

FX POWER **TRADING COURSE**



SUPPLEMENTARY MANUAL FOR POWER TRADING COURSE

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POWER TRADING COURSE MANUAL

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What Makes A Good Trading Market?

Regardless of which instrument you are trading - be it stocks, municipal bonds, U.S. treasuries, agricultural futures, foreign exchange, or any of the countless others - the attributes that determine the viability of a market as an investment opportunity remain the same. Namely, good investment markets all possess the following characteristics: liquidity, market transparency, low transaction costs, and trending markets.

Liquidity

Liquidity, the term used to qualitatively assess how easily trades can be entered and exited, is of prime importance to all traders. Trading essentially involves two transactions: the opening of a position, followed by the subsequent closing of that position. Liquidity, which is highly correlated to volume, assesses how easily traders can enter and exit positions. A liquid market is a market where participants can rapidly execute large volume transactions with little impact on prices. Markets that have high daily turnover generally offer the most competitive prices and the best execution. Traders participating in illiquid markets will experience delays and market order fills could potentially be at a very different price from the market rate when the order was initially placed (slippage). Furthermore traders may have difficulty in exiting positions, therefore affecting the true cost of the trade. Ultimately this will create substantial barriers to clearing profitable trades.

Market Transparency

Market transparency is usually defined as the ability of market participants to observe the information in the trading process. Informed traders are better off while uninformed traders become worse off, because markets can be exploited by those with private information. Today's financial markets rely heavily on information transparency: traders need the ability to

see a transparent spread in order to employ a strategy that is both pre-meditated and disciplined, while still flexible enough to accommodate an ever changing marketplace. Such transparency of information provides traders with the ability to craft a fine-tuned risk management strategy, and apply it to the market in accordance with the fundamental and technical tools used to assess market opportunities. Ultimately, greater market transparency leads to market efficiency. In the case of Worldcom, for example, inaccurate reporting by company principals have resulted in the downfall of the company and losses for many shareholders. Markets where this can occur may not be considered a good trading market. Another key concept in market transparency is the ability to trade from live, executable prices. Markets that do not offer prices that are executable are frustrating for traders. There is typically a delayed fill and the fill price may not always be at the same rate as the market rate when the order was initially placed.

Low Transaction Costs

Transaction costs include all factors that may affect the ease of executing a trade. Transaction costs lower profits and/or extend losses. The lower the transaction costs for trading, the more attractive the market is for active traders. Explicit transaction costs include commissions for trade. Trading on \$0 commissions per trade is always better than being charged \$20 in commissions per trade. Implicit transaction costs can take several different forms that traders may or may not be aware of, but which can affect profitability nonetheless. For example, markets that have centralized exchanges tend to have higher transaction costs, due to exchange and clearing fees associated with trading. Transaction costs can also be increased by faulty execution, if the actual price of execution diverges from the market-clearing prices.

What Makes A Good Trading Market?

Trending Markets

Technical analysis statistically works better in markets characterized by cycles that repeat themselves. The reason for this is because the whole premise of technical analysis is based on the study of price movements. Historical price data is used to forecast the direction of future prices. In addition, technical analysis works better in liquid markets. Through technical analysis traders can identify general trends and capture key entry and exit points. Markets that are less liquid makes it more difficult to accurately gauge entry and exit points.

