean that more countries include the euro in their currency pegs.

[4] The Impact of the Euro and the Prospects for the Dollar (National Bureau of Economic Research Working Paper No. 12333), authors Elias Papaioannou, Richard Portes, and Gregorios Siourounis.

Currency Pairs

As we have noted, currencies always trade in pairs, and this "pairing" of the most active currencies creates some historical relationships between them.

The five most traded currency pairs are called the majors. They are, in order of trading volume, EUR/USD, USD/JPY, GBP/USD, AUD/USD and USD/CHF. Note that the U.S. dollar is included in each of these pairs, and the fact that the United States is the largest trading country in the world plays no small role in this fact, as it is on one side or the other of 86.3% of all currency transactions.

Some currency pairs are quoted with the USD as the base currency, while others are quoted with the USD as the quote currency. Those with the USD as the base currency (USD/JPY, USD/CHF, and USD/CAD) are called direct rates, while pairs with the USD as the quote currency (EUR/USD, GBP/USD, and AUD/USD) are known as indirect rates.

Each of these pairs has its own set of characteristics and it is important to understand these characteristics if you want to trade in any given pair.

- **EUR/USD** The EUR/USD pair controls 27% of the total daily volume of currencies traded, according to the Bank for International Settlements (BIS) 2007 data on the topic. One of the best reasons to trade this pair is that the economic news of both of these trading partners, the Euro zone and the United States, is constantly in the headlines, making tracking the fundamentals a lot easier. When the European Central Bank, responsible for the monetary policy of the Euro zone, or the Federal Reserve Bank, responsible for the economic policy of the United States, makes a move to lower or raise interest rates, for example, it is major worldwide story. You may not hear about such a move by the Swiss National Bank unless you were specifically following this market.

Another attraction for most traders, especially new ones or ones who are trading part time, is that since it is a very active currency pair, it has moderate volatility with smooth movements that are easier to follow and profit from.

In general, the EUR/USD pair has a negative correlation to the USD/CHF pair and a positive correlation to the GBP/USD pair. In other words, the CHF and EURO move opposite each other and so the other side of each pair will as well. The euro and the pound tend to track each other more closely. Many traders use this correlation to predict what is going to happen to the other pair. In other words, if the

GBP starts to move, tracking its direction may help in a trader's analysis of the EUR.

- **USD/JPY** The second most traded currency pair, the U. S. dollar against the Japanese yen, comprises 13% of total daily trading volume, according to the BIS numbers. This is another currency pair that has smooth movements with a tight bid/ask spread. However, liquidity in this pair is at its highest during the Asian trading hours, which may remove some opportunities for traders in other time zones.

Japan is a small country that is heavily dependent on its export earnings. This causes the Bank of Japan to intervene, often aggressively, to keep the yen low compared to other currencies in order to boost its exports. It is most active and aggressive when selling JPY against USD and EUR, since the United States and the European Union are Japan's major trading partners, and its central bank is anxious to protect the country's export industry. Traders can use this information to their advantage by watching the intervention activities of the Bank of Japan.

- **GBP/USD** The third most traded currency pair according to the BIS is the British pound against the U.S. dollar, and comprises 12% of worldwide daily trading volume. Unlike the EUR/USD, USD/JPY pairs, the GBP/USD pair is noted for its volatility, with wild swings in either direction. It is not a trading pair that is recommended for new traders since these kinds of swings can frequently send out false signals in both trends and breakouts. (See technical trading, below.) Even though the pound typically moves in the same direction as the euro, this relationship can be broken, for instance when the Bank of England aggressively raises interest rates, as it frequently does, and pushes up the pound against the euro.

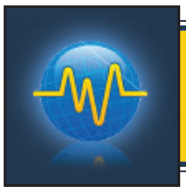
- **AUD/USD** Australia is a resource based economy. When commodities are doing well, currencies from commodity based economies do well also. Commodities account for 60% of Australia's exports. This also makes the Australian dollar very sensitive to emerging market economies that rely disproportionately on raw materials. The Reserve Bank of Australia intervenes actively to maintain interest rate levels to support the economy. Since this is one of the less liquid currency pairs in foreign exchange markets, with many outside factors, such as strong activity in China's economy, affecting it, it is a difficult pair for novice traders to follow and succeed in.

- **USD/CHF** The same BIS information tells us that trading in USD/CHF is only

5% of total daily trading volume, so it is the least traded currency pair among the majors. Nevertheless, it is a popular trading pair among speculators since it frequently trails the movement of the EUR/USD and can be watched from that angle. It is also a very popular trading currency during times of financial turmoil, since it is considered a "safe haven" currency because Switzerland is one of the most stable economies in the world.

Because of both the political and economic stability of Switzerland, the USD/CHF pair tends to be more influenced by economic and political fundamentals in the United States. In other words, there is usually not much news to trade on in Switzerland. Like Japan, Switzerland is also very dependent on exports, but the Swiss National Bank tends to allow the Swiss franc to remain strong against its trading partners, perhaps to protect its reputation as a safe haven currency. Swiss exports are also typically "high end" goods, and because of this may be less price sensitive.

Trades that do not involve US dollars are referred to as *cross-rate trades*. This is because trading usually occurs by trading the first currency to obtain US Dollars, and then trading the US Dollars with the second currency in the currency pair. Examples of cross-rate currency pairs include Australian Dollars and New Zealand Dollars (AUD/NZD) and Canadian Dollars and Japanese Yen (CAD/JPY).



Why Trade Foreign Exchange?

We have seen that a lot of people and institutions are trading foreign exchange, and for very good reasons. Should you? As we have seen, a number of these participants are using the foreign exchange markets because they have to. They need to buy and sell products and services in another currency. But a great many more are involved in this market solely as a profit making enterprise. They have obviously been convinced by the number of viable rationales that this is a market with a strong potential for profit.

The Most Traded Asset in the World

Over three, and probably, when the numbers are measured for 2008, more than five trillion dollars change hands on the foreign exchange market each and every day. Any market with that kind of volume is sure to offer trading opportunities. A trading volume estimated to be fifty times larger than the New York Stock Exchange means that there is always a dealer available to buy or sell a currency. Constant trading of this magnitude injects extreme liquidity into the foreign exchange markets.

Liquidity is the number of active traders and the overall volume of trading that exists in a particular market at any given time. What is the advantage of this to traders? A market with a great deal of liquidity means that markets tend to have gradual, incrementally small price movements. Less liquid markets tend to have abrupt movements and prices that move in big jumps. The extreme liquidity of the foreign exchange market ensures price stability. In a liquid market, individual trades have very limited impact on the total market and all trades can be quickly and readily matched to relevant counterparties. This liquidity also contributes to lower transaction costs and keeps the market from being overly volatile.

Further contributing to this liquidity is the sheer number of hours that trading can take place on the foreign exchange markets. Almost five days a week, around the clock, means that no participant needs to delay or forego a trade because his market was not available. Traders can always open or close a position and be assured of a fair market price.

Twenty Four Hour Trading

A very big attraction of the foreign exchange market is the fact that it has no time zones constraints and is open twenty four hours during the business week. (It closes Friday afternoon New York time and reopens Sunday afternoon.) All currencies are continually in trade in some part of the world during this period. It is truly the market that never sleeps. Even when there may be a major holiday in one part of the world, traders can continue to trade somewhere else. One of the biggest advantages to this for traders is that breaking news can be reacted to immediately. Foreign Exchange traders can take forex positions immediately, before the rest of the trading world can enter into the fray. Twenty four hour trading also adds to the overall liquidity of this market since traders are given a round the clock opportunity to enter and exit their positions. As we can see, the overlapping opening and closing hours for OTC foreign exchange trading covers this around the globe trading:

TIME ZONE	TIME (ET)
Tokyo Open	7:00 p.m.
Tokyo Close	4:00 a.m.
London Open	3:00 a.m.
London Close	12:00 p.m.
New York Open	8:00 a.m.
New York Close	5:00 p.m.

Larger New York banks that deal extensively in foreign exchange maintain 2 shifts, one arriving at 3:00 a.m., when London and Frankfurt open. Many of these banks have branches in London, Tokyo and Frankfurt, and therefore these banks, and their customers, can be in the foreign exchange market whenever it is open.

Information Availability

There is literally no insider information or insider trading in the world of foreign exchange. This is one of the most open information markets in the world, since it is world events and economics that impact it. Anyone who can follow the news can follow the foreign exchange markets. The vast majority of the news that affects foreign exchange market is public information, shared equally by all. If a trader wanted to monitor the world news all night and day to be sure to be on any breaking news, it is within his purview. The news is always out there, it is just a question of taking the time and opportunity to access it. Even the trading tools, such as charting and technical analysis is available to all traders who have an account with a broker who offers these tools, which

is just about every sizeable broker/dealer today.

Limited Number of Currencies to Follow

Estimates are that 85% of the massive foreign exchange market is concentrated in only eight major currencies. They are:

USD: U.S. Dollar
EUR: Euro
JPY: Japanese Yen
GBP: Great Britain Pound Sterling
CHF: Swiss Franc
CAD: Canadian Dollar
AUD: Australian Dollar
NZD: New Zealand Dollar

Compare following eight (or less if you choose) currencies instead of hundreds of stocks and bonds.

Number of Participants

There not only are a large number of traders, both institutional and private, who are active in the foreign exchange market, but they are geographically very dispersed. The actual trading of foreign exchange may occur primarily in the financial centers of Britain, the United States and Tokyo, but the orders are coming from every corner of the world.

When you consider that financial institutions, investment management firms, retail forex brokers, commercial companies, hedge funds, central banks and commercial banks, large and small, are competing with one another on the forex markets, you can readily see that it is rare that any one participant can have an unduly strong influence on the movement of a currency. The participation by all of these giants actually makes it easier for the individual investor to compete in these markets. The participation of all of these businesses and individuals adds a depth to foreign exchange trading that cannot be matched in any other market. They render the overall market so vast that theoretically, no one entity, even a central bank, could corner the market.

This is a recent phenomenon, since, before the advent of internet trading, the major players were the commercials and banks and governments. Until the 1990's, they were

the major players because it required tens of millions of dollars to participate in this market. Internet trading has allowed forex trading firms to offer accounts to individual investors. When individuals, funds and portfolio managers joined the game, the playing board not only became bigger, it became more level.

Portfolio Diversification

One of the best arguments for trading in foreign exchange is diversification. Foreign exchange is a distinct asset class that behaves differently than stocks and bonds. If all of your financial assets are tied up in stocks (or bonds, or real estate) your entire portfolio will behave in the same manner, since all of the assets will behave in the same general manner. In addition, most equity investors tend to invest in their own country's equity market, with perhaps a few international stocks or fund thrown in for balance. This makes sense since it is difficult enough to follow the stocks of one country, never mind the entire world.

Foreign exchange gives the investor an alternative method of investing. When the real estate market was collapsing in the mid 2000's, the foreign exchange market was exploding, and with it, its potential for profit. Foreign exchange also diversifies one's investments globally. In the equities market, many investors are locked into the companies, and therefore the economy, of a given country. Adding global diversification to an equities portfolio would be difficult and probably not very cost effective, since that much more of one's investment funds need to be tied up. When foreign exchange is part of an overall investment strategy, one automatically includes the economies of a number of countries. Diversification like this into foreign exchange gives an investor an opportunity to mitigate his losses.

An investor has the obvious choice to diversify his portfolio into multiple asset classes and different exchanges to spread out his risk, but managing such a diverse portfolio, if it were in physical assets, such as equities and bonds in different countries would be a very difficult portfolio to manage and would require an investment outside of the range of most small investors. With foreign exchange, an investor is investing in the economy of other countries with a very small investment.

Alternative to the Stock Market

Investors have recently been sorely tested by the stock market meltdown. After a long bull market that was bound to fall, if not collapse, many investors are looking for viable alternatives to the traditional investments in equities and bonds. Investors would

do well to look at foreign exchange trading as an alternative to trading in the troubled stock market.

Confidence in the market- A lack of confidence is rightly undermining the stock markets. People simply don't trust their investments in the corporate world. In addition, the stock market can experience periods of very low activity. Declining markets tend to exhibit this behavior even more, so that equities investors in a declining market become less liquid, just when it is the least desirable. Short selling is possible in the stock market, but there are many rules and regulations governing the short selling process. Those who trade in the foreign exchange market can take the opportunity to seek profit in either a rising or declining market. In effect, each foreign exchange trade represents a short sell of one of the currencies since the trader is buying and selling simultaneously against the long purchase of another. Another feature is that foreign exchange traders are not required to wait for an uptick before they can enter a short position, as is the case in the stock market. Currencies can be bought and sold at any level.

Round the clock trading- The round the clock trading in foreign exchange can mean a great deal in a world where news and markets turn on a dime. In the equities market, once you have placed your order, unless it is a market order, it waits until your price or stop is hit or your "good until" time is reached. All of this stops once the market closes; your order goes to sleep. If market shattering news occurs after trading hours, you have to sit tight and call your broker in the morning or wait until morning to see how the market will digest it. It is no wonder that pre-market trading has become such an important part of the stock market, but it is the large speculators and traders who are active in those markets.

Your forex order, on the other hand, is out there all night long, and if any ground breaking news brings it to your price, your order is filled. If the news makes you change your mind about the wisdom of this order, you can cancel it in real time.

Volume- Since the stock market has such markedly lower trading volume, investors in the stock market are much more vulnerable to liquidity risk. This results in wider dealer's spreads as well as large price movements in response to any relatively large transaction. Foreign exchange also offers extremely high leverage, as high as 100:1, much higher than the 2:1 margin normally offered by stock brokers.

Continuity- In some economies, the stock market can be shut down in emergencies or crises. The foreign exchange market, since it is effectively an over the counter market with no exchanges to shut it down (except in futures and other derivatives) can and does keep trading despite the emergency or crisis, and even as a result of it. The Indian stock market was shut down in the wake of a wave of terror attacks on various sites in Mumbai in November, 2008. Trading shifted substantially to the forex market, first of all as an alternate outlet for active traders, but also as a way to hedge the results of these activities in the first place.

No Bear Market- Except for short selling, if any other market is in a decline, many of the traditional investors are forced to the sidelines. Shortselling a stock is a difficult operation for most people, and recently, shortselling of certain financial stocks has even been banned. So when the stock market goes down, it can only go down; there are not some stocks that improve because another went down. And a falling stock market tends to bring everything down with it. The foreign exchange market, on the other hand, is effectively a see-saw, since every currency is traded against another, and so when one goes up the other goes down. This means that the potential for profit exists whether one is buying or selling, depending on the currency that is traded.

Information flow- In trading the stock market, one is always at the risk that some small factor, such as a revised earnings report, or the defenestration of a corporate officer is known in a certain small circle before it is universally known. This puts the small trader at a substantial disadvantage and often leaves him at a complete loss as to why a stock moved in a certain direction, until he can get the full story. The information that powers the foreign exchange markets is generic and able to be known to all of the participants simultaneously, if they care enough to access it.

Regulation

With the exception of currency futures and options, foreign exchange trading is generally conducted in a very decentralized manner. Despite the fact that it is the largest trading market in the world, it remains largely unregulated. No international organization has been established to oversee it, nor have any international been established. Central banks do intervene periodically to maintain stability in their own currency, but traders are even able to use this intervention to support trading activity. Yet, it is not a disorderly market. Wild fluctuations can and do happen when strong forces are acting

upon the markets, but the liquidity of the market is a self regulating mechanism. The simple fact that there is always a buyer for every seller and vice versa, at least in the widely traded currencies, is regulation enough. Outside of that, foreign exchange may be the final frontier for a free-wheeling trader who wants to trade when and how he pleases.

Low Transaction Costs

Investment transactions all have a cost associated with them, and in the stock market there is a commission on every trade an investor makes. There are so-called discount brokers who charge very low commissions for a trade, but even so, there is always a commission. They usually range from $7.00 to $30.00 per transaction for online brokers, with little to no service or market information. Full service brokers who do supply services may charge upwards of $100 per trade. That means each time you buy and sell. Most foreign exchange brokers charge no commission or fees at all, they simply earn the difference between the bid/ask spread, called the width of the spread. The spread can vary among brokers and with each currency, but the normal spread should be about 5 pips (.0005 US cents), though it can be as low as .01 percent. Overall, the width of the spread in a foreign exchange trade is generally less than 1/10th of a stock market transaction.

Higher returns on trading is a natural result of lower transaction costs since costs cut into yield on any transaction.

Small Investment Requirement

An individual can get started trading foreign exchange for a very small amount. Online trading companies offer mini or micro trading accounts with minimum trading requirements as low as $250. That is probably too small an amount to really make any measurable profits on a trade, but it shows that foreign exchange trading is available to the average Joe without a lot of capital to put up. A mini account such as this will buy a trader 10,000 units of a currency (as compared to 100,000 units with a standard account.)

An additional benefit to this small investment required is that a trader's capital is not locked up in the market. With most other types of investments, the value of the investment is deposited in exchange for the investment. For example, if you buy a $10,000 Certificate of Deposit, you forego that $10,000 for the term of the deposit. If you buy 10 shares of a stock that cost $1,000 apiece, you have to deposit $10,000 in your brokers

account to own those stocks. These funds may be tied up for a long time, or penalties or losses may occur if they have to be taken out sooner. A foreign exchange trade can be quickly and easily unwound, and thanks to the mechanism of leverage, not that much money has to be tied up in each trade.

Most other types of investments are designed to keep your money bundled up for long periods of time. This can come at a cost to the investor if they need to use the capital. It could be rather difficult to gain access with out taking a substantial loss out of there account.

Leverage and Margins

Leverage is the ability to buy something by only putting up a small percentage of its worth. The use of leverage and the amount of margin may be the biggest advantages to foreign exchange trading for the small investor. Investors in the foreign exchange market are able to place large trades because of the low margins required by the majority of brokers. For example, a trader can control a position of US$100,000 by putting down as little us US$1,000 and borrowing from his broker. This amount of leverage is a factor that makes foreign exchange trading so attractive to speculators.

This considerable leverage offered by currency trading firms is a powerful tool. Many people consider it a dangerous road that can lead to excess risk (and, yes, leverage and risk must be very carefully managed), but leverage is essential in the foreign exchange markets. The average daily percentage move of a major currency is less than 1%, whereas a stock can easily have a 10% price move on an average day, and certainly a great deal more in the recently volatile stock market. Traders need to move large quantities of a currency to yield profits. This is the basic concept behind margins and leverage.

When someone buys a foreign exchange contract, he does not actually buy that amount of the currency and put it in an account somewhere. In contrast, when you buy a stock, that is exactly what you do. You own *xxx* number of the stock of ABC Company, and your broker deposits them in your brokerage account with him. When you buy a currency contract, you do not buy that currency and put it into an account. You enter into an agreement with your broker or dealer that he will pay you if the price of the differential of the currency pair moves in your direction. You actually gain or lose as if those two currencies were in your account. When you have a gain on a trade, the funds are deposited to your foreign exchange brokerage account. If you lose on a trade, it will

be deducted. Brokers and dealers require a margin from their customers to make sure there will be enough money in the account in case of losses.

The dealer will earmark a certain amount of money in your account for each lot you trade. You may not use that portion of the money in your account until that contract is settled. If the net amount of the settlement of your outstanding trades brings the balance to below your margin amount, you will not be permitted to perform any more trades. This will occur whether or not you actually cash out of the trades, since the dealer cannot take the risk that there will not be enough money in the account to cover losses when you do. The brokers and dealers are not willing or able to absorb those losses. If there is not enough money in the account to cover the potential losses, the dealer will close your position. In other words, he will buy or sell the balancing forex contracts in order to zero out your position; you will have no control over the price you buy or sell at. This is called "blowing up" an account.

Let us say your dealer has a margin requirement of $1,000 per full currency lot. If your account has an initial balance of $10,000, buying or selling one currency lot will leave you $9,000 available for additional trades. This $1,000 margin is not deducted from your account, but it is frozen and you cannot use it for other trades or withdraw it until your position is closed. Here is where traders need to be careful. If your account has $10,000 in it, only $1,000 is frozen for your outstanding trade. However, this does not limit your losses to $1,000, as some people may assume. The broker/dealer will not close your account when your losses exceed $1,000, only when the balance in the account falls below $1,000. If your losses ran high enough, the balance could be drawn down to just below $1,000, the point at which your margin no longer covers the dealer.

Leverage is a function of the margin requirement. Leverage simply means using a small amount of capital to control a much larger amount of capital, and it is not a concept that it unique to the foreign exchange market. "Highly leveraged" became the buzzword of the mortgage and capital market crisis.

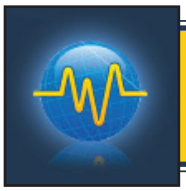
If we use the example of the US$1,000 controlling US$100,000 that we had at the beginning of this section, the trader could buy a full lot of USD/EURO, giving him $100,000 of nominal value. This means that his dealer gave him 100:1 leverage. It is in the best interest of the dealers to allow their customers to trade at high leverage rates because it increases the amount they can trade, yielding the dealer higher commissions. Remember that a trader does not have to use all of the leverage that is available to him. If the trader used all of the leverage available to him, he could control contracts worth

US$1,000,000 with a US$10,000 account. (At 100:1, US$10,000=US$1,000,000.) If the market moved 10 pips against this trader, the losses on his million dollar trades would clean out his $10,000 account.

The important thing about leverage is that, even though it can magnify a trader's profit, it can also magnify his losses. It is important that the trader does not lose sight of this and manages his risk accordingly. Even if a broker is willing to offer leverage as high as 1 to 100, which means you only have to put up 1% of the size of the currency you are controlling, it is truly dangerous to trade at those levels. Many new traders are strongly tempted by these levels of leverage and too easily get themselves in over their heads because they may not realize the danger. Once the market moves against them and they start to lose their base capital, the leverage factor increases since they have less capital in the account to support the trade. Then leverage has a snowballing effect since as it starts to eat away at his capital, he is forced totally out of the market when he doesn't want to be, and faster than he expected.

The more leverage you use, the greater your risk, and managing your leverage and margins is a very important component of managing foreign exchange trading.

This is one of the features of foreign exchange trading that make self discipline, patience and planning, factors we will be discussing later, such important qualities for a successful foreign exchange trader.



How to Make Money Trading Foreign Exchange

There is money to be made in foreign exchange, but anyone who engages in it has to be smart, careful and disciplined. Many people who enter into the Forex market are gamblers at heart and may not have the "right stuff" to move quickly, exit losing positions and move on to the next trade.

Obviously, with a market that trades over US$3trillion a day, compared to a New York Stock Market that trades a US$1million a day, there is money to be made, by the simple definition of the number of opportunities that abound. Following the right strategy is the key to making or losing money in the foreign exchange market. But let us first understand how and why the money is made.

Understanding a Foreign Exchange Trade

How does anyone make money from a foreign exchange trade? It is always a good idea to understand the basics before moving onto other levels, and this applies to any discipline, whether is a knowledge discipline, or sports or cultural. You can't play tennis unless you can swing a racket and you can't play the piano unless you can read a few notes. (Well, there are exceptions, of course.) What is a basic foreign exchange trade?

Remember at the outset, that we said that one of the most basic transactions was performed by a vacationer who buys some Euros for his upcoming holiday in France. For our example, we will make him a weary Londoner who wants to sit in sunny Spain for a week or two. His airfare and even hotel may have been charged to his credit card in pounds, but he needs some cash for food and fun. He goes to a bank or foreign exchange dealer and gives him 500 British pounds and waits for his Euros in return. He receives EUR606.375 because the rate that he is quoted is 1 GB to 1.21275 EUR. (500 x 1.21275=606.375). Upon arriving in Spain, he meets a lovely American multi-millionaire who insists on paying for every meal, drink and activity. He goes home happy and tired, but with EUR606.375 still in his pocket. Since he cannot use this currency in London, he goes back to his bank or foreign exchange dealer to get some British pounds back. What will happen to him?

The more important question is what happened in the currency markets over the

prior two weeks. If Britain went into a major recession during this period, the pound may have fallen to 1.2575. and when our intrepid traveler sold his pounds back, he would have received GB482.21, a loss of GB17.79. (606.75 ÷1.2575 = 482.21-500 = 17.79) Had Spain, or any other country in the Eurozone experienced any similar kind of economic or financial upheaval, and the rate went the other way, perhaps to 1.17375, he would have been able to pocket GB516.61, a gain of GB16.61. It is important to note that the quotes used were how many euros he could receive per pound, not how much the euro is worth versus the pound. (We will talk about direct and indirect quotes later in the book.) The inverse equation gives us that answer. (This can be rather tricky and caution must be used when the currencies trade in the same range, for example the U.S. dollar and the Canadian and, not too long ago, the U.S. dollar and the euro.) At 1.21275, the pound is worth .8213 euros (1÷1.21275). To thoroughly grasp the concept of which "side" of a foreign exchange transaction one is on, do the exercise to make sure that you would have spent GP500 to receive EUR606.75 at .79523.

Of course, none of these equations take into account the bid/ask spread that will give the FX dealer his commission. The casual purchaser of a foreign currency would never even be exposed to this concept. He is quoted a price and he can take or leave it, although if he goes into a forex dealer, he will see both sides of the most traded currencies quoted on a board in the shop. If the buyer of foreign exchange lives in a sizeable financial community such as London, he may be able to shop around for a better rate, but he may also risk the rate moving against him while he does so. Since he wants the physical currency to take along with him on vacation, he has to be able to go to the bank or dealer and pick it up.

This casual traveler engaged in a "spot" foreign exchange purchase. He bought a foreign currency for delivery two days hence, and therefore entered into the spot market. The three main divisions of foreign exchange trading are the spot market, the forward market and the futures market. We have just seen the spot market in action on a small scale, but it also takes place on a grander scale each day by the major traders around the world. They also engage in the "forward" market by entering into forward contracts with a counterparty. A forward exchange contract is an agreement between two parties to exchange a specified amount of one currency for another at a specified rate at a specified date in the future. Importer, exporter and investors commonly use forward exchange contracts to hedge foreign currency cash obligations or assets. The futures market consists of forward transactions of standard sizes and maturity dates that are traded on a futures exchange.

The spot transaction we examined for our British vacationer involved the physical delivery of his currency. Although many forex transactions are actually "delivered", that is, the foreign currency is credited to the account of the other party, for instance in settlement of an invoice in the foreign currency, the vast majority of contracts are settled out before delivery, and none of the foreign currency ever changes hands. Foreign exchange market participants who want to trade foreign exchange for profit primarily trade online, and in fact today, most of the trading is done either online or electronically. As we have seen in the discussion of margins and leverage, none of the foreign exchange a trader deals in will touch his account in any case; only the profits or losses will be reflected.

Some other conventions to be aware of in foreign exchange:

If a trader is a purchaser of a currency he is said to be long the currency (e.g. long dollar, long yen). If a trader is a seller of a currency, he is said to be short the currency (e.g. short sterling). If a currency is considered underpriced, it means that the price is expected to go up; if a currency is overpriced, the price is expected to go down. If a market is overbought, it means that market participants have been buying up the currency and it may soon reach a level where there are no more buyers; if a currency is oversold, it means that market participants have been selling the currency and it may soon reach a level where there are no more sellers.

Let's start to look at some real trades an investor may consider.

Trading the Foreign Exchange Market

At this point, we won't discuss the whys, only the hows of trading on the foreign exchange market. Later we will discuss the many factors that affect how currencies will move against each other and how traders in this market interpret economic news (called fundamentals) and the movement and direction of the currencies (called technicals).

Getting started in foreign exchange is fairly easy, and anyone interested in learning about it can do a great deal of research on line, where many tutorials such as this book are available. Once an investor has decided that forex is an investment option he wants to delve in, he can open an account through a futures broker. We discuss choosing your broker and the kinds of services and fees to expect in depth later in the book. Remember that most foreign exchange brokers do not charge a commission for their trades, but work on the spread between the bid and ask price and that spread cost can vary widely from 0.05 percent, to as little as 0.01 percent. These very small differences can make a

big difference in profits, so they are an important consideration.

Researching the markets is a good first step, but a new trader will find it faster and easier to learn if he uses a virtual trading account before he begins for real. Most brokers now offer "paper" trading accounts to potential clients. Too many new traders just dive right in only to end up losing a lot of money. If they don't quit altogether when this happens, they probably do what they should have done in the first place: research, do some paper trading and then start small. Once the trader has familiarized himself with the ins and out of the trading mechanisms, it is wise to start with a small account so as not to risk too much while still in the learning stage.

Trading in foreign exchange is not very different than trading in other assets. Anyone who has had any experience trading on the stock market or the commodities markets will note the similarities. The idea is, of course to buy a currency and see it rise in value so that a profit is realized, or to sell a currency and see it fall in value so it can be purchased at the lower level, creating a profit. We saw that our traveler was able to make an inadvertent profit if he sold the euros back at a higher rate, or a loss if he sold them back at a lower rate than he bought them. He didn't really care since he had planned to spend them anyway. Now, we care. Let us examine a fairly simple trade that will yield a profit.

One of the most traded currency pairs is the EUR/USD pair. Currencies are always quoted in pairs because you have to buy one and sell another. There are two ways to quote a currency pair, directly and indirectly. A direct currency quote is when the domestic currency is the base currency, while an indirect quote is when the domestic currency is the quote currency. Pairs are quoted with the base currency is quoted on the left of the slash and the quote currency is quoted on the right. When you are buying, you will be quoted how much you have to pay in units of the quote currency in order to buy a unit of the base currency. The value of the base currency is always one. If you were Canadian, and trading against the U.S. dollar, the U.S. dollar would be the foreign currency and a direct quote would be considered CAD/USD and in indirect quote would be USD/CAD. To remember it better, in a direct quote, the foreign currency varies and the domestic currency is always one unit, and in an indirect quote, the domestic currency varies and the foreign currency is one unit. In a direct quote for the Canadian dollar, the quote might be .79 CAD/USD, and means that with one Canadian dollar, you can purchase US$.79. The indirect quote in this example would be 1.265 USD/CAD and would mean that you could US$1 would buy C$1.265. To find the indirect quote from the direct quote, you divide one by direct quote by 1 (1/.79).

(This quoting convention applies only to the spot market. In the spot market, some currencies are quoted against the U.S. dollar, while in others, the U.S. dollar is being quoted against them. However, the forwards/futures market and the spot market quotes will not always be parallel one another, since in the futures market, currency futures are always quoted as the foreign currency directly against the U.S. dollar. This means that pricing is done in terms of how many U.S. dollars are needed to buy one unit of the other currency. For example, Swiss francs are quoted versus the U.S. dollar in futures (CHF/USD), unlike the USD/CHF quote if you were buying dollars against the Swiss Franc. Using this example, if the Swiss franc depreciates in value against the U.S. dollar, the USD/CHF contract will rise. Contrarily, in the spot market, the pound is quoted against the U.S. dollars GBP/USD and this is the same way it is quoted in the futures markets, so when the pound strengthens in the spot market, the GBP/USD contract also rises.)

In the forex spot market, however, most currencies are traded against the U.S. dollar, and the U.S. dollar is often the base currency in a currency pair. In these cases, it is called a direct quote. However, not all currencies have the U.S. dollar as the base. There is a class of currencies called the "Queen's Currencies", which are currencies that have an historic tie with Britain. These would include of course, the pound, but also the Australian dollar and the New Zealand dollar. It was decided upon the relatively recent introduction of the euro that it would be quoted in this manner as well. This is what explains the anomaly in the futures markets we see above. In all of these cases, the U.S. dollar is considered the counter currency, with an indirect quote, and you will see the EUR/USD quoted as 1.2679 (rather than .7886), meaning that one euro is worth $1.2679.

Most currency exchange rates are quoted out to four digits after the decimal place, with the exception of the Japanese yen (JPY), which is quoted out to two decimal places.

Now that we know the mechanisms of a trade and the conventions of quoting foreign exchange, let's look at how we can get into a real trade.

After we have read about the importance of liquidity and depth in the forex markets, it was decided that the safest way to get our feet wet in this new market was to choose a very active currency pair such as the euro versus the dollar. We feel that weakness in the American economy is also going to mean a weaker dollar, so we want to buy some euros and watch them become more valuable (appreciate) against the dollar. So we decide to buy EUR10, 000 against USD. The rate we are quoted for this EUR/USD trade, which means we are buying the base currency at the same time we are selling the quote

currency is 1.26845, which means that we have to pay $1.26845 for each euro we receive (the euro is the base currency and the dollar is the quote currency), or USD12, 684.50 for EUR10, 000.

It turns out that we have read all the signals correctly and watched our trade earn money as the euro appreciated against the dollar. When we see it reach 1.30, we decide it is time to take our profit, so we sell the euros and receive $13,000, earning $315.50 on our trade. Not bad for a novice! During the period that we held this trade open, in the jargon of the trade, we were long the euro (you bought the euro) and short the dollar (you sold the dollar). Once we made the determination, based on the fundamentals and technical indicators that we follow, that the euro should improve in value, we wanted to buy the euros and hold onto them for appreciation. If we felt differently, that the euro was headed for trouble and would go down in value, we would have sold the euro and waited to buy it back at the lower price. Of course, since each trade is a buy/sell of two currencies, this really means that we would have bought the dollar as we sold the euro or been short euros and long dollars.

Trading Lots

The basic unit of trading for a small investor is called a lot. A lot consists of 100,000 units of the base currency, but many brokers today offer trading in mini-lots. Currencies are always traded in pairs, and remembering that the base currency is to the right of the slash, if you are buying a lot of GBP/USD, it means that you are buying GBP100, 000, against the equivalent dollars at the quoted rate. Conversely, if you are a seller of pounds and you were given the GBP/USD rate, you would sell GBP100, 000.