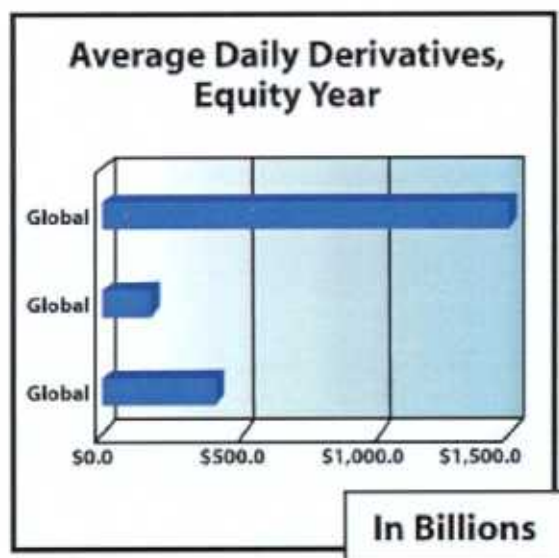
Superior Liquidity

Spot currency trading is the most popular FX instrument around the world, comprising more than 1/3 of the total activity. It is estimated that spot FX trading generates about \$1.5 trillion a day in volume, making it the largest and most liquid market in the world. Compare that to futures \$437.4bn and equities \$191bn and you will see that foreign exchange liquidity towers over any other market. Even though there are many currencies all over the world, 80% of all daily transactions involve trading the G-7 currencies i.e. the "majors." When compared to the futures market, which is fragmented between hundreds of types of commodities, and multiple exchanges and the equities market, with 50,000 listed stocks (the S&P 500 being the majority), it becomes clear that the futures and equities provide only limited liquidity when compared to currencies. Liquidity has its advantages, the primary one being no manipulation of the market. Thin stock and futures markets can easily be pushed up or down by specialists, market makers, commercials, and locals. It takes real buying/selling by banks and institutions to move the spot FX market. Any attempted manipulation of the spot FX market usually becomes an exercise in futility.

Traditional measures of liquidity include daily volumes traded and number of transactions; however, it is also important

to consider volatility. Volatility measures fluctuations in the market price. Although many traders perceive volatility to be a good thing for markets, in actuality low volatility is a sign of a smoothly functioning liquid market, whereas markets characterized by high volatility tend to be illiquid and less suitable for small, active, short-term traders. In highly volatile markets, large volume transactions can literally move the market and create "gapping." In the foreign exchange market studies indicate that prices tend to move in relatively small increments, despite very large transaction. Evidence exists to support the notion that the foreign exchange market's volume provides it with protection against excess volatility.

In addition, spot foreign exchange trading is the perfect market for active event driven traders, as it can be traded 24 hours a day. Unlike stock and futures trading, currencies do not get halted, ensuring the ability to trade during virtually any important event. Given its inherent internationality, FX trading serves a purpose in all geographic regions; as a result, trading must occur during all hours. The round-the-clock nature of the foreign exchange market ensures that there will be minimal gaps in the market; in other words, there is no potential for the market to close one day and reopen the next day at a drastically different price. In equities and futures markets, centralized exchanges end operations when the business day concludes. After-hours market liquidity is quite thin, thus making trading unfeasible. More importantly, traders who leave positions open after the market closes expose themselves to greater risk: should news be released after the market closes that affects positions, traders will not have the opportunity to immediately liquidate; as a result, they will be forced to cope with market conditions upon opening the following day, when the market may open at a very different rate than when it closed. As a result, traders become victims of illiquid markets: they were unable to react to news and world events when the market closed, and hence were unable enter/exit positions. The seamless continuity of the foreign exchange market ensures that the market is liquid at all times, thus alleviating traders of potential risks associated



FX: the Perfect Market for Active Traders



Transparency of Market Information

with market gaps and illiquidity.

The spot FX market is on the cutting edge of the technology revolution, making trading much more efficient, and simply a better choice for active traders. Price transparency is very high in the FX market and the evolution of online foreign exchange trading continues to improve this to the benefit of traders. One of the biggest advantages of trading foreign exchange online is the ability to trade directly with the market maker. A reputable forex broker will provide traders with streaming, executable prices. It is important to make a distinction between indicative prices and executable prices. Indicative quotes are those that offer an indication of the prices in the market, and the rate at which they are changing. Executable prices are actual prices where the market maker is willing to buy/sell. Although online trading has reached equities and futures, prices represent the LAST buy/sell and therefore represent indicative prices rather than executable prices. Furthermore, trading online directly with the market maker means traders receive a fair price on all transactions. When trading equities or futures through a broker, traders must request a price before dealing, allowing for brokers to check a trader's existing position and 'shade' the price (in their favor) a few pips depending on the trader's position. Online trading capabilities in FX also create more efficiency and market

transparency by providing real time portfolio and account tracking capability. Traders have access to real time profit/loss on open positions and can generate reports on demand, which provide detailed information regarding every open position, open order, margin position and generated profit/loss per trade.

A Sample FX Trade

STEP 1

Joe logs onto the online trading platform and places an order online.

STEP 2

The order is executed by the online firm's FX dealing desk electronically.