Bid and Ask

When you are trading foreign exchange, you will be quoted a bid and an ask price. The bid price is the price at which the dealer would buy the base currency in exchange for the quote currency; in other words, the bid price is the price you will use when selling a currency pair and reflects how much of the quoted currency will be obtained when you sell one unit of the base currency. The ask price is the price at which the dealer would sell the base currency in exchange for the quote currency; in other words, the ask price is the price you will use when buying a currency pair and reflects how much of the quoted currency has to be paid in order to buy one unit of the quoted currency. When prices are quoted, the quote before the slash is the bid price, and the numbers after the slash are the ask price. Usually, only the last two digits of the full

price are quoted, since traders in the markets know the general range of the currencies and are only concerned with the small fractional fluctuations. For example USD/CAD=1.2650/55 means that the bid price is 1.2650 and the ask price is 1.2655. If you are a "buyer", it means that you are buying the base currency and are going to work with the ask price to see how much you have to pay in Canadian dollars for one U.S. dollar. According to this bid/ask spread, you can buy one U.S. dollar for Can$1.2650. If you were a "seller", you would sell one unit of the base currency for a price equivalent to Can$1.2655. Whichever currency is quoted first is the base currency, and you either buy or sell the base currency.

The difference between the bid and the ask price is known as the spread.

Spreads and Pips

Using the quotes above, the spread would be .00005, or 5 pips, also known as points. A pip is the smallest amount a price can move in a currency quote. Most currencies are quoted to four decimal places, so one pip is usually quoted as 0.0001. The Japanese yen is quoted to two decimal places, so one pip for the yen is 0.01. These price differences seem small, but since traders in the foreign exchange markets extensively use leverage, small differences in price movements, because of the huge dollar amounts under control, can mean thousands of dollars. Spreads are usually higher in less active market and in currencies that do not have a lot of trading volume.

Cross Currencies and Cross Rates

When a currency quote is given without the U.S. dollar as one of its pairs it is considered a cross currency. The most common cross currency pairs are the EUR/GBP, EUR/CHF and EUR/JPY. These currency pairs expand trading possibilities in the foreign exchange market, but they will not have the liquidity as the major currencies that include the U.S. dollar in the transaction. One of the advantages to trading the foreign exchange markets is that there is no necessity to follow hundreds or thousands of stock or bonds, but for those traders who want to add a little diversity or spice to their trading, a look at the cross currencies may be worthwhile.

Since each of the cross currencies has as its major partner the U.S. dollar, crosses are actually a measure of the *relative* strength of each of these currencies against the dollar. Because of this, they may offer traders a good opportunity to make more nuanced analyses in the markets instead of simply whether the dollar will rise or fall. Many traders in the cross currencies like to trade them because trends and trend channels tend

to be more pronounced. Carry trade strategies also tend to frequently focus on cross currencies.

If you are interested in following the cross currency markets, you can certainly be quoted any cross in actively traded currencies, but it is good to know the relationship between these rates.

Computing cross rates

Assume that the following major exchange rates are known:

EUR/USD = 1.6845/50
GBP/USD = 1.4823/28
USD/JPY = 92.75/80
USD/CHF = 1.20375/80

To calculate GPB/CHF

GBP/USD: Bid: 1.6845 Ask: 1.6850
USD/CHF: 1.20375/ 1.20380

GBP/USD X USD/CHF = 1.6845 X 1.20375 1.6850 X 1.20380

GBP/CHF 2.0277 2.0284

Carry Trade

The carry trade is when investors borrow currencies that have a low interest rate to invest in currencies that have a high interest rate. These investors risk that the currency they borrowed may increase against the other in value and they would have to pay them back with a less valuable currency. Another version of the carry trade uses the forward premium of two currencies. The forward premium is the difference in percentages between the forward exchange rate (amount of currency to be delivered at a specific future date) and the spot exchange rate (amount of currency if delivered immediately). The forward premium carry means selling the currency that has a higher forward exchange rate than the spot, and buying currencies that have a lower forward exchange rate than the spot rate.

Theoretically, carry trades should not yield a profit because the interest rate differential should already be built into the respective exchange rates (the equilibrium theory

of "uncovered interest parity"). If one country has high interest rates, and another low interest rates, the difference in the interest rates would reflect the rates at which investors expect the high interest rate currency to depreciate against the low interest rate currency. When this happens, the return from lending in the high interest rate currency will be the same as borrowing in the low interest rate currency once the loan has to be paid back.

That's the theory. In practice, foreign exchange traders do make money in the carry trade. One of reasons for this is that not only do foreign exchange rates change, interest rates do as well. An empirical anomaly of foreign exchange markets called the "forward premium puzzle" is responsible for this. It means that currencies that are at a forward premium and have a low interest rate actually tend to depreciate, rather than appreciate as the theory would have it. By the same token, currencies that are at a forward discount and have a higher interest rate tend to appreciate rather than depreciate. This incongruity means that traders in the carry trade can make profits from the foreign exchange (from the appreciation of the high interest rate currency that was bought at a forward discount) as well as from the interest rate differential.

Types of Trading-Fundamental and Technical

There are two types of trading analysis: fundamental and technical. In the trades we performed above, we felt that the euro was going to improve in price against the dollar, and so we thought it wise to buy euros and hold them for a period until this happened. What brought us to this determination in the first place? We thought that "weakness in the American economy is also going to mean a weaker dollar" so we were using some fundamental data to come to our determination. There are many fundamental factors that are believed to influence how currencies will behave in relation to one another. The main difference between fundamentals and technicals is that fundamental analysis studies the causes of market movements while technical analysis studies the effects of market movements.

Fundamentals

All the news, economic data and political events that emerge about a country will have an impact on the value of its currency. Fundamental traders look at all of this information to evaluate a country's currency. Some of the fundamental indicators that can affect the foreign exchange rate of a currency are: the growth rate of the currency's country or countries (Gross Domestic Product), trade and capital flows, interest rates,

inflation, unemployment, money supply, foreign exchange reserves, political conditions, central bank intervention, retail sales and durable goods orders. Political considerations are also important as they will affect the overall confidence in the country's economy and stability. Equity markets will also have an impact on forex, as they are one of the largest viable alternatives to investing in foreign exchange. An important feature of fundamental analysis is intervention. Governments can manipulate their currencies to prevent them from deviating too much from the levels that the government considers desirable. Traders in the foreign exchange market will follow central banks intervention policies since they will affect the direction of the currency.

In addition, there are a number of economic theories or laws that economists postulate should have an effect on foreign exchange rates. As we will see, sometimes they do and sometimes they don't, but traders look at them in any case.

Each of these fundamentals has an influence on foreign exchange rates. However, it is not simply a question of one fundamental pointing to strength in a currency; all of these factors are at work all of the time and may cancel each other out, support each other and sometimes not even work the way tradition and economic theory says that they should. Take for example, the theory that higher interest rates will attract buyers to a currency and increase the price of that currency. Interest rates in developing countries are generally higher than in developed economies, but due to higher risks this does not necessarily make their currencies stronger. Here is an overview of some of the fundamental factors that affect foreign exchange markets:

- **GDP** is the sum of all private consumption, investment, business spending, government spending and net exports. . Basically, the GDP is a measure of the growth rate of an economy. The relative rates of growth in GDP between economies reflect the relative rates of return and corporate profitability and therefore are key factors in determining the direction of capital flows.[5] Capital flows will affect the supply and demand for a currency, and therefore its exchange rate. GDP is considered the best overall measure of the health of an economy, and the healthier and economy is, the more attractive it will be to investors, and the more its currency will be supported because funds will be invested in the country.

- **Trade and Capital Flows** are the flows of money between countries and they have a large impact on the relative exchange rates of the countries. A country that imports a great deal more than it imports will have a depreciating currency because it needs to sell its currency to buy the imported goods. Another flow of

[5] Bloningen, Bruce A., "Firm-Specific Assets and the Link Between Exchange Rates and Direct Foreign Investment" *The American Economic Review*, June, 1997

funds is investment, and a country that sees growing capital investment from abroad will experience an appreciation in it currency, because its currency has to be bought in order to fund those investments.

- **Interest Rates** are one of the most important factors affecting the behavior of exchange rates and are therefore a major focus of foreign exchange market participants. Traders will closely watch how the central bank of a country is managing its bank rate, since the central bank will use that to adjust money supply. Interest rates are at the heart of foreign exchange since interest is the price of money and therefore the price of a currency. This "carry cost" of a currency is a major factor in how currencies will behave towards one another. Investing in one currency means foregoing the interest that could be earned on another currency. Investors who seek instruments that pay interest, such as bonds, will buy the bond that gives them the highest interest rate. If the interest rates in one country exceed the interest rates in another, the bonds of the first country will be more attractive. In order to purchase these higher yielding instruments, they need to buy the currency of that country. This creates a reduction in the supply (and an increase in the demand) of that currency relative to others.

- Governments attempt to manage general interest rates by fixing the rates on instruments they have control over. Short term rates, such as the Fed Funds rate, the rate the banks charge each for overnight loans in the United States or the European Central Bank's short term rate are used to "tighten" or "loosen" money in the economy. Announcements by these agencies about a change in the short term rate sends a clear monetary policy signal to the markets, and have a huge impact on all stock, bond and currency markets. **The Discount Rate is another short term rate that the government uses to manage policy. It** is the rate that the Fed charges commercial banks for emergency liquidity purposes. This rate also implies clear policy signals.

- The **30-year Treasury Bond,** known as the long bond, is a "bellwether" rate because it indicates market participants' inflation expectations. Comparable long term bonds exist in other major economies as well. Although there is not a clear cut relationship between the long bond and exchange rates, a fall in the value of the bond will indicate inflationary concerns and can pressure a country's currency. It can affect it either way, since in an environment where inflation is currently not a threat, data indicating strong economic growth, which inflation does, will support the currency. When the threat of inflation is high, this will usually hurt

the currency.

- Three month Eurodollar deposits are dollar deposits held outside the United States. This interest rate serves as a benchmark for evaluating interest rate differentials. For example, if there is a large differential in favor of the Eurodollar and against the Euroyen deposits, the dollar will more likely strengthen against the yen.

- The 10-year Treasury Note is another benchmark that serves for comparison of the strengths between economies. Analysts will compare the yield on a 10-year Treasury Note with the yields on comparable bonds such as the German 10-year bund, the Japanese 10-year JGB and the 10-year gilt of Britain. The difference in the yields of these instruments will affect exchange rates; a higher U.S. yield normally means a higher U.S. dollar.

- **Inflation** rates (the rate that the price of goods increases) will have an impact on real interest rates, and therefore on exchange rates. Inflation is measured by changes in the prices of a basket of goods over a certain period of time. Increased prices are a sign of inflation which should contribute to a decline in the currency of the country. Inflation also affects the nominal interest rate. The nominal interest rate is the quoted rate on any given instrument. A benchmark rate such as a ten year bond is a good indicator of the general rates in an economy, but it has to be examined taking inflation into account. When the inflation rate is deducted from the interest rate, one arrives at the "real" interest rate. Since inflation erodes interest rate earnings, a true measure of interest rates would factor in the inflation rate. If an investor is earning 10% on his deposit, but inflation in his country is 5%, then he is really only earning 5%, since the value of this investment is eroded by 5%. However, in keeping with our disclaimer that indicators don't always work perfectly, a currency may sometimes strengthen with increased inflation because of expectations that the central bank will raise short-term interest rates to combat the rising inflation.

- **Unemployment** levels will generally be an indication of the health of an economy, and the currencies of countries with high unemployment rates will be weaker than those of countries with lower unemployment and consequently healthier economies. In a country that has seen recent economic turmoil, strong employment numbers could send the currency higher since the markets will view them as an indication of economic recovery. But markets discount information quickly,

and since high employment can lead to inflation, the currency may ultimately suffer.

- **Money Supply** influences exchange rates because of its influence on inflation and interest rates. With an increase in money supply, there is an increase in inflation and a corresponding decrease in real rates of interest, which will lower demand for a currency.

- **Reserves** are currencies that are held in reserve by governments to settle foreign exchange debts with other nations or to support their own currency. A large requirement for reserves in a given currency should support that currency because of the laws of supply and demand. Central banks use reserve operations to manipulate their currency's value: it would buy its own currency and sell the reserve currency which has the effect of lowering the exchange rate of the reserve currency and increasing the exchange rate of its currency. Buying the reserve currency would push down the exchange rate of its own currency. Adjusting these levels of reserves can have a sizeable, but usually temporary effect on foreign exchange rates.

- **Political** conditions in a country or a region can have a very strong effect on the foreign exchange markets. First of all, political instability will negatively impact a country's economy, and therefore its attractiveness to investors. This lowers demand for its currency and its price. In addition, if a government is in power that is perceived to be fiscally irresponsible, it will have the same effect, especially if the country is a major player on the international scene. Political unrest in major oil producing nations, for example, can contribute to price and inflation instability, which will in turn affect exchange rates.

- **Intervention** in a nation's currency is used by central banks to impact foreign exchange markets. A central bank could perform purchases or sales of its currency against another currency, using its reserves, as above, or engage in a concerted intervention in which it collaborates with other central banks. Interestingly, many times the hint or threat of intervention can significantly move foreign exchange markets.

- **Retail sales** data is a measure of the sales retailers make during a period, and therefore measures consumer spending. Like inflation measures that use a basket of goods, the retail sales data does not examine all retailers, but a sampling of a group of stores of different types for a general idea of consumer spending. Retail

sales data is viewed by market participants as another sign of the weakness or strength of an economy, with an increased rate of retail sales considered an indication of a strong economy.

- **Durable goods** orders measure the amount of manufactured goods that have been ordered (whether shipped or not) for the time period being measured. Durable goods are those with a lifespan of over three years, so they include such items as appliances and autos, and give the markets an idea of how individuals are spending their money. Durable goods are viewed as a better measure of long term growth in an economy, since they are purchases that can be delayed in periods of slower economic growth.

In addition to basic economic and political factors that influence the direction of foreign exchange rates, there are a number of economic theories that are seen to explain how currencies interact. The most widely followed of these theories are Purchasing Power Parity, the law of Supply and Demand, Interest Rate Parity, the Balance of Payments theory and the International Fisher Effect.

- **Purchasing Power Parity** states that price levels between two countries should be equivalent after exchange rate adjustments. The basis for this theory is the law of one price, which states that the cost of an identical good should be exactly the same regardless of where it is consumed. If one follows this theory, any large discrepancy in the price of an identical good between two countries after exchange rate adjustment means that one of the currencies is overvalued and arbitrage opportunities exist. Such arbitrage should, in theory, bring the rates or the prices back into equilibrium since arbitrageurs will buy or sell the currencies appropriately to force to adjust.

- The international newspaper The Economist studies the theory of Purchasing Power Parity in a light hearted way in its Big Mac Index[6]. According to the law of one, a Big Mac should cost the same all over the world, after exchange rate adjustments. This is, of course, not the case, and we see that the ubiquitous burger, and by inference, the Norwegian krone is grossly overvalued. On the other hand, a Big Mac, and supposedly other goods, can be cheaply obtained in Hong Kong and Malaysia since their currencies are undervalued against the dollar by 52%:

[6] "Sandwiched", The Economist July 24, 2008.