STEP 3

The order is confirmed in a matter of seconds on Joe's platform, and is instantly logged into Joe's activity report.

FX: the Perfect Market for Active Traders

Transparency of Market Information

A Sample Futures Trade

STEP 1

Joe calls his broker and places his trade (or places the order online).

STEP 2

The trading desk receives the order processes it and routes it to the FCM order desk on the floor of the CME.

STEP 3

The order is confirmed in a matter of seconds on Joe's platform, and is instantly logged into Joe's activity report.

STEP 4

Order clerk hands the order to a runner or signals it to the pit.

STEP 5

The floor broker goes to the pit to executes the trade.

STEP 6

Trade confirmation goes to the runner or is signaled to the order clerk and processed by FCM order desk.

Lower Transaction Costs than Equities and Futures

As mentioned earlier, transaction costs can serve to lower profits or extend losses. Due to the decentralized nature of the FX market, transactions costs in the FX market are either zero or close to zero. The FX market is able to offer lower transaction costs because there is no centralized exchange for trading such as the NYSE or the CBOT. Therefore, clients do not have to pay any exchange or clearing fees. Costs are further reduced by the efficiencies created by a purely electronic marketplace that allows clients to deal directly with the market maker, eliminating both ticket costs and middlemen. Because the currency market offers round-the-clock liquidity, traders receive tight, competitive spreads both intra-day and night. Online foreign exchange is far and away the best market choice for aggressive short-term oriented traders. Online FX allows active traders to trade without the huge costs associated with doing so in futures and equities trading. Equity and futures markets are structurally very antiquated and need to take small pieces of each transaction to keep their systems afloat. Active stock and futures traders often see substantial portions of their gross profits go to brokers in the form of commissions, and exchanges in the form of exchange and data fees. Also with the growing trend of exchanges going public, it is reasonable to assume that these "hidden" costs will only rise, as these newly public entities will have shareholders to answer to.

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Lower Transaction Costs than Equities and Futures

Average Roundtrip Commission Charge On \$100K Position



FX: the Perfect Market for Active Traders

Perfect Market for Technical Analysis

The FX market is the perfect market for technical analysis. Long-term movements in the currency market generally correlate with economic cycles. Economic cycles tend to repeat themselves and therefore can be predicted with a fair degree of accuracy. Repetition is the key to technical analysis, since the entire premise of technical analysis lies in using historical price movement to forecast future price movement. In the stock market, the fundamentals of a particular company can change radically in a short period of time, making historical prices irrelevant in the prediction of future movement. Technical analysis, which relies strongly on statistical assessments of market conditions, benefits greatly from the fact that the FX market is more normalized - meaning it is less skewed - than other financial markets. The equities and futures markets, which are more skewed than the FX market, offer less statistical reliability; their distribution is less normalized, and hence the market is not as likely to retrace back when a statistical indicator suggests that a particular asset is overbought or oversold. As a result, other markets are not as conducive to technical analysis.

Currencies rarely spend much time in tight trading ranges and have the tendency to develop strong trends. Over 80% of volume is speculative in nature; as a result, the market frequently overshoots and then corrects itself. A technically trained trader can easily identify new trends and breakouts, which provide multiple opportunities to enter and exit positions. Charts and indicators are used by all professional FX market traders and candle charts are available on most charting packages. In addition, the most commonly used indicators such as Fibonacci Retracements, Stochastics, MACD, Moving Averages, RSI and support/resistance levels have proven valid in many instances. In the NZD/USD chart below, it is clear that Fibonacci Retracements, Moving Averages and Stochastics have at one point or another given successful trading signals. For example, the 62% retracement level has served as support for the NZD/USD from the beginning of September 2002 to the end of September 2002.

Equity and **Futures** traders, who focus on technical analysis, can implement the same technical strategies that they use in the futures market in the FX market.



FX: the Perfect Market for Active Traders

Not Convinced? Two More Reasons Why Traders Choose Forex

Ability to Go Long or Short with Equal Ease

The FX market is considered by most traders to be the only true free market as its vast size and international presence allow it to be loosely regulated. This makes FX a very "trader friendly" environment with little restrictions impeding the average trader. A key aspect of light government intervention is the ability to short on a downtick; currency traders, unlike their equity counterparts do not need to waste valu-

able time waiting for conditions to change before executing a trade. As the chart shows, a trader looking to short OSIP would have had to wait 3 minutes and over a \$1 in potential profit before getting a short off. A currency trader facing a similar situation would most likely have been able to get a short off almost immediately trading in the spot FX market.