The McCurrency menu

The hamburger standard

	Big Mac prices		Implied PPP† of the dollar	actual exchange rate	Under (–)/ over (+) valuation against dollar
	In local currency	in dollars*			
United States‡	$3.57	3.57	–	–	
Argentina	Peso 11.0	3.64	3.08	3.02	+2
Australia	A$3.45	3.36	0.97	1.03	-6
Brazil	Real 7.50	4.73	2.10	1.58	+33
Britain	£2.29	4.57	1.56§	2.00	+28
Canada	C$4.09	4.08	1.15	1.00	+14
Chile	Peso 1,550	3.13	434	494	-12
China	Yuan 12.5	1.83	3.50	6.83	-49
Czech Republic	Koruna 66.1	4.56	18.5	14.5	+28
Denmark	DK28.0	5.95	7.84	4.70	+67
Egypt	Pound 13.0	2.45	3.64	5.31	-31
Euro Area**	€3.37	5.34	1.06††	1.59	+50
Hong Kong	HK$13.3	1.71	3.73	7.80	-52
Hungary	Forint 670	4.64	187.7	144.3	+30
Indonesia	Rupiah 18,700	2.04	5,238	9,152	-43
Japan	Yen 280	2.62	78.4	106.8	-27
Malaysia	Ringgit 5.50	1.70	1.54	3.2	-52
Mexico	Peso 32.0	3.15	8.96	10.2	-12
New Zealand	NZ$4.90	3.72	1.37	1.32	+4
Norway	Kroner 40.0	7.88	11.2	5.08	+121
Poland	Zloty 7.00	3.45	1.96	2.03	-3
Russia	Rouble 59.0	2.54	16.5	23.2	-29
Saudi Arabia	Riyal 10.0	2.67	2.80	3.75	-25
Singapore	S$3.95	2.92	1.11	1.35	-18
South Africa	Rand 16.9	2.24	4.75	7.56	-37
South Korea	Won 3,200	3.14	896	1,018	-12
Sweden	SKr38.0	6.37	10.6	5.96	+79
Switzerland	SFr6.50	6.36	1.82	1.02	+78
Taiwan	NT$75.0	2.47	21.0	30.4	-31
Thailand	Baht 62.0	1.86	17.4	33.4	-48
Turkey	lire 5.15	4.32	1.44	1.19	+21
UAE	Dirhams 10.00	2.72	2.80	3.67	-24
Colombia	Peso 7000.00	3.89	1960.78	1798.65	9
Costa Rica	Colones 1800.00	3.27	504.20	551.02	-8
Estonia	Kroon 32.00	3.24	8.96	9.87	-9
Iceland	Kronur 469.00	5.97	131.37	78.57	67
Latvia	Lats 1.55	3.50	0.43	0.44	-2
Lithuania	Litas 6.90	3.17	1.93	2.18	-11
Pakistan	Rupee 140.00	1.97	39.22	70.90	-45
Peru	New Sol 9.50	3.35	2.66	2.84	-6
Philippines	Peso 87.00	1.96	24.37	44.49	-45
Slovakia	Koruna 77.00	4.03	21.57	19.13	13
Sri Lanka	Rupee 210.00	1.95	58.82	107.55	-45
Ukraine	Hryvnia 11.00	2.39	3.08	4.60	-33
Uruguay	Peso 61.00	3.19	17.09	19.15	-11

*At current exchange rates

†Purchasing-power parity; local price divided by price in the United States

‡Average of New York, Chicago, Atlanta and San Francisco §Dollars per pound

**Weighted average of prices in euro area ††Dollars per euro

Sources: McDonald's; *The Economist*

- **Supply and Demand** is a basic economic theory that says that if the supply of a good increases, the price of the good will decrease, and vice versa. Supply and demand price theory applies to currencies as much as it does to other goods. If the supply of a country's currency increases, it should require more of that country's currency to purchase another currency than it did before, which means that its price is lower. If there is a jump in the supply of a currency, that currency will become less valuable relative to other currencies, simply because there is more of it. Central banks control the supply of a country's currency by increasing money supply and also by manipulating interest rates which will have an ultimate effect on the money supply by increasing or decreasing the flow of money.

- **Interest Rate Parity** is a concept that is similar to Purchasing Power Parity, and it states that similar financial assets, with the same risk in different countries should carry the same interest rate, once an adjustment for the exchange rate has been made. The Law of One Price guides this theory as well, and exchange rates should adjust to make up for any difference in price, or arbitrage will continually balance out those differences. Since risk evaluation is a more complex concept, it is not as simple to calculate real differences because it is not as simple to make the comparisons between financial instruments. Purchasing Power Parity is easier to measure because goods can be fairly generic.

- **Balance of Payments** Theory states that if a country is running a large current account surplus or deficit, it is a sign that the country's exchange rate is out of equilibrium. In order for the current account to be brought into equilibrium, the exchange rate would have to adjust upwards or downwards. Countries that have large current account deficits (more imports than exports) would experience a depreciation in their currency, and countries that have large current account surpluses would see an appreciation in their currencies. Balance of Payments Theory does not account for all factors in the market, since the U.S. dollar, despite a current account deficit of the United States that consistently is the highest in the world (at over $850billion) has only recently lost a great deal of value, and has appreciated and depreciated in spite of its steadily increasing current account deficit. Its role as a reserve currency, the phenomenon of petro dollars and other factors may contribute to this imbalance. On the other hand, the currency of China, which consistently has the highest current account surplus, (more than $250billion) trades in a narrow range, supposedly due to intervention on the part of the Chinese government to maintain a peg to the U.S. dollar.

- The **International Fisher Effect** holds that the exchange rate between two countries should change by an amount similar to the difference between their nominal interest rates. In other words, if the interest rate in one country is lower than the interest rate in another country, the exchange rate of the currencies of these countries should make up the difference, and the country with the lower nominal rate should appreciate against the currency with the higher nominal rate by a like amount.

So we see that these theories, since they are based on assumptions that may not always exist, and on perfect situations, cannot be accurate in predicting currency movements. Nevertheless, it is important to understand the basis of each of these important theories, especially since traders use them as part of the many tools for evaluating the fundamentals to predict foreign exchange market movements.

Most active traders keep on top of the financial news by reading financial publications such as the Wall Street Journal, the Economist and the Financial Times as well as general newspapers for political news that may impact the markets.

Technicals

Technical trading is used in other trading markets as well as the foreign exchange markets. Commodities trading is one of the largest forums that uses technical trading, but it is also used in analyzing equities. Today's technical analysis techniques were first seen in Dow Theory, developed around the turn of the century by Charles H. Dow to analyze the stock market. Dow laid out his theory as follows:

- The market has three movements, all occurring at the same time - primary, secondary and intraday. These movements are not totally random and the main purpose of using all three movements is to define a trend at an early stage and to trade in accordance with its direction.
- Averages discount everything.
- The market reflects all available information. The price in a market already discounts everything. It is affected by economic, political and other factors, but all this information is already reflected in it.
- History repeats itself. Any technique that proved effective in the past should still be effective to forecast future price movements.

Technical analysis uses the information indicated by the price to interpret what the market is saying in order to make a prediction about future prices

In other words, Dow believed that everything there is to know about a market is already reflected in its price, since the arrived upon price in a market summarizes all of the expectations of market participants. If unexpected event occur, the market is only affected in the short term; the patterns remain.

To Dow's studies, Robert Rhea added the concept of divergence and Richard Schabacker developed the modern concept of pattern analysis. Schabacker was the first to classify some of commonly used chart patterns and he developed the theory of price gaps, trend lines and support and resistance levels, all extremely useful tools of technical analysis that we will discuss shortly.

Technical trading uses the factors in the market, primarily prices (which in the case of foreign exchange are the exchange rates) and volume to predict how the markets will behave in the future. As we said, technical traders believe that exchange rates already reflect all relevant factors in the market. Traders use charts to track exchange rates in order to be able to spot trends and patterns that will give them indications of the next move a currency will make. Most computer charts display a small box of data usually called a display window which will show the following items on the chart:

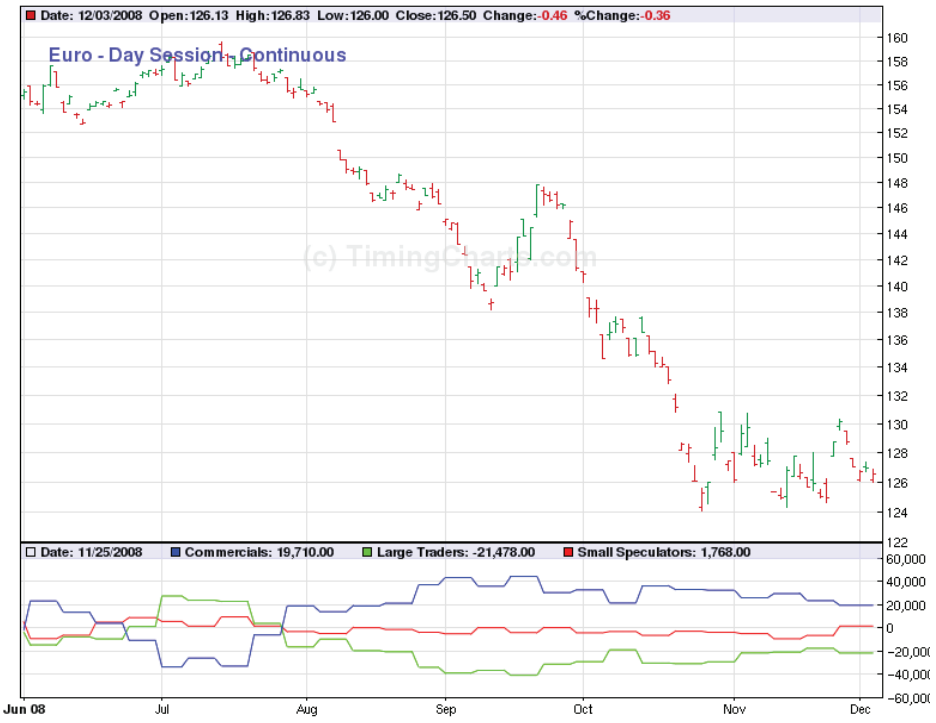
O = Opening Price
H = Highest Price
L = Lowest Price
C = Close or Last Price
Tr = Volume or number of trades in that time period.

The three most popular types of charts are line charts, bar charts and candlestick charts.

A **line chart** is the simplest of the charts used and connects one closing rate to the next closing rate to show the general movement of a currency over a certain period of time. Frequently, a line chart may make it easier to spot longer trends, or when other technical instruments are overlaid, such as bands or oscillators (see below) or when comparisons with other time line points such as the Commitment of Traders report, below.

Source: TimingCharts.com

A **bar chart** is a series of bars showing the prices over the chosen time period. The range of rates is indicated on the right hand vertical scale. The bar represents the rates for the particular range of time. On a daily chart, the top of the bar would fall at the high for the day, and the bottom at the low, but bar charts can exist for shorter or longer periods of time, so that a trader can see all of the activity for each week or month. Extending slightly to the left and right of each bar are two small ticks; the tick to the left is the opening price and the tick to the right is the closing price. In this way, on one line, we can see the high, low, open and close for that day if it is a daily chart, or week or month for longer period charts.



Source: TimingCharts.com

Candlestick charts are called that because they look like candlesticks, a cylindrical shape with a wick sticking out of the top. A Japanese rice trader dreamed up candlestick charts in the 1700's to follow the price of rice based on supply and demand. He had a runner who went to different towns to gather the price from each town's rice auction, and brought the information back for his boss to produce a chart of the open, high, low and closing rice prices

The wider the price range of the currency, the longer the candlestick will be. The top of the candle represents the opening, the bottom the close, the bar extending upward the high, the bar extending downward the low. The hollow or filled portion of the candlestick is called the "real body" and the thin lines above and below the body represent the high/low range for the period and are called "shadows" (or wicks and tails). Hallow candlesticks mean that the close is greater than the open and filled candlesticks mean the close is less than the open, or the chartist may use colors, as in the chart below. Technical traders enjoy using candlestick charts because so much information can be seen at once.

Source: FXUniversal

Charts can be drawn to depict any length of time. Day traders may look at the movement of a currency in hourly intervals or a trader who is planning to unwind a position may want a short range view for spotting the best exit point. A portfolio manager may prefer to see an overall, long term view so that he can spot patterns months or years. Most technical traders use one type of chart primarily, but keep on eye on the others. Some patterns may be easier to spot on some charts than others. Sometimes longer range trends are easier to spot on a simple line chart.

All of these charts use the information on the chart to spot patterns. Traders interpret these patterns to give them information that they use in making their trading decisions. In other words, whether a trader prefers a line, bar or candlestick chart, he will still use the concepts of double tops and bottoms, support and resistance, head and shoulders, etc. that we will discuss below to interpret the direction of the market.

Interpreting Technical Charts

Whatever charting system is used, interpreting the patterns is the most important part of technical trading. The various patterns that may be spotted have to be interpreted in view of volume and open interest (for futures contracts) since they will indicate the strength of the pattern.

When markets display these patterns, they may be said to be a kind of market. There

are two large types of markets, a trending market and a trend-less market. Within these two types of markets, there are specific patterns that also identify themselves. In general the patterns in markets can be described as:

- Trending- Patterns characterized by elongated price movements with occasional pauses, profit taking, or resting periods.
- Uptrends - A pattern of higher highs and higher lows.
- Downtrends - A pattern of lower lows and lower highs.
- Trend-less - Erratic price movements which are steep and do not last long and therefore must reverse. These movements can move many points in a short period of time, but they usually result in very little net price movement over time.
- Choppy - An erratic pattern of higher highs and lower lows.
- Sideways - A narrow pattern of lower highs and higher lows.

Each of these types of markets are important to identify, because, even though uptrend and down-trend markets offer excellent trading results, choppy markets indicate stop levels.

Simply put, traders try to identify a trend and follow it up or down, watching for indications that the trend is ending and a new pattern (trend) is going to start.

Trend lines: Prices (in our case, exchange rates) rise and fall intermittently, but most of the time, they move in narrow ranges. Dow theory defines three types of trend lines: bull (rising prices), bear (falling prices) and flat (prices remain in a sideways pattern). Traders will use charts to first determine if the market is in an uptrend or a downtrend.

Classic Uptrend:

An uptrend means that each bottom is above the previous bottom and each high is above the previous high, so that a "trend line" can be drawn between the bottom points. The more of these supporting trend points there are, (in other words, the longer the trend), the stronger the trend.

Conversely, a downtrend means that each bottom is below the previous bottom and each high is under the previous high, and a trend line is drawn using the highest points. Below is a chart indicating a classic downtrend.

A flat trend means that each bottom or high is at the same level as the previous bottom or high. Below, we see a classic flat trend.

(Notice that after this flat trend, prices look as though they may be starting to form a bottom. Traders would be watching closely to see if a supporting double bottom forms, indicating a reversal of this trend.)

There are two major axioms that traders use in dealing with trends:

1. The trend is your friend. It is unwise to enter positions against the prevailing trend.

2. The primary trend will remain intact until a clear trend reversal signal is given. In the above example, more data would be needed, or a longer trend line viewed, in order to see if a true reversal is occurring.

Trend Channels: Channels form boundaries for price fluctuations. A trend channel is created by drawing a parallel line next to the trend line. One line shows the price highs, the other the price lows.

Channel lines are used to fix spots to take profits or losses. In an uptrend channel, the top line of the channel is drawn by connecting the progressive highs; in a down-trend, the parallel lines would connect the progressive lows. This creates the channel and as long as prices remain within the channel, the market is continuing its trend. Once it trades outside of the channel, this is viewed as a signal for a change in the market.

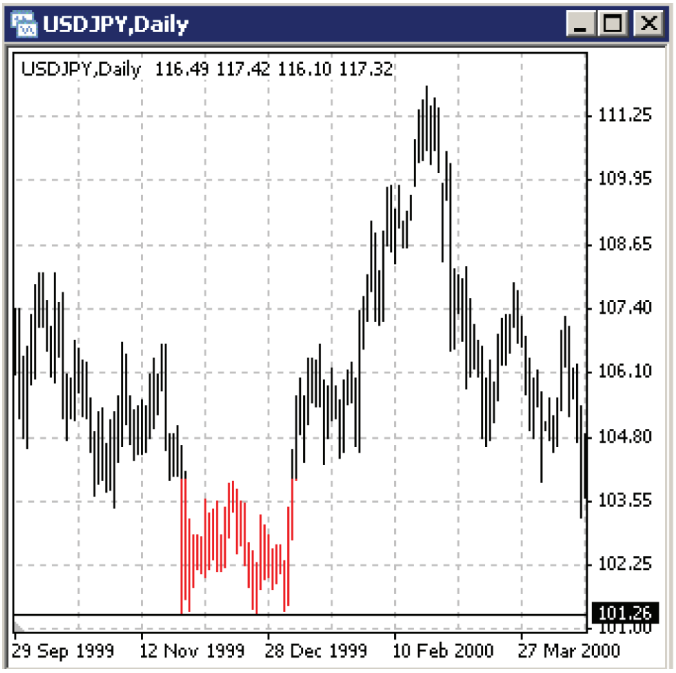
For this reason, the vast majority of chart patterns fall into two main groups: reversal and continuation. Reversal patterns indicate a trend may change and may be broken down into top and bottom formations. Continuation patterns indicate that the trend has taken a pause and then resumes its previous direction after a while.

Traders watch for trends or patterns to form, as indicated by the various shapes that the rates form on a chart.

Tops and bottoms: A double top is where a rate goes up to a certain level, drops back from that level, and then makes a second run to that level, then drops back again. The double top pattern indicates that demand may be outpacing supply, causing prices (the exchange rate) to rise until supply outstrips demand, which causes the rate to fall once again. After the rate falls back for the second time, if the rate goes back up to its prior level and fails to break through it, it indicates that sellers have taken over, causing rates to fall even more dramatically than the first fall.

The double bottom is the reverse, where a currency rate falls to a particular level, retraces back up from that level and then falls to it again. In this case, supply is outpacing demand, and if the rate cannot penetrate the second bottom, the rate should rise even more dramatically than the first increase.

Classic Double Bottom:



Other factors are analyzed to interpret the strength of the moves. The wider or narrower the valleys created by these bottoms or tops, the volume traded at the point of the bottoms or tops and big M's or big W's act as further confirmation of a trend. A Big M or W pattern includes double tops or bottoms with extremely tall sides. A pattern that breaks like this will indicate extremely strong support for movement of the currency in

that direction.