Potential Lucrative Trade Missed because of Archaic Exchange Rules



FX: the Perfect Market for Active Traders

Unrivalled Leverage Capabilities

Another key attribute in determining the worthiness of an investment market is the leverage it affords. Because the FX market actually lacks volatility, traders have the power to customize their risk exposure through the usage of leverage. Leverage essentially allows traders to participate in the market with borrowed funds. The FX market is one of the most popular markets for speculation due to its enormous size, liquidity, and the tendency for currencies to move in strong trends. Most market makers allow positions to be leveraged 100:1. This high leverage enables traders to access a market that was previously not accessible to traders with a limited amount of capital. Traditional lot sizes are 100,000 units. This means that without leverage, traders would have to put up \$100,000 per lot that they buy or sell. With 100:1 leverage, traders who want to participate in the FX market would only need to put up \$1,000 per lot that they buy or sell. This represents 100 times capital versus the 10 times capital that is characteristic of equity and future markets. This additional leverage provides to active traders the ability to maximize profits based upon daily market fluctuations. To understand how leverage works, consider the following example:

Trader A deposits \$10,000 into a trading account to speculate on the USD/JPY exchange rate, one of the most heav-

ily traded currency pairs in the world. Instead of trading just \$10,000, though, Trader A opts to use the leverage available. Trader A decides to trade \$100,000 with his initial investment, thus creating a leverage ratio of approximately 10:1 (since he is trading circa 10 times what he deposited).

Now let's say the USD/JPY makes a 0.5% movement in favor of Trader A - a typical percentage move for the USD/JPY in a single day. On a \$100,000 investment, a 0.5% move results in a profit of \$500. On an investment of \$10,000, though, a \$500 profit equates to a 5% return.

Alternatively, a more aggressive trader may decide to trade \$200,000 with his initial \$10,000 investment. In such a case, a favorable move of 0.5% would result in realized profits of \$1,000 - or a 10% return on the initial investment.

The aforementioned examples illustrate how leverage can be used as a tool to precisely customize a trader's risk exposure to market volatility. Instead of relying on volatile assets to generate profits or losses, as other financial markets do, leveraged currency trading takes a different approach: the market is not very volatile, relatively speaking, and thus clients can use leverage to customize the level of risk they assume in the market.

Margin Required to Put on a Position



24-Hour Market

The FX market is the ideal market for active traders. It is a 24-hour market that grants instant access to trading for immediate response to global developments. It also gives traders the added flexibility of determining their trading day. Equities on the other hand, open at 9:30am EST and close at 4:00pm EST. If there is a significant breakthrough between 4:00pm EST and 9:30am EST, most traders will have to wait until the open at 9:30am to place trades. Most likely by that time, unless you have access to ECNs such as Instinet for pre-market trading, the market would have gapped up or down against your favor.

In addition, if you have a full-time job during the day and can only trade after hours, equities would be a very inconvenient market for you to trade. You would basically be placing orders based upon past prices and not current market prices. This lack of transparency makes trading very cumbersome. With the FX market, if you choose to trade after hours, you can be assured that you would receive the same liquidity and spread as any other time of day. In addition, you would be able to access and trade on real time executable prices.

Low Transaction Costs

In the equity market, traders must pay a spread and a commission. With online equity brokers, commissions can run upwards of \$20 per trade. With positions of \$100,000, average roundtrip commissions could be as high as \$120. The over-the-counter structure of the FX market eliminates exchange and clearing fees, which in turn lowers transaction costs. Costs are further reduced by the efficiencies created by a purely electronic market place that allows clients to deal directly with the market maker, eliminating both ticket costs and middlemen. Because the currency market offers round-the-clock liquidity, traders receive tight, competitive spreads both intra-day and night. Equity traders are more vulnerable to liquidity risk and typically receive wider dealing spreads, especially during after hours trading.