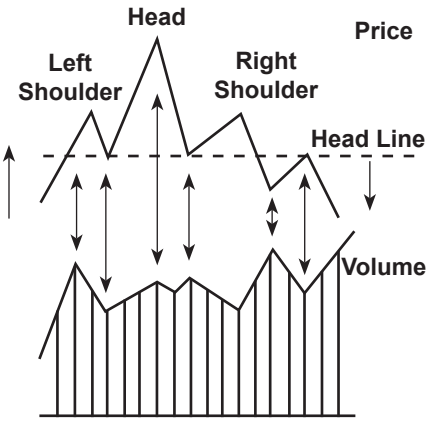
Breakouts: Breakouts are one of the strongest indicators used by technical traders. A breakout is a very dramatic movement in the rate of a currency out of its normal trading range and is usually accompanied by significant volume. Breakouts usually occur as a result of unexpected events in the market. Breakouts with a strong percentage move accompanied by strong volume rarely die out and move back into the old trading range, although some breakouts may not immediately continue up or down and false breakouts do sometimes occur. Breakouts are based on support and resistance.

Support and resistance: Charts show the continual interaction between buyers and sellers in a market. This interaction creates levels known as support and resistance. If buyers push up the price of a currency, its exchange rate will continue to stay at or above a certain level. If it does this for any length of time, that level is considered to be a support price, that is, that the rate will not fall below this support, but should continue rising. Resistance is the opposite. If buyers offer less for a currency, the price will fall each time it hits the resistance line, and seem to be unable to break through it. These levels are found simply by drawing a line across a series of exchange rates. These support and resistance lines eventually will form the trend line, with the support level the starting point of an uptrend. The theory behind this is that when the rate falls to a support level, buyers start to resist against further rate decreases, giving it support. Once a support level is broken, it becomes a resistance level.

Support level

Resistance level:

Head and shoulders patterns: These are classic reverse patterns that signal that a major top or bottom is forming. The head and shoulders pattern is most often seen in an uptrend and it is considered most reliable when it is found in an uptrend. The head is the price peak, with another peak lower than the head to the left (left shoulder) and another peak lower than the head to the right (right shoulder):



A head and shoulder is indicated when the left shoulder and the head are in place, and the market starts to rally from the neck. The right shoulder forms when the market falls at a lower high than the major high. The classic pattern of a head and shoulders is when the right shoulder is of approximately the same size and extent as the left shoulder. A head and shoulders pattern is not complete until the right shoulder has completely formed and the decline from the right shoulder's peak breaks under the neckline.

Support and resistance are not exact numbers, nor are they exact spots on the chart. Many times, a support or resistance level may look broken, but the market may have just been testing it and it may resume. There is no clear cut way to know if a support or resistance level has been broken, although some say that is confirmed if the market closes past that level. A support level is the starting point of an uptrend, and actually forms a tangent to the minimum prices. It is commonly thought that when the price falls down to the support level, buyers start to resist against further price decrease in a bullish market, thus giving it support. This is the reason the price will bounce back in many cases and start rising once again after having reached their support level.

Flags, pennants and gaps: Tops and bottoms and heads and shoulders are reversal chart patterns, alerting the trader to a change in a trend direction. Flags, pennants and gaps are continuation chart patterns, which serve to confirm the direction of a trend.

Flags indict a straight up or down move that is very steep. It indicates a short consolidation that has parallel boundaries that point either upward or downward. It repre-

sents a pause in the trend before it continues and is usually preceded by a sharp advance or decline, depending on the direction of the trend.

The formation of a flag pattern is usually accompanied by a decrease in volume followed by a sharp increase in volume after the breakout. A flag pattern is considered to be in the middle of the trend, so after the breakout the price the trend should move in the same range as it had moved before the flag pattern formed. In general, the flag should run in the opposite direction of the general trend, "blowing" upwards for a down trend, as above, or downwards for an uptrend. Since this is not always the case, it is important to watch the movement immediately after the formation of a flag. A wedge is similar to a flag, as it is a small triangle that inclines against the trend.

A flag confirming a downward trend:

Pennants indicate converging trend lines that occur during market consolidations. Prior to a breakout, a pennant will occur at weakening volume followed by a large increase in volume. In a pennant, the boundaries are not parallel. A pennant will appear after a rapid trend, in the middle of the trend. As the pennant is forming, volume usually decreases and then will increase sharply after the breakout.

Pennants form during consolidation periods in the trend, but unlike flags, which are a short consolidation period in the opposite direction of the trend, pennants are formed

as sideways triangles, and are more supportive of a continuation in the trend. They indicate that the bears could not get even a short stronghold in an uptrend, or that the bulls could not push the market out of a downtrend even for a short while.

A pennant in an upward trend:

Gaps: Gaps are formed on a chart where no trading has taken place. An up gap forms when the lowest rate on a trading day is higher than the highest high of the previous day. A down gap is formed when the highest rate of the day is lower than the lowest low of the previous day. Up gaps indicate strength of a direction; down gaps indicate weakness. A breakaway gap is a price gap that occurs in the mid point of a strong trend, and usually occurs after some kind of consolidation. An exhaustion gap is a gap that occurs at the end of a strong trend and indicates the trend may be ending.

Retracement: Exchange rates almost never simply rise during an uptrend and fall during a downtrend. As we have seen in the charts above, rates rise or fall and then retrace for a bit, while still within the same trend. It is believed that positions opened at the end of a retracement are the most profitable. In order to identify this, analysts use a correction index using Fibonacci numbers, developed by a mathematician in the 11th century. This is a series of numbers that takes a previous number, adds it to a current number

to get the next number, etc. A Fibonacci series would be 1,2,3,5,8,13,21,34,55 and so on. This Fibonacci indicator was popularized in technical trading by Ralph Elliot, who invented the Elliot Wave principal. It tries to forecast potential support levels based on the height of the overall move and any wave patterns. [7] Traders use these numbers to measure the angle of correction in price retracements. It is a fairly complex system of analysis, but serious traders usually subscribe to charting services that calculate these numbers for them.

Fibonacci numbers possess a number of interrelationships, such as the fact that any given number is approximately 1.618 times the preceding number and any given number is approximately 0.618 times the following number. Traders use these relationships to find corrections in a price range movement. In a fast moving market, a correction will be about 0.382 of the price range movement, in an average market, about 0.50 of the price range movement and the maximum correction, because of the mathematical relationships, is 0.618, and indicates a weak trend. The chart below shows how the measurements are indicated on a chart.

Moving Averages: This is the average of an exchange rate over a period of time, adjusted by time. Traders look at both simple moving averages and enhanced moving averages. A simple moving average calculates the closing rate of over a period of time, divided by the designated period of time. In other words, take the closing rate of a cur-

[7] This number series has been called "the most important mathematical presentation of natural phenomena ever discovered" (R. Fischer, The New Fibonacci Trader: Tools and Strategies for Trading Success, 2001). "It is exhibited in everything from the proportions of the Egyptian pyramids... the number of florets in flower heads... the double helix of the DNA molecule... to the logarithmic spiral of the nautilus shell."

rency over 30 days and divide it by 30. It is called a moving average, because the number of days remains constant, so that the period is always 30 days, and the earlier rates are dropped from the average when a new one is added. An enhanced moving average gives more weight to the most recent rates, since traders believe that the more recent the data, the greater influence on the analysis it should have. The exponential moving average (EMA) is one of the most popular of the weighted moving averages. It discounts both prices of the previous and current periods. Every subsequent value becomes more significant.

A few rules that exist for moving averages should be noted:

- The longer the time period, the less sensitive the moving average is to price movements.
- If the moving average period is too short it will have too many false signals.
- If the moving average is too long, period will lag a little.
- In a sideways trends, it is better to use longer periods than usual.

An illustration of the use of moving averages:

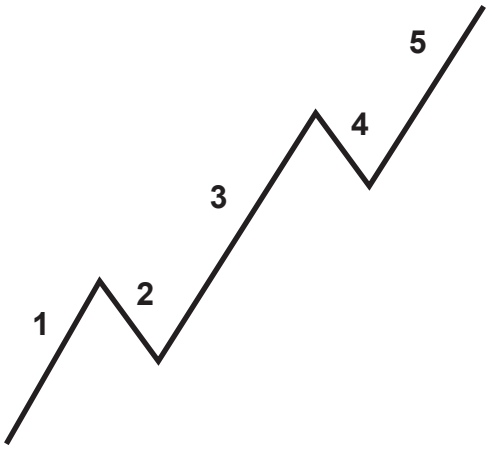
Source: Fxstreet.com

Bollinger Bands: Analyst John Bollinger developed Bollinger bands in the 1980's to address the need for an analytical technique that would measure volatility. Bollinger

Bands are fluctuating bands that follow the price movement of an exchange rate (or any set of prices) in a set of three curves drawn in ratio to the rates. The primary band is a simple moving average. The middle band is a measure of the intermediate term trend that serves as a base for the upper and lower bands. The width of the band is not constant, but moves according to a divergence from the moving average over a specific period of time. Decisions to enter or exit a market are made when the rate rises above the band resistance or falls below the band support. Bollinger bands are indications of the strength of a market, since they contract when the market is quiet (no sharp moves, and the rate consolidates to continue a prevailing trend) and widen when the trend becomes stronger or a new trend is beginning. Trend confirmation is said to be strong when Bollinger Bands widen at the same time that volume increases.

Bollinger bands shown on a bar chart:

Elliot Wave Theory: Developed by Ralph Elliot for analysis of the stock market, this theory proposes that, contrary to popular belief at the time (1920's) markets did not behave in a chaotic manner, but behaved in repetitive cycles. Elliot believed that the psychology of the market created swings, either up or down, and these swings created repetitive patterns. Elliot believed that a trending market moved in a 5-3 wave pattern.



In the first wave, a currency makes an initial upward move, caused by any number of reasons. Many of the buyers in that move, upon seeing a potentially overvalued situation may take their profit, causing the currency to fall; this is wave 2. It does not fall to its previous lows, because market participants will view it as a bargain once it has moved down and start to buy again. Wave 3 is usually the strongest wave; more market participants join this upward move and this additional volume pushes the rate up strongly. The currency will reach a level where it is once again considered overvalued, and traders will sell, leading to wave 4. This wave tends to be a weaker one since there are usually more people who are bullish and want to buy on the dips. Wave 5 is the second long run up, where everybody wants to get in on the band wagon of this hot currency. This is when it truly becomes overvalued, and contrarians in the market will recognize it and start to sell.

Convergence and Divergence: Charles Dow also developed the concept of confirmation which we now know as divergence. It is used to compare price movements to oscillator movements to find the strength of a trend. The weaknesses in some moving averages systems can be overcome through the use of Moving Average Convergence Divergence (MACD). MACD is the difference between a fast 12 day exponential moving average and the slower 26 day exponential moving average. Bullish divergence is shown when a new high has not been confirmed by a new MACD top. In other words, the rate is above the previous top rate and the MACD top is below the preceding top. This signifies that the trend is weak. Since it does not mean that the trend has ended, traders will look for other confirmations that the trend is about to reverse. Bearish convergence is shown when a new low has not been confirmed by a new MACD bottom and the bottom rate is below the previous one. This means the bearish trend is weak, but is likewise not a strong signal for the reversal of a trend.

Bullish Divergence:

Bearish Convergence

Volume

Overlaying all of these tools used in technical trading is the issue of volume. Many of these patterns may indicate or confirm a trend, but volume adds additional weight to whatever argument the pattern may support. Volume is the amount of trading activity in a given currency. If volume increases just at the point of a significant juncture on a chart, it will indicate increased interest by traders at that level. If volume increases at the point of a significant price increase, it indicates that prices should continue to rise. If volume increases at the point of a significant price decrease, it indicates that the price will continue to fall. Volume is a confirming indicator in forex (and other) trading. It is important to make sure that heavier volume is occurring in the direction of the trend. A very firm upward trend in prices will be indicated by rising prices, rising volume and (in futures) rising open interest. Since volume is a tool used in both fundamental and technical analysis, we will examine in depth below.

Additional Trading Tools

In technical trading analysis, it seems like the more information the traders have, the more information they look for in order to confirm what the first information told them. Beyond the most popular technical tools we have just reviewed, there are a number of esoteric mathematical formulas that we will review briefly here:

- **Parabolic Time Price System** (also called SAR), developed by Welles Wilder in 1976, defines the direction of a prevailing trend. The parabolic SAR is below the

price chart if a trend is bullish and above the price chart if a trend is bearish.

- **Average Directional Movement Index** (ADX), also developed by Wilder, [8]shows if a trend exists in a market and the potential it may have.
- **Momentum Oscillators** are the difference between price levels, measured after a specific length of time. For example, if the length of time is five, the oscillator is the difference between the current exchange rate and the one five bars before.
- **Commodity Channel Index** measures the price deviation of a given asset from its average price. A value of more than +100 shows that the asset is overbought and a value of -100 shows that is it oversold.
- **Relative Strength Index** (RSI), another Wilder development, is a mathematical formula that measures the price changes over a period of time. RSI = 100-(100/(1+U/D)), where U is the average value of positive changes over the period, and D is the average value of negative changes over the period. An overbought condition is indicated by an RSI above 70, and oversold condition by and RSI below 30.
- **The Stochastic Oscillator** attempts to determine price behavior by observing closing price levels. The theory is that rising prices tend to close closer to the top and falling prices tend to close closer to the bottom.
- **A Force Index Oscillator**, developed by Alexander Elder, uses trend, range and volume to measure bullish forces during upward movement and bearish forces during downward movements.
- **The Relative Vigor Index** (RVI) is based on the concept that closing prices are higher than the opening price in a rising market and lower than the opening price in a falling market. It is demonstrated by the relatively simple formula RVI = (CLOSE - OPEN) / (HIGH - LOW).
- **The Williams Percent Range Oscillator** uses a formula to measure oversold and overbought conditions. The values lie between 0 and 100, and if an oscillator is between 80 and 100, it indicates an oversold market; if it is between 0 and 20, it indicates an overbought condition.
- **Average True Range** is volatility index developed by Wilder[9] that measures a moving average of three range values, with the higher oscillator value indicating a possibility for a trend reversal and the smaller oscillator value indicating a weaker trend.

[8] Wilder, J. Welles, "New Concepts in Technical Trading Systems" Trend Research, 1978.

[9] Ibid.

Fundamental or Technical Analysis?

Most traders use a combination of technical and fundamental analysis in their trading. Fundamental factors can often throw off the technicals, especially catastrophic or unexpected news. Technical factors are frequently able to explain market movements that are not explainable by the fundamentals. A good trader will always have a general awareness of what is happening in the fundamentals as he keeps a watchful eye on his technical charts.

Using the Tools to Make Money

Now that we understand the tools that are available to us to understand and trade the market, how do we use them? Most traders follow both fundamental and technical analysis, although one may call himself a fundamental trader who looks at the charts and another may call himself a technical trader who keeps track of the fundamentals. By the simple fact that most of the traders in the foreign exchange market are using both of these tools, they are both going to influence the behavior of the markets. But also keep in mind that no trading tool can be 100% correct all of the time.

Trends and Channels

Once a trend line has been established, a trader would draw a parallel line to the main trend line, across the highs for an uptrend and across the lows for a downtrend, to create a channel. With the prices contained within this channel, trade entries and exits can be identified.

The length of a trend is very important because it further reinforces it. Trends confirm overall market sentiment, but in addition they are reinforced by trading techniques. Traders who were on the wrong side of a trend may be forced out of their position by stop loss orders as the trend continues to move against them. For example, if a trader was a buyer of euros because of some fundamentals, but the euro had entered a downward trend, if the price of euros kept falling, he would at some point have to exit the market, become a seller, and further magnify the strength of the trend, without even wanting to be on that side of the market.

Support, Resistance and Breakouts

Retracements bouncing off support or resistance lines are often good entry points, especially if confirmed by subsequent price action. The longer the base of support or resistance, the more solid the support or resistance will be. Breakouts from previous

trading channels are another good entry point, once you have confirmed signals of the breakout. When watching for signals of reversals, another maxim in the trading lexicology is that "bottoms bounce sharply and tops curve slowly." In other words, watch for short retracing before confirmation at bottoms, and longer consolidation before trend reversals at tops.

Moving Averages

Moving averages are used to confirm trend direction. All moving averages should confirm the direction of a main trend. Converging moving averages, where the short term average crosses above the long term average, for instance, often signals a good entry point. Chartists refer to this as a golden cross. When a shorter term moving average crosses below the value of the longer term average, a negative signal is given (called a dead cross.) Most of the time, traders use three or more moving averages. Tight formations by the averages, in conjunction with small price moves often signal a major market move. It is recommended to go short under falling moving averages in this case, and go long under rising moving averages. On the other hand, when three or more averages diverge (spread out), a major move may be at hand. Reversals frequently occur at three equally spaced moving averages in a trending market. Because of the mixed signals that can be garnered from the averages, it is always important to use them as one of many tools and not in isolation.

Volume

One of the most important tools that will help in confirming what the trends, support and resistance and averages are telling us is volume. High volumes on a breakout indicate buying interest. Once there is a bounce off a trend line or a breakout from a channel, retracing often occurs. Lower volume on the retracing indicates that fewer sellers are in the market, and it should continue in the trend line once again. However, if the volume increases on a retracement, that may indicate that the market is set to go lower, since there are more sellers fueling the move. So you can see that the same move can tell you two different things, depending on when the volume appears. Momentum increasing in the direction of the trade entry will usually act as a confirmation.

The accepted maxims concerning volume are:

- When prices are rising and volume is increasing, prices will continue to rise. In other words, an uptrend is being confirmed.

- When prices are rising but volume is decreasing, the uptrend is losing its momentum and may be coming to an end.
- When prices are falling and volume is increasing, prices will continue to fall. In other words, the downtrend is being confirmed.
- When prices are falling and volume is decreasing, the downtrend is losing its momentum and may be coming to an end.

The Charts

As we have seen, a great deal of information can be garnered from the individual components of the chart. A candlestick chart is a great example of this because of all of the information that is contained in each "candlestick": the price range of the currency (the wider the price range of the currency, the longer the candlestick), the opening and closing prices (top of the candle represents the opening, the bottom the close), the highs and lows (the bar extending upward the high, the bar extending downward the low), and whether the close is greater than the open (hallow candlesticks) or the open is greater than the close (filled candlesticks). Technical traders have a number of conventions that apply in analyzing candlestick charts.

Long white (hallow) candles are very bullish. Since the length indicates the price range, a wide trading range trading prices breaking that far away from the opening can signal strong upward moves.

A hammer (totally filled candle with no wick at the bottom or top) frequently appears after a significant downturn in an oversold market. A hanging man (long tail under the body of the candle) occurring near the top of a rally may signal a decline in the market, since the low price had the power to dip that low.

A doji (very short body and long wicks) usually indicates a period of consolidation and may be a good time to wait out a market. Buyers and sellers, indicated by the upper and lower wicks, did their best but they balanced each other out, and the market predominantly traded in a very narrow range. A doji indicates that a market is in balance.

An engulfing pattern is a chart pattern that forms when a small black candlestick is followed by a large white candlestick that completely "engulfs" the previous day's candlestick. The shadows or tails of the small candlestick are short, which enables the body of the large candlestick to be bigger than the entire previous day's candlestick.

Just as with the various specialized oscillators and strength indicators that were briefly discussed above, new schools can grow out of reading more and more into these relationships. The above candlestick patterns are the ones that are most commonly followed by traders because they seem to have the strongest signals, and are therefore the ones a novice FX trader should recognize and interpret. However, entire books have been written on candlestick patterns, and interpreting them in relationship to one another is a complex analysis that throws around terms such as collapsing doji stars, evening stars, haramis, rickshaw man(candlestick charting was invented by a Japanese trader, after all) dark cloud covers, etc .

But, at the end of the day, it is important to realize that the markets are not driven by Stochastic Oscillators, Fibonacci numbers or any thing else. They are driven by people who react to politics, economic analyses and other fundamentals. A good trader will use technical tools together with his sense of what is happening in the world to gain the best insight into the market.

Market Sentiment

The foreign exchange markets are influenced by market sentiment, and it doesn't matter if a trader is using primarily the fundamentals or the technicals to analyze the markets. It would seem that the fundamentals would be attuned to market sentiment, but as we have said, technical indicators already discount what is happening in the market and that also includes the feelings of the participants in the market. Reading market sentiment means trying to determine if the market is overall bullish, bearish, overbought, oversold. It is a simple concept to understand: obviously, if the majority of market participants are bullish on a market, they will continue buying in expectations of price increases. The concept may be simple to understand, but how do we read the signals to learn the true sentiment?

Measuring Market Sentiment Using Fundamental Analysis

Exchange rates are determined by fundamental factors such as political and economic news. And yet, the markets don't always or necessarily go in the direction that the news and the expected reaction to that news would predict. One of the important features of this "disconnect puzzle" is the link (or lack thereof) between exchange rates and the explanatory variables that can be only attributed to the influence of market moods or sentiment on exchange rates.[10] Long term studies such as the one by Rebitzky, using the U.S.dollar verses the Euro, indicate that the bull/bear spread (using the relative

[10] Rafael R. Rebitzky, 2007,"Sentiment in foreign exchange markets: Hidden fundamentals by the back door or just noise? "Money Macro and Finance (MMF) Research Group Conference 2006 118, Money Macro and Finance Research Group.

number of participants in the study forecasting stronger dollar versus those forecasting a weaker dollar) as an indicator of sentiment shows a correlation between the stronger market sentiment and the direction of the dollar.

Studies such as this are helpful in understanding that sentiment does indeed influence the foreign exchange markets, and even why. The one problem with studies of any kind, however, is that they are done after the fact. Only by understanding and spotting market sentiment as it is occurring will we be able to it to make better trading decisions. How can we know in advance what market participants are thinking about a given currency?

Obviously, traders who are bullish on a currency will buy it and traders who are bearish on it will be sellers, and this is their "sentiment". In some markets, such as such as the futures markets and stock markets, we can use volume and open interest as indicators of sentiment. Volume and open interest is calculated and reported by the exchange on which the currency is traded, for example the Chicago Mercantile Exchange. If a futures price that has been falling suddenly reverses and prices start rising, and this reversal is accompanied by heavy volume, analysts view this as a clear signal of a market sentiment that has turned bearish from bullish. However, the problem with the spot or cash market in foreign exchange is that, since it is an over the counter market and there is no one central exchange that takes on the task of measuring and reporting, volume cannot be measured. However, the currency futures market influence the spot foreign exchange market, and vice-versa.

What are futures prices, other than spot prices that have been adjusted interest rate differentials to account for time differences? For this reason, the spot and futures prices tend to move in tandem. That is, when the spot price of one currency goes up, the futures price of the same currency will go up. As CHF futures prices rise, the spot Swiss franc will also rise, because of this synchronistic tendency.

So now that we have shown that:

1. volume and open interest can tell us the direction and strength of market sentiment
2. the spot and futures markets move in tandem with one another
3. volume and open interest are measured on the futures market but not on the spot

market, we can come to the conclusion that we can use the futures markets volume and open interest reports to measure market sentiment in the spot markets.

We can find the information on these numbers in one important document that is published by the Commodities and Futures Trading Commission (CFTC), the Commitment of Traders (COT). This report, published by the CFTC every Friday, contains general information and detailed notes for contract markets in which twenty or more traders hold positions equal to or above certain reporting levels established by the CFTC (read: the big traders.) The original COT reports concentrated on the more traditional areas of agriculture and commodities, but more recently the report has been expanded to include the currency markets. The COT divides traders into two groups: non commercials (individual traders, hedge funds, and financial institutions who, for the most part, are in the market for speculative gains), and commercials (big businesses that use currency futures to hedge currency exposures). This one report tells us a great deal about the participants in a market and what they are doing by listing the long contracts, the short contracts, open interest (the number of contracts that have not been exercised or delivered), reportable positions (number of options and future positions that are required by CFTC regulations to be reported), non-reportable positions (the open interest of traders that do not have to report to the CFTC) and number of traders (how many traders are required to report).

The report not only breaks down the number by types of participants, but also, very critically, the changes from the prior week. This allows traders to determine from these shifts if a trend is continuing or slowing down.

Open interest is a very important component of this analysis. Since open interest is the number of contracts that have not been exercised or delivered, open interest can be described as a trader's position. If a new buyer enters into the market by buying a contract, he increases the long open interest position in that contract as well as the short open interest. All the long open interest in a market will be equal to all of the short open interest since there always has to be a buyer and a seller for each contract. Open interest increases when new buyers and seller enters the market. An increase in total open interest usually supports the current trend, so in a steady uptrend or downtrend, open interest should increase. (The longs, the buyers dominate in an uptrend, and the shorts, the sellers dominate in a downtrend.) When open interest starts to fall, this usually indicates that the current trend is starting to lose power.

Smaller traders can use this information by watching the direction that the commercials set. When the market is at a low, and there are a lot of long commercial positions on the COT, it is a strong indicator that the commercials are "buying the dip" for their future activities.

Source: TimingCharts.com

In this example, the Commitment of Traders numbers are shown at the box under the price chart. The green line is the level measuring when the non commercials, the large speculators who can have the most influence on a market. Notice how each point when the open interest of these speculators peaked corresponds to a turnaround, since at that point, there are not enough participants in the market to support it (it is over-bought) and the trend loses its steam.

Like most indicators, the COT is a tool that traders use in conjunction with others, just like the technical tools that traders bounce between to make sure one confirms the other. We talked about reviewing trades to see what went right or wrong, and this looking back strategy is a smart one for indicators as well. Back testing, checking to see if what the indicator said should happen actually did happen, is a great way to find this out.

Entering the markets

Finding entry and exit points in a market is one of the most important challenges in foreign exchange trading, since following the trend is the key to successful trading. Don't be surprised if you constantly see the adage "The trend is your friend" when you are doing your research on foreign exchange trading. One of the best keys to finding

entry points is to find those points where all of the indicators give the same signal, both for timing and direction. If the following indicators can be recognized on a chart, the trend will have been identified and an entry signal given. The more of these indicators that can be identified, the stronger the entry signal.

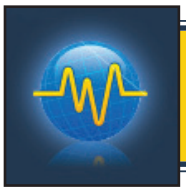
Bullish indicators

- a bullish candlestick engulfing pattern
- a trendline that breaks out upwards
- positive divergences in RSI, stochastics, and MACD
- strong, close support levels
- weak, distant resistance levels

Bearish indicators

- a bearish candlestick engulfing pattern
- a trendline that breaks out upwards
- negative divergences in RSI, stochastics and MACD
- moving average crossovers
- strong, close resistant levels
- weak, distant support levels

As we will discuss in setting up a trading plan, a trader should always place exit points (stop losses and take profit orders) at key levels before the trade is placed. This will prevent emotionalism or plain old neglect from ruining the trade. A trader should be careful about adjusting these stops and only do so if some fundamental indicators have changed the rationale of the trade.



The Ingredients of a Successful Trading Strategy

Understanding what the charts and fundamentals are telling you, and how to time your trades accordingly is only about half of a whole successful trading strategy. Most success is defined by two key ingredients: knowledge and discipline. Once a trader has embarked on a plan that will give him the knowledge required to trade intelligently, he needs to incorporate the second major ingredient: discipline.

Money Management

In order to trade intelligently and successfully, you need to have an overall money management strategy. The first leg of this strategy should be to make sure that you trade within your means. This means that losing money in the market will not have an adverse effect on your or your family's life.

Too many traders look at each trade they enter and decide how much they think they can afford to lose on it. That is like building a house by buying some lumber, then the windows and doors, then the appliances, and never adding up the whole thing up. A good trader will have an overall view of his long range strategy for making and managing his money. Any trader who does not look at this big picture and have a goal for his return on investment, his total account size and how many trades he can have outstanding at any one time, but is rather waiting to hit some jackpot with some magic trade is not trading, he is gambling.

The key to successful money management is controlling losses. A successful trader will only risk a certain percentage of his trading capital so that he can ride out any losing streaks. A trader who risks a small percentage of his capital will still be in the market for the winning trades. The idea is to have a money management strategy that will allow you to have a losing streak and still retain enough capital to continue trading. Without discipline and risk management, a trader will run out of capital before he can even get the experience to become a successful trader.

A trader should fix a maximum capital investment in his trading business. Anyone who starts a brick and mortar business would save or borrow a fixed amount of capital to found the business. A foreign exchange trader should do the same thing, that is, have

a fixed amount of capital set aside for his trading. Managing risk is also similar to starting any other kind of business. A businessman would not hire four employees and fill an entire warehouse with inventory; he would start slowly until he got his business off the ground. By the same token, a trader should decide what his maximum exposure should be at any given time and set parameters to maintain it.

Let us set up a hypothetical trading plan. Our trader has decided that he can risk $100,000 in his trading business. He immediately needs to establish his money management strategy so that he limits his exposure. Let us say that he decides he will not risk more than 25% of his capital at any one time and no more than 10% on any one trade. For this $10,000 investment, he will not risk more than 10%, fixing his absolute maximum loss at $1,000, since he will also use 5% stop losses ($500) on his trades. This is the kind of money management strategy that will guarantee that the trader will be able to ride out bad spells since he will never have a disproportionate share of his capital subject to loss.

Money management will also address the kinds of risks you are willing to take for a given level of reward. This is your "risk to reward ratio". When a trade is contemplated, you normally will be entering when a trend is running. Since the trend has already started, some of the possible profits have already been bypassed. So let's say you are entering the trend with about halfway more to run. If you chart the channel from start to possible finish, perhaps you see a profit of $5,000 in it, but you are entering late, so your possibility is $2,500. How much should you be willing to risk to achieve this goal? Since our possible profit is $2,500 and our maximum absolute loss is $1,000, we have to decide if this trade is worth the risk of 2500:1000 or 2 ½ to 1. If we have established our risk to reward ratio at 3 to 1, then the maximum that should be risked on this trade is $833, and we should exit the trade when our losses register that high.

For trading success to be consistent, it is imperative that every trade have a predetermined exit point. This exit point needs to be established before a trade is entered, so that emotion and desire cannot get in the way of a losing trade. As we have said, the exit point is the maximum loss, or worse case risk for the trade if stop losses haven't already signaled an exit.

Their risk tolerance, their level of comfort in the given market and their amount of experience will usually determine a trader's risk/reward ratio. This is an important aspect of trading money management.

Setting Stop Losses

Limiting total capital, amount of trades and setting risk reward ratios is the "big picture" of money management in foreign exchange trading. But, as they say, if you take care of the pennies, the nickels will take care of themselves, and this is where stop losses come in. A stop loss is an order that is given at the time of a trade, that limits loss on the trade by fixing the lowest or highest price the market can go to before the trade is liquidated. By taking a loss at this level, a trader prevents any further losses. They are also used to protect profits, since the trader may want to lock in his profits at a given price before it can turn. In this case, they are just called stops.

When you have set maximum risk levels, you can set stop losses within them to further minimize risk, but allow profits to run. It is important to allow enough trading range for the normal volatility in that market. One rule of thumb is to set a stop at 3X the daily average range for the currency. Other traders prefer to set a stop at a fixed percentage of dollars invested in the trade, or at the low of a given time frame, such as the previous week. In any event, using our money management policy, it would never exceed the absolute maximum loss. A good trader will always be willing to cut his losses earlier rather than later, before they can hit this limit.

One of the problems with stops is that there are many popular trading systems that have stops set at fixed levels, usually just beyond technical support or resistance points. The big speculators are all well aware of these systems to take advantage of obvious known points where the smaller traders will be forced out. So it is important to watch that you don't become part of this stampede all looking to exit at the same time.

Have a Plan

"Plan your trade and trade your plan" is a maxim that has been tossed around for such a long while that nobody is sure who said it first.[11] But it has such validity that it is no wonder that it has become a trading rule. Even with all of the knowledge and information in the world, if a trader does not have a good trading plan and the discipline to stick to it, he cannot be a profitable trader. A trading plan will help you set your goals and the means to reach those goals. As the saying goes: "You're never going to get there if you don't know where you are going."

Why should a trader have a trading plan?

- This is a business. No serious business that intends to be profitable would oper-

[11] One citation attributes it to a long time trader, Eric Patterson. A similar expression "Plan your work and work your plan" is an adage that dates back to the 1800s.

ate without a business plan.

- Without a trading plan, trading decisions are largely based on hunches, instincts and (worst of all) emotions. Decisions with this kind of basis are very unlikely to achieve long term success.
- Consistency is the key to wise trading decisions, and once a plan is developed and followed, the trading moves it dictates will be consistently applied.

What should the plan consist of?

A proper trading plan should map out which markets are going to be traded, how much total capital is to be invested, how much of it at any one time, size of individual trades, what kind of risk/reward ratios are going to be the goal, and loss management (maximum losses and stop loss systems). The trader will also have to decide on what kind of trading system he wants to use, whether he intends to concentrate on a fundamental or technical approach, and if technical, which indicators will he rely on, who his broker will be and how much he wants to rely on the broker, or how much of his own research and decision making he wants to do.

The Markets

It is difficult to make money in thinly traded markets, so the first segment of a trading plan should be to research which markets, and which segments of those markets show the most potential. This is not to say that the focus cannot be shifted once it becomes part of a trading plan. Remember, this is a business and if a business is not flexible enough to shift priorities and methods, it is doomed to fail. If you were GM, would you continue to manufacture and market big SUVs after gas prices soared and small Japanese hybrids were taking over the market? (Oh, sorry, they did; lesson hopefully learned.)