Low to zero transaction costs makes online FX trading the best market to trade for short-term traders. If you are an equity trader who typically places 30 trades a day, at \$20 commission per trade, you would have to pay \$600 in daily transaction costs in this example. This is a significant amount of money that would serve to reduce profits or deepen losses. The simplest way to look at this is in an equities trade: there is a broker, the exchange and the specialist. All of these parties need to be paid, and their payment comes from your commission and clearing fees. In the FX market, these fees are not applicable.

High Leverage

The FX market provides traders access to a much higher leverage than the equities market. FX traders can benefit from leverage in excess of 100 times their capital, versus the 10 times capital that is typically offered to professional equity day traders. The margin deposit for leverage is not a down payment on a purchase of equity, as many perceive margins to be in the stock markets. Rather, the margin is a performance bond, or good faith deposit, to ensure against trading losses. This is very useful to short-term day traders who need the enhancement in capital to generate quick returns. However, leverage is a double-edged sword. Without proper risk management, this high degree of leverage can lead to large losses as well as gains.

Profit in Both Bull and Bear Markets

In the FX market, profit potentials exist in both bull and bear markets. Since currency trading always involves buying one currency and selling another, there is no structural bias to the market. Therefore, if you are long one currency, you are also short another. As a result, profit potentials exist equally in both upward trending and downward trending markets. This is different from the equities market, where most traders go long instead of short stocks, so the general equity investment community tends to suffer in a bear market.

No Trading Curbs / No Up Tick Rule

The FX market has a daily volume in excess of \$1.5 trillion, making it the largest and most liquid market in the world. This is close to three times the size of the equities market. This additional volume and liquidity ensures traders that they will have access to the most competitive market in the world with the best executions. Unlike the equities market, there is never a time when trading curbs would take into effect and trading would be halted, only to gap when reopened. This eliminates missed profits due to archaic exchange regulations. In the FX market, traders would be able to place trades 24 hours a day.

Also, in the equities market, traders are prohibited from shorting a stock in a downtrend unless there is an up tick. This can be very frustrating as traders may want to join short sellers, but continually watch the stock trend down before an up tick occurs. In the FX market, there is no such rule. If you want to short a currency pair, you can do so immediately and not have to wait for any requirement such as an up tick rule. This allows for instant and efficient execution.

Low Error Rates

Online FX trading is typically a 3-step process. A trader would place an order on the platform, the FX dealing desk would automatically execute it electronically and the order confirmation would be logged on the trader's trading station. An equities trade, on the other hand, would have a 5-step process: the client calls his broker to place an order, the broker sends the order to the exchange floor: the specialist on the floor tries to match up orders (the broker competes with other brokers to get the best fill for the client), the specialist executes the trade, and the client receives a confirmation from the broker. The elimination of a middleman eliminates the error rates on placing FX trades and increases the efficiency of each transaction.

Limited Slippage

Unlike the equity markets, the most advanced online FX market makers provide instantaneous execution from real time, two-way quotes. These quotes are the prices where the firms are willing to buy /sell the quoted currency, rather than vague indications of where the market is trading, which aren't honored [indicative quotes]. Orders are executed and confirmed within seconds. Robust systems would never request the size of a trader's potential order, or which side of the market he's trading, before giving him a bid/offer quote. Inefficient dealers determine whether the investor is a buyer or a seller, and 'shade' the price to increase their own profit on the transaction. The equity market typically operates under a "next best order" system, under which you may not get executed at the price you wish, but rather at the next best price available. For example, let's say Microsoft is trading at \$52.50. If you enter a buy order at this rate, by the time it reaches the specialist on the exchange floor, the price may have risen to \$53.25. In this case, you will not get executed at \$52.50; you will get executed at \$53.25, which is essentially a loss of $\frac{1}{4}$ of a point. The price transparency provided by the leading online foreign market makers assures that traders always receive a fair price. Every order you place, along with all stops and limits, will be executed at EXACTLY that price without slippage.