Concentrating on a relatively small number of currencies will allow you to more closely monitor local markets and indices. Risk can be spread by trading not only in the spot market, but also in the futures and options markets.

The Trend

A trending sector should be identified and analyzed. Remember that the trend is your friend, and you cannot trade the trend until you identify it. Another advantage to targeting one or two nicely trending markets is that, if you try to follow too many mar-

kets at one time, you will have to try to follow too many information streams. Information overload can be just as dangerous as knowing too little about your markets. In addition, when faced with too much information, many traders suffer from a syndrome known as "analysis paralysis", where they cannot filter out the irrelevant information. They are so overwhelmed that they either make no decisions at all, and just continue more and more research, or they make poor decisions because so much information can be conflicting. Once the necessary research is done, plan the trade, make the trade and then "trade the plan", confident that the plan has incorporated the necessary stops and exit points to limit losses.

When all of this is established in advance, a general trading plan can be developed and the trader will know how to apply that trading plan to each individual trade. This means that before he makes a trade, he will know:

- Which market does he want to enter?
- How much of his capital he will risk in this trade?
- How many lots (or contracts in futures) will be entered into?
- What the risk/reward ratio of the trade is?
- Where the stop loss is to be placed?
- Where his maximum loss is to be placed?
- Where are entries, exits and added positions are to be fixed?

What stands in the way of a successful trading plan?

Primarily, it is emotion. It is important to always try to trade with a clear head and don't let emotion enter into your trading decisions. Greed, pride, fear, sometimes envy and even laziness can stand in the way of the execution of a successful trading plan. When a trader get greedy, he may continue to increase a position that is making money and even ignore signals that a turnaround is due. He is on a winning streak, and he likes it. One of the biggest problems with this trading error is that he may end up holding his largest positions just when the market turns against him.

Pride is one of the most dangerous emotions a trader can engage in. Many traders let their losses run because they are convinced of the rightness of their trading decision. They convince themselves that their position is correct, and the market will realize that

and turn around at any moment. There is an expression in trading called "talking your book", which means that the trader views the markets in terms of his positions and can find any rationale he has to in the market to support them. A fundamental trader may find the rationale in some economic news that the market has already discounted or doesn't even care about, or a technical trader may use a shortened time frame to see a trend, or spot a pattern that doesn't really exist. Pride is frequently the reason that a trader will hold a position even after it has gone through his stop, or hold it longer than he was originally planning to. He can convince himself that it is really an investment that will eventually pay off, or he can afford to hold onto this one because his other positions are making money.

Pride may be one of the most dangerous emotions in trading, but fear is one of the strongest. Fear may cause a trader not to enter a trade when his system posts a valid entry signal, because the currency is falling too fast. Fear may have the opposite effect and push a trader into a trade before the signals have been confirmed, because he doesn't want to miss out on it.

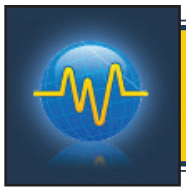
Everyone has heard stories about the boy wonder who made a killing in the Swiss franc, pound sterling or euro. Envy tells us we can be that same boy wonder. The only problem is that you do not hear the other stories, of the losses that were made or the small profits that were kept. We only hear about the big winners and we want to be like them. There are two legendary stories that show both sides of this "killer trade" syndrome. George Soros, an investor and financier, made at least $1 billion (it can only be estimated, and he has not confirmed) in one week in by betting against the British pound. In September, 1992, he sold short more than $10 billion worth of pound sterling. Since the Bank of England was dragging its heels in refusing to raise its interest rates to the same levels as other countries in a European interest rate mechanism, Soros felt the pound would fall. He was right, and in fact, the Bank of England was forced to withdraw the currency completely out of the European Exchange Rate Mechanism and to devalue the pound, allowing Soros to buy back the pound at this sizeable profit.

There is always a corollary to stories like this, and in the late 1970's, the billionaire Hunt brothers tried to corner the silver market by buying up all the silver futures they could. Their purchases pushed the price of silver up, which was their intent because they wanted to profit from this run up, but they pushed it up to such an extent that there were no buyers left and the price collapsed, from $50 an ounce to $10, causing the Hunts a $1.3billion loss.

Another "emotion" that may interfere with a successful trading plan is laziness. You may have seen more than one site titled "Make Money Quickly and Easily with Foreign Exchange Trading." Anyone reading an ad like this should run in the opposite direction. The only people who make money from this kind of a headline are the ones selling the book, video, audio or trading system. Foreign exchange trading is not for the lazy. Information is critical to successful trading, but there is so much information available that a trader has to be focused and disciplined to be able to separate the essential from the hype. A trader needs to work hard to understand the key factors that motivate his market and the technical systems that he plans to use.

Besides emotions, a barrier to successful trading is not learning from one's lessons. One of the smartest things a trader can do to improve as a trader is to identify his mistakes. Losses, not profits, are frequently the best teachers. Each loss can improve your knowledge of market action. If there is a consistent pattern to your losing trades, find out if and how you deviated from the trading system that was supposed to work. Performing a "damage report" for your losing trades can serve as a very valuable tool for future success. By the same token, don't think that just because you are winning, you are not making any mistakes. Maybe you could have had a bigger profit without a greater risk, or maybe it was only luck that was responsible for a winning trade. A trader's goal cannot be to trade perfectly all the time, only to have more winning trades than losing ones. The trader who consistently performs will outperform the traders with a few spectacular gains and many losses.

Keeping track of your trades with a view to improving your overall trading strategies is a great idea and well worth the time and discipline it may require. For each trade, make a note of your entry point, what stop losses were given, what your exit point was and where you actually exited the trade, what was good or bad about the trade and what emotions you were feeling as you were trading, and how they affected your actions. Many traders keep a diary for this purpose. A daily "debriefing" session such as this takes only about five minutes at the end of the trading day, but can be invaluable in future trades. Think about the trades that were executed and make sure that all of your trading rules were followed. If not, why not? (If you don't have a trading plan and trading rules, you probably shouldn't be trading in the first place.)



Foreign Exchange Brokers

We talked earlier about approaching your foreign exchange trading as a business, with a business plan and goals. In any business, it is important to find the right partner, and in foreign exchange trading, that partner is going to be your foreign exchange broker.

What exactly is a foreign exchange broker? A foreign exchange broker is an individual or institution who acts as a middleman between you and the foreign exchange markets. In addition, a foreign exchange broker is a good source of information for your trading activities. Despite the fact that trading foreign exchange involves risk, you can reduce that risk by working with a broker that is reputable and can give you the best information.

Consequently, one of the most important decisions that can be made upon entering the arena of foreign exchange trading is to hire the right broker. There is no certification process with a broker dealer, such as you might have with a Certified or Public Accountant (CPA), Chartered Accountant or Certified Financial Analyst (CFA), but many broker-dealers choose to be registered with the National Futures Association (see below). A broker does not necessarily have to have specialized training to practice as a broker, but most of them will be college educated, perhaps with a degree in business, finance or economics. They will therefore be familiar with economic fundamentals. In the best of cases, they have also been specially trained to work in the foreign exchange markets. A foreign exchange broker should be an **expert in Forex trading** just like a real estate broker is an expert in real estate.

A foreign exchange broker can be either an individual or a company that buys and sells foreign exchange, in accordance with the orders of the client/trader. A trader should make sure that the broker is substantial enough that the trader feels that his money will be safe with him. It is also important to know that, in case he goes bankrupt, you have a jurisdiction in which you can appeal. For these reasons, a trader should try to find a large enough broker that is regulated in at least one major country. In addition, a larger broker will probably have more services to offer its clients and the resources to make sure trading platforms are not going to crash in active markets.

The ideal broker is committed to getting the best rates for his clients, as well as to

giving them the best advice on the movements in the foreign exchange market and the best strategies to use in the face of those markets. But just as in the case with a stock broker, a broker earns his commission (the spread) whether or not the client gains or loses money. This means that the more trades, whether they are winning or losing trades, the more money the broker will made. This is an important fact to take into consideration when a foreign exchange broker is making buy and sell recommendations. A trader who is working with a system should not have a problem with this, since the system will signal the entry into trades, but trading on the emotions of brokers' recommendations can be a dangerous pitfall to be avoided.

The best brokers have access to wide-ranging market information, allowing them to access real time data on the foreign exchange markets and the news that affects them. In addition, they are able to help their clients interpret this information by providing technical and fundamental commentary, economic calendars and research results, as well as monitoring the markets for them. They are responsive to their client's needs and are able to execute their trades quickly and efficiently. An added duty of most foreign exchange brokers is that they offer advice on the markets to help their clients in their trading decisions.

The size and complexity of the foreign exchange market, with its wide fluctuations and volatile movements, make it essential that your foreign exchange broker be knowledgeable, proficient and attentive to his clients. In general, you will want to find out if the company that you are considering dealing with has a good reputation and is established in this industry. If you know of people who are already trading foreign exchange, you may look for recommendations from them. Be thorough and persistent when it comes to researching the company's history and whether or not there have been any problems with the company at any time.

How do you know if you are going to get the right kind of broker?

The first step is to try to eliminate the outright frauds and thieves. There are some areas that are more prone to fraudulent dealers (Russia and the Bahamas are supposedly hotbeds of forex fraud), and also some signals to be on the lookout for to alert you to the crooks. One of the best ways to protect yourself is to find out which brokers have had their licenses revoked by the National Futures Association. Their site has an easy to use Background Affiliation Status Information Center (BASIC) module on their site on which a customer can search a broker either by his NFA ID number, or by his firm name. In addition, a broker or dealer does not have to be registered with the NFA un-

less he is dealing in the futures market, but most legitimate brokers want to maintain the ability to trade in both the cash and the futures markets. The CFTC (Commodities Futures Trading Commission) has the authority to take action against registered broker-dealers for violating the anti-fraud provisions of the Commodities Exchange Act. Similar regulatory bodies exist in other countries, but many world wide broker-dealers are registered with the NFA, since anyone whose business involves advising U.S. citizens or residents about CFTC regulated contracts is required to register with the CFTC. Most brokers, rather than eliminate this sizeable market, will choose to register. All brokers registered with the NFA as futures commission brokers have to meet strict financial standards which include capital adequacy requirements. In any event, however, it is still important to note that only futures are regulated, not cash transactions.

Britain's Financial Services Authority (FSA) regulates financial services firms that accept deposits or advises on investments, so working with a broker that is authorized by the FSA will assure a layer of security against fraud, although forex brokers are not required to belong. Any companies that deal with options or futures, however do have to register with the FSA. Most other countries in the Eurozone also have financial authorities that regulate firms that offer investment products and advice. In Germany, for instance, the BaFin plays this role. Foreign exchange, of course, as the maverick of the financial world is not regulated, per se, but many brokers who offer other products are registered with these regulatory authorities and offer foreign exchange services to their clients. For the best chance of avoiding foreign exchange scams and frauds, deal with a registered firm.

Foreign exchange transactions traded in the retail, off exchange markets are not guaranteed by any exchange. They are therefore naturally susceptible to fraud and scams.

Firms and individuals that solicit accounts on behalf of forex dealers also do not have to be regulated. You should therefore try to find out if they are regulated and by whom. Dealing with unregulated firms exposes you to unnecessary risk to outright fraud. In addition, since there is no central marketplace, the dealer-broker determines your prices, so it is very important to be able to rely on your broker's integrity to be assured of a fair price. Even though it is the interbank market that fixes prices, prices quoted by brokers are a reflection of this. However, individual investors cannot access the pricing available on the interbank market for comparison purposes, and therefore need to rely on trust to make sure they are getting fair pricing.

There has been a sharp rise in investment fraud in recent years, most especially in the commodities and foreign exchange area. One of the best signals that the broker is not legitimate is if he has a sales pitch that claims you can make a lot of money in foreign exchange with little to no risk. Many solicitors are out there, drumming up business through telemarketing, on the radio or in newspapers and, of course, on the internet. As anyone who surfs the net surely knows, through the use of cookies, sites can target you as interested in foreign exchange as soon as you make any internet inquiries. Yes certainly, legitimate firms use this means to attract new customers, but legitimate businesses will have a disclaimer about the risks involved in trading. Trust your gut: if it sounds too good to be true, it probably is.

There are also brokers who may not engage in outright fraud, but do engage in practices that are not in the best interest of their clients. One of these practices is "sniping and hunting", which is when a broker prematurely buys or sells in order to increase his profits. When you are checking with other traders, find out which brokers may have a reputation for sniping and hunting. Another broker practice that harms the trader is requoting. Requoting is when you get a quote and then while you execute the trade you are requited a different price. This can certainly happen in a market where news is moving it quickly, but if the broker requotes you on a constant basis, this may be his way of increasing profits. This practice often happens with brokerage firms that advertise very low spreads-as low as one pip-so their advertised spreads may just be a come on practice. Try to choose a broker who has a no requoting policy.

Despite all this gloomy news, there are plenty of legitimate and honest forex brokers out there, probably in the thousands. They each have their own currency prices and spreads, but the size and liquidity of the market, and the number of brokers competing for it make these differences pretty insignificant. However, one broker could definitely be better than the other and can offer you a better deal both in terms of spreads and services, so it is important to get as much information as you can to help you choose the best broker for your needs. You will not be restricted by location in your choice of broker, since foreign exchange is primarily traded electronically or over the internet.

The broker should know the markets and his job, but both of you should also know what is expected of him and you. First of all, make sure you know and are able to meet the minimum amount for opening an account with this broker. This may reduce the list of brokers you can consider. You want to seek out a broker who has the best expertise, and can also offer you the best resources to assist you in your trading decisions. Check on the experience the broker has in the field and find out if you can get recommenda-

tions or referrals from clients. Read any agreements thoroughly and make sure you are comfortable with all of the terms. It cannot be emphasized enough: Beware of any broker who does not spell out the risks involved in trading foreign exchange. Make sure you know what services he is agreeing to perform for you. You should be able to expect a charting service, technical analysis, news services, web support and data interpretation.

Since forex is a 24 hour market, do you want or expect 24 hour support from your broker? Can you find out how responsive he is to inquiries and how quickly he can execute trades? What kind of trading systems and support systems does he offer? Where is he located? In today's markets, a trader can use a broker just about anywhere in the world, since trades are executed electronically or online. But if you want to be able to speak to your broker about your trading strategy, you may want to have at least some contiguous hours with him. The foreign exchange market is based on using time efficiently, and on being able to make quick decisions. If you are not able to reach your broker in a timely manner, you will not be able to get timely quotes or executions, both critical to profitable trading.

Although it is not necessary, some traders feel a need for the personal touch in their trading activities. If you are one of these, the location of the broker's office will be more important to you. Being able to visit the office in person has an added advantage, since you will be better able to judge by the physical location and appearance what the financial stability of the broker is. You may even be able to get a look at their back office and see how your transactions are processed. Listening to the brokers on the phone can also be an indication of how they work with their clients: lots of or little interaction, pushing trades or informing of market moves, is there a feeling that the client is a partner in the relationship?

Once you have established your expectations, you will then have to find out which brokers meet them. You can establish a short list of brokers based on the brokers' knowledge and experience. You can then compare individual services and pricing from each broker and find the one broker who can afford you with the best combination of knowledge, service and pricing.

First, you will want to note the margins they provide. Margins can range from 1% to 10%, so choosing a broker who will offer you the kind of leverage you require will be an important first step in the elimination process. Choosing the broker who offers the highest margins may not be the most important criteria for you if you prefer not to be too

highly leveraged and therefore would probably not be taking advantage of this feature. More service or narrower spreads might be the more important trade off for you.

Next, ask about the broker's spreads for whichever currencies you are planning to trade in. What are the trade sizes and do the spreads differ based on trade size? Remember that the lower the spread the more money you will make, since you are reducing your operating costs. If you do not plan on making a lot of trades, the spreads may not be that crucial, but if you plan on being in and out of the market frequently, the spreads will matter. Generally, the more you trade, the lower you want your spreads to be. Even though brokers primarily earn their fees through the spreads, make sure there are no hidden fees that you will only find out about after they have eaten into your profit. Some brokers, for instance, may charge rollover fees for positions held with them overnight.

Check into their policy about negative balances, where the broker liquidates your position if the balance goes into negative. You may want to be able to protect your account from being blown up and your trades being forced into liquidation.

Narrow your choices further by examining the different types of trading tools they will offer to you. Each broker has a different trading platform that they offer their clients. Look at the charting packages and the forex trading platform that the broker is offering. If you have decided that some of the more esoteric charting techniques are beyond you, you may decide to work with a broker who sticks to the basic trends, supports and reversals. Can the broker offer you a demo account (paper account) where you can use the platform on an experimental basis? It helps if you can see for yourself how the different tools work and how easy they are for you to work with them.

Using a paper account will also give you some input into the ability to watch the market by following the economic news and the markets reactions to the news, and to observe their trading strategies. You will be able to observe if the broker has a short term or long term trading strategy and match it to your strategy. This kind of trading also helps you to understand how the particular system of that broker works, and become comfortable with using the software tools that he offers. Most foreign exchange brokers offer these types of demo accounts that allow for this paper trading.