Liquidity

Spot FX is a market with \$1.5 Trillion in daily turnover, nearly 5 times that of the futures market. It is also a 24-hour market, granting instant access to trading for immediate response to global developments. This also gives traders the added flexibility of determining their trading day. Futures on the other hand, have varying hours for open and closes. For example, if you traded gold futures, it is only open for trading between 7:20am-1:30pm on the COMEX. On the other hand, if you traded crude oil futures on the NYME, trading would only be open between 8:30am-2:10pm. These varying hours create confusion and make it difficult to act on breakthrough announcements throughout

the remainder of the day. In addition, if you have a fulltime job during the day and can only trade after hours, futures would be a very inconvenient market for you to trade. You would basically be placing orders based upon past prices and not current market prices. This lack of transparency makes trading very cumbersome. With the FX market, if you choose to trade after hours, you can be assured that you would receive the same liquidity and spread as any other time of day. In addition, you would be able to access and trade on real time executable prices.

Low Transaction Costs

In the Futures market, traders must pay a spread and/or a commission. With future brokers, average commissions can run close to \$160 per trade on positions of \$100,000 or greater. The over-the-counter structure of the FX market eliminates exchange and clearing fees, which in turn lowers transaction costs. Costs are further reduced by the efficiencies created by a purely electronic market place that allows clients to deal directly with the market maker, eliminating both ticket costs and middlemen. Because the currency market offers round-the-clock liquidity, traders receive tight, competitive spreads both intra-day and night. Equity traders are more vulnerable to liquidity risk and typically receive wider dealing spreads, especially during after hours trading.

Low to zero transaction costs makes online FX trading the best market to trade for short-term traders. If you are an active futures trader who typically places 20 trades a day, at \$100 commission per trade, you would have to pay \$2000 in daily transaction costs in this example. This is a significant amount of money that would serve to reduce profits or deepen losses. The simplest way to look at this is in a futures trade; there is a broker, an FCM order desk, a clerk on the exchange floor, a runner, and a pit trader. All of these parties need to be paid, and their payment comes from your commission and clearing fees. In the FX market, these fees are not applicable.

Execution Quality and Speed / Low Error Rates

The futures market is known for inconsistent execution, both in terms of pricing and execution time. Every futures trader has experienced a half hour wait for a market order to be filled and has been executed at a price far away from where the market was trading when the initial order was placed. Even with electronic trading and limited guarantees of execution speed, the price for fills on market orders is far from certain. In the futures market, execution is uncertain because all orders must be done on the exchange. This creates a situation where liquidity is limited by the number of participants, which in turn limits quantities that can be traded at a given price.

In addition, the futures market typically operates under a "next best order" system, under which traders frequently do not get executed at the initial market order price, but rather at the next best price available. For example, let's say a client is long 5 March Dow Jones futures contracts at 8800. If the client enters a stop order at 8700, when the rate reaches this level, the client will most likely be executed at 8690. This 10-point difference would be attributed to slippage, which is very common in the futures market. In the FX market, the price transparency provided by the leading online foreign exchange market makers assures that traders always receive a fair price. Every order you place, along with all stops and limits, will be executed at EXACTLY that price without slippage.

Now online foreign exchange platform allows for instantaneous execution from live streaming prices. There is no discrepancy between the displayed price and the execution price. This holds true even during volatile times and fast moving markets. In the futures market, execution is uncertain because all orders must be done on the exchange. This creates a situation where liquidity is limited by the number of participants, which in turn limits quantities that can be traded at a given price. Real time streaming prices ensure that market orders, stops, and limits are executed without

REVIEW: FX vs. Futures

Which Do You Prefer?

SPOT FX	EQUITIES	FUTURES
Large Market Liquidity	Decent Market Liquidity	Little Market Liquidity
Very Low Cost - Little to Zero Commissions	Most Cost & Commissions	Many Costs & High Commissions
24 - Hour Market	9 to 5 Market w/ Limited After Hours Trading	9 to 5 w/ Limited After Hours Trading
No Bear Market	Prolonged Bear Markets	Prolonged Bear Markets
Low Error Rate	High Error Rate	Very High Error Rate
Limited Slippage	More Slippage	Constant Slippage

slippage and/or partial fills.