(Beware of getting addicted or lulled into complacency by paper accounts. Paper trading for a short time may help a trader become more familiar with how their markets work. But if a trader is not comfortable with real live trading after 4 to 6 weeks of paper trading, trading may not be for him. Paper trading offers none of the emotions that

you will feel in the real markets, and these can be very critical to making decisions and maintaining discipline. It is important to realize that trading on paper, instead of with real money, is very different than the real thing. A lot less emotion is involved when you are not risking your own money and since emotion can often play an important role in trading and trading decisions, you may not be getting the same experience that you will have when you go "live". Managing and controlling emotion is a very big aspect of trading decisions, so removing this factor from the equation can make a very big difference in results.)

Once you have compared the services, make sure you can confirm that they meet the expectations that you set at the beginning. What was offered as part of the advertising hype may be a different story when you review exactly what you are going to get as a customer. Re-ask all of the questions that put this broker on your short list in the first place.

You may find that shopping for the best foreign exchange broker is not easy, but using these guidelines, you will be sure to find one that suits all of your needs. The main points to consider is the broker's reputation and experience, spreads and fees, and the amount and quality of the tools he can put at your disposal and the importance of each of these to you.

To recap, these are the steps to take in making the all important decision of choosing a foreign exchange broker:

1. Establish a list of brokers you may consider. Scour the internet and the financial publications for names of brokers, or search the NFA site. Due to the great number of dealers that you would have to sort through, you should consider recommendations from people you know who are already trading forex.

2. Eliminate any brokers who have had their licenses revoked by the NFA. You may even consider eliminating any brokers who are not members of the NFA.

3. Gather all the information you can about these brokers, how long they have been in business, if they are able to supply referrals, number of brokers in the company, hours of operation, how trades are settled, etc.

4. Shorten the list by the criteria you feel important. Perhaps they have been in business for a while, but are a small boutique operation with only a few dealers; you may prefer that to a behemoth where you feel ignored. If being able to discuss them with existing customers is important to you and they can't accom-

modate this request, this may be your rationale for eliminating them. Make sure they have the services that fit your trading style as well as your trading budget. If you don't plan on investing a lot in trading, you may have to open an account with a brokerage company that offers mini-accounts. (A mini-account allows a trader to trade for as little as $250, as compared to a standard account which usually requires an initial investment of $2,000 or more.)

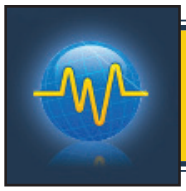
5. Once you have a list of 5-6 brokers, be prepared to interview them to find out exactly what they have to offer you and what they require of you. You may want to formulate a checklist to be able to make a comparison of all of them after you have gathered the facts. Choosing a broker is a very personal decision, just like choosing your doctor or lawyer. Features that may be important for one client may not be as important for another. For example, you may not be interested in high margins, or you plan on subscribing to a charting service and so it does not matter if the broker offers one. You also want to be very clear about expectations on both sides of the trading equation; know what he is going to do for you and know what is expected of you. Below is a sample checklist you may consider using as a questionnaire for potential brokers.

- Where is the FX market maker incorporated? Is it in a country such as the U.S. or the U.K., or is it offshore?
- Is the FX broker regulated? If so, by whom?
- How large is the broker? What is his excess capital? How many employees are there?
- What is the minimum amount for opening an account?
- What margins does he offer?
- What are the normal spreads in a XXX/XXX trade?
- Are there any fees besides the bid/ask spread?
- Do they offer mini-accounts?
- How is trading handled when the office is closed?
- How are negative balances handled?
- What kind of market tools do they offer?

    - real-time charts
    - technical analysis tools
    - economic calendars
    - real-time news
    - technical commentaries
- Can I trade a paper account and for how long?
- Can I get a copy of the account agreement for prior review?
- What kind of support can I expect?
- Is there 24-hour telephone support?

In addition, you should be attuned to the questions the broker asks of you, as this will be an indication of the kind of relationship you will have. If he asks about your goals and what your expected needs are in terms of advice and support, and tries to get a clear handle on what kind of trader you want to be, he is probably responsible and supportive. If a broker does not seem interested in analyzing his client's ability to operate in the markets, he is not interested in the long term success of the client. Be especially wary of brokers who ask few or no questions, are not willing to take the time to answer yours, and seem to just want to sign you up for an account, without making any effort to understand your goals and needs. In addition, a broker who is not clear about the costs and risks involved and just wants to sign you up for an account may merely be looking for some quick commission income before he moves onto the next victim. If this is the kind of service he gives, he is used to his customers blowing out their accounts a few times, losing all of their investment capital and giving up on trading; he has to grab at his commissions when and where he can.

All this advance work may be difficult but it is well worth the efforts, since you want to be comfortable and be able to count on this new "partner" to assure your success in your foreign exchange trading business. Over time, you will find that you have become friends with your broker, and trust his opinion for your trading decisions. Even though your foreign exchange trading decisions are ultimately up to you, finding the right broker can make the difference between big profits and big losses.



Psychology of a Successful Trader

Foreign exchange trading is not for everyone. As in almost any vocation, a certain personality is required and certain skills need to be present. Skills can be acquired, within reason, but most people do best in those areas where they have a certain affinity. It would be really difficult for someone who is "numbers challenged", to be a mathematics teacher and the vocation of artist is probably out of the realm of someone who can barely do stick drawings. The good thing about human nature, however, is that we are usually attracted to those fields that we enjoy and perform well in. Someone who is reading a book about trading foreign exchange is most likely to be attracted to that field.

There are many types of traders, and one personality type is not necessarily more successful as a trader than another. You probably know two different doctors with two very different personalities, but each is still a successful doctor. How the personality of a trader may influence his trading decisions is probably the more important issue in success. Most of the advice we have given has centered around being logical and calm and recognizing trends while not getting paralyzed by analysis, but a trader has to be a bit intuitive as well. Most personalities can be adapted to emphasize the features that help in trading and downplay the features that don't. This exercise is probably the most important in developing the psychology of a successful trader.

Van K. Tharpe, Ph.D., a professional coach for traders and investors has developed profiles for the mental qualities of the fifteen most common types of trading personalities [12] and the strategies for making them work. The types of trading personalities he has identified are the accurate trader, the administrative trader, adventurous trader, artistic trader, detailed trader, facilitative trader, fun-loving trader, independent trader, innovative trader, planning trader, socially responsible trader, strategic trader, supportive trader and values driven trader.

The Accurate Trader

The accurate trader is thorough, practical and accurate in his activities. He is very good at keeping track of trades and following signals and probably does very well at analyzing what went right or wrong about each trade. This type of trader would do well if he could find a trading system that works and is successful on a fairly consistent basis. He would have a tendency to follow it if it is a proven system.

[12] Tharptradertest.com

This sticking to the tried and true can be a handicap in situations that can be abstract and over thinking could easily lead to "analysis paralysis"

The Administrative Trader

Many of the qualities of an administrative trader are excellent features of a successful trader. Practical, realistic and decisive, the administrative trader has the ability to execute decisions quickly once they have been made. The organizational skills generally found in the administrative type of trader are an advantage in making sure that trades run smoothly and that records are well kept.

The administrative trader has to beware of spending more on the systems than on the trading. His love of order may lead him to lead him to concentrate on trades that go smoothly and lose track of the challenges.

The Adventurous Trader

The flexibility that is usually the hallmark of an adventurous personality is a major boon to good trading. Adventurers are not usually tied to any one way of doing things, and so would find it easier to exit a losing trade. The adventurous trader also usually likes to digest and analyze a lot of information for his decision making process, and prefers to rely on hard facts.

A too adventurous trader however, has to be careful of his risk taking techniques and make sure he has systems in place that will analyze and curtail his risk.

The Artistic Trader

Being open minded, flexible and adaptable are excellent trading qualities and these are usually the qualities of the artistic trader. Being attuned to the market is important to him and he will enjoy the flexibility of independent trading and making his own hours.

Artistic types, however, are not known for analyzing the strengths and weaknesses of a course of action, and keeping accurate records may also be a challenge.

The Detailed Trader

A quiet and serious person may tend to be a detailed trader, putting a lot of time and effort into a thorough and methodical analysis of each action. The detailed trader is organized and dependable, which are major advantages in successful trading since

it means systems will be followed. A detailed trader also makes sure that all decisions make sense and bases them on logic and a thorough analysis. "Detail" people do things in an orderly and sequential manner, and this is good for a successful trader since it makes following a system easier.

One of the weaknesses of the detailed trader may be his inability to see the big picture, and so he tends to concentrate on trades rather than trading. Many times, seeing the overall picture, for example the overall strength of an economy, is necessary for trading success.

The Facilitative Trader

This is another type of trader who tends to be quiet and serious but unlike the detailed trader, he can work with the big picture and the correlations between things, but he usually does better in groups. This may be a disadvantage, since trading tends to be a solitary task. In addition, the facilitative trader, more of a people person, may not be comfortable with logic and ideas, and therefore may not be able to consistently follow a trading system and may require outside validation of any trading decisions.

The Fun-Loving Trader

This type of trader is inherently optimistic and has the added advantage of being enthusiastic about whatever he is doing. This usually leads to a high level of productivity and energy which can carry him through times when optimism may be unfounded. But logic and common sense and a true desire for material improvement through hard work can help the fun loving trader be more realistic. A major challenge would be to be to view all trades realistically and avoid sticking with losing trades.

The Independent Trader

The independent trader prefers theory and the abstract which are excellent studies for trading success, as long as analysis paralysis once again does not set in. Too much study means too little trading. But this kind of trader enjoys new knowledge and ideas and is open to learning from both his own and others' mistakes.

The Innovative Trader

Like the independent trader, the innovative trader wants new information and new systems to keep his mind active. He is usually a good intuitive trader and if he can combine intuition with good information, he is on the track for successful trading. An

innovative trader needs to be careful about the type of information he is fed, and may rely too much on external circumstances.

The Planning Trader

A natural leader, this type of trader can be decisive and quickly develop and follow a trading system. The planning trader has the three core qualities that are essential to being a great trader:

- he sees the big picture, new possibilities and connections between things.
- he makes decisions based on logic.
- he is decisive, orderly and likes to do things sequentially.

These abilities allow a trader to spot inefficiencies in the market and take advantage of them. Long-term planning and goal setting, which are natural qualities for a planning trader will work well to allow him to plan trades and liquidate positions when goals have been met. Being willing and able to expand his knowledge and stay well informed while remaining driven towards trading goals and following ideas to completion are sure to help in the trading arena.

The Socially Responsible Trader

This trader looks for a market that is in keeping with his values. This can be a hindrance for a socially responsible trader since the market can often be far from socially responsible, and does what it wants. If the trader can find opportunities in the market that are in keeping with his values he can be successful, since he will be motivated. However, this philosophy does not lend itself to the logical evaluation of trading systems, which may lead to trading decisions which fly in the face of reality.

The Strategic Trader

The main qualities of the strategic trader are competence, knowledge and intelligence. These are also qualities imperative to good trading. The strategic trader, like the planning trader, has the three core qualities that make a good trader and his ability to be an original thinker combined with great drive will be sure to lead to trading success. The strategic trader has to be careful, however, when he is being influenced by emotions since he may not recognize it.

The Supportive Trader

Like the detailed trader, the supportive trader looks to the details and doing things very conscientiously. He is serious and dependable and as such, he probably does not enjoy taking a risk. A logical and orderly trading personality helps in trading, but if a trader is too adverse to risk, he may not find many opportunities for profit.

The Values Driven Trader

The value driven trader has to believe in what he is doing and finds value in relationships, ideas and possessions. He would tend to want to make money out of his trading and can usually spot new trends and how markets are shifting. He has to be careful not to read too much of his own values into the market and end up trading facts that are really not there.

What then, is the perfect psychology of a successful trader?

Developing the Psychology of a Successful Trader

Combining the best qualities of all of the identified types of traders will yield a personality type that is best suited to making the right trading decisions most o the time. Remember, that is what a good trader will aim at. Striving for perfection will paralyze a trader faster than almost anything else, since, if no trade can go wrong, many trades will never be entered and many will never be exited even after stop losses have been hit.

Practical, Realistic and Decisive: If we have seen a common thread above, it is that the traders who are bound to have the most success tend to be practical and realistic, as well as decisive. Individuals who are organized will be better at keeping track of signals, keeping track of trades, and analyzing trades afterwards. These organized and practical individuals are good at formulating a set of standards and then following the steps to reach their goals. One of the big problems is to try to combine all of these traits of the detailed, organized, administrative types with an ability to see the big picture, and may tend to concentrate on smaller goals and be too rigid. The big picture is important to trading success

Follow a system I: There are many systems that can produce great returns, but the problem usually is following the system. One of the biggest mistakes a trader can make is not to follow his own rules. If you have not established and follow a written trading plan, your trading career is doomed to failure. Following a system is fairly simple if the

trader is careful to avoid these common pitfalls:

not entering a trade, even though it is signaled by the system because of fear or because he wasn't paying attention. A trading system is based on the sum of its pieces. If a trader picks and chooses among the recommended trades, he may be missing many of the ones that would have balanced lesser earning or losing one. By entering only those trades that are interesting or exciting, the system is undermined.

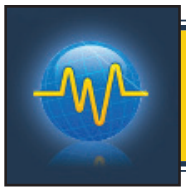
- entering a trade merely on emotions or excitement (everybody says this is the hot move of the day). Entering a trade on a recommendation outside the system and on impulse does not work because so many parts of the system are then not included in the trade, such as exit points and stop loss positions. In addition, a trader will blame those who recommended the trade instead of himself. A good trader will hold himself responsible for ALL of his trades, and falling into a blaming game will undermine a system because of this sense of responsibility that is lost.
- keeping mental stops, which can easily be run through. Enter a stop loss order so you can forget about it. Another problem with mental stops is that it becomes your stupidity or forgetfulness that is to blame, not your trading mentality.
- trying to trade a number of systems at the same time. There are many systems out there and many of them are very good, but only if followed consistently. Bouncing between them cannot possibly bring the intended results and profits.
- holding positions that are too large. Once a trader's risk profile has been developed, based on total investment, investment in each trade and risk to reward ratio, he should stick to it. Having too much in one position skews the judgment, for one thing, and for another, if the trade has to be exited at a loss, the multiplier effect can be disastrous. In addition, there is no additional capital for potential trades that were great opportunities.

Many a trader has taken a winning system and turned it into a loser by moving outside the parameters of the system too frequently. Let's look at the pitfalls of not following a system one by one and see if we an eradicate them.

Follow a system II: Having a system and attempting to follow it is one thing; knowing that you did follow it, and if not, why, is another.

- not entering a trade. A disciplined trader will treat his system like a respected partner, and follow its recommendations attentively.
- entering a trade on emotion. What made you enter that trade? You have to follow the financial news on T.V., but is this pushing you into trades that your system did not? What was your mental state when this decision was taken? Were you disgusted with a losing trade and felt you needed to vindicate yourself?
- keeping mental stops. This is a fairly easy one to analyze and overcome. Every trade should have a physical stop trade entered so that small losses cannot become runaway losses. This exercise should become automatic.
- trying to trade a number of systems at the same time. Second guessing your system will only lead to confusion and incorrect signals.
- holding positions that are too large. Did you follow your money management plan? Perhaps you need to do a checklist with calculations that will force you into maintaining your pre-designed risk parameters.

The habit of holding a daily debriefing session with yourself will work wonders in helping to avoid the pitfalls of falling away from a system. Seeing it clearly in writing each time a lapse led to a losing trade will quickly reinforce the discipline necessary to "plan the trade and trade the plan".



Conclusion

There is a great deal to learn about foreign exchange trading, but it is a fascinating topic, and applying the lessons learned can be exciting and rewarding. Successful foreign exchange trading is within the realm of any trader who is willing to dedicate himself, and put in the time to learn about the market basics as well as the more complex features of this field. Today's advances in communications and computerization make it easier than ever for a trader to learn all he needs to, as long as he is not afraid of a little work.

Foreign exchange brokers today can offer a wide array of technical products to help the individual trader follow the market and its trends. Most of the studies on fundamentals and technicals are used by millions of traders around the world and are available to even the trader with the smallest portfolio. Large banks and commercials are doing the exact same trading that a part time trader in the comfort of his home may be doing. It is only a matter of scale. The information available to the big participants in the foreign exchange market is just as accessible to the individual trader. This level playing field is one of the most advantageous and beneficial aspects of foreign exchange trading.

The only enemy the trader really has is himself. If a trader has the discipline to developing a trading plan, establish a money management program, and then choose a trading system that works for him, AND STICK TO IT, he will be on the road to success. There are no guarantees, but building a body of knowledge and maintaining a rationale plan is the best way to enter and remain on that road to success.