THE FX Market Structure

The foreign exchange market is the generic term for the worldwide institutions that exist to exchange or trade currencies. Foreign exchange is often referred to as "forex" or "FX." The foreign exchange market is an 'over the counter' (OTC) market. This means that there is no central exchange and clearing house where orders are matched. FX dealers and market makers around the world are linked to each other around-the-clock via telephone, computer, and fax, creating one cohesive market. Since there is no centralized exchange, competition between market makers prohibits monopolistic pricing strategies. If one market maker attempts to drastically skew the price, then traders simply have the option to find another market maker. Moreover, spreads are closely watched to ensure market makers are not whimsically altering the cost of the trade. Many equity

markets, on the other hand, operate in a completely different fashion; the New York Stock Exchange, for instance, is the sole place where companies listed on the NYSE can have their stocks traded. Centralized markets are operated by what are referred to as specialists; market makers, on the other hand, is the term used in reference to decentralized marketplaces. Since the NYSE is a centralized market, a stock traded on the NYSE can only have 1 bid-ask quote at all times. Decentralized markets, such as foreign exchange, can have multiple market makers - all of whom have the right to quote different prices.

Below is an illustration of how both centralized and decentralized markets operate:



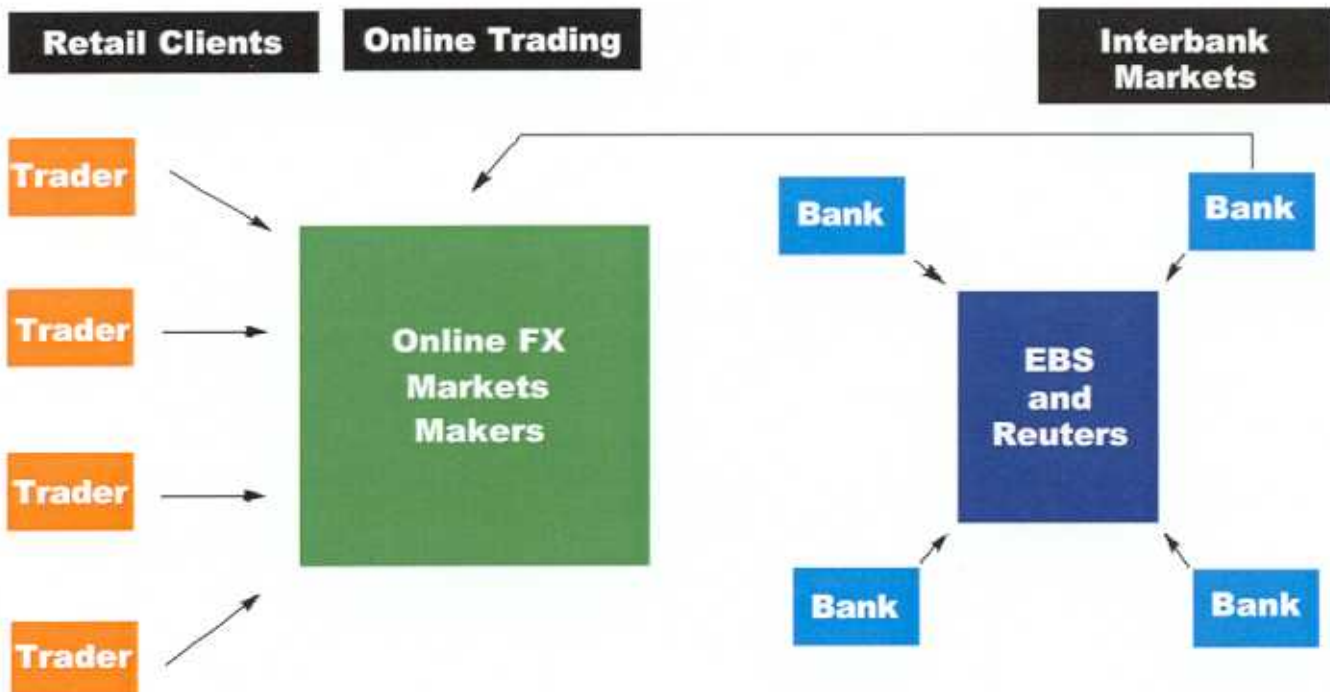
By their very nature, centralized markets tend to be monopolistic; with a single specialist controlling the market, prices can easily be skewed to accommodate the interests of the specialist, not those of the traders. If, for example, the market is filled with sellers from whom the specialists must buy from but there are no prospective buyers on the other side, the specialist will be forced to buy from the sellers in a situation where they cannot sell a commodity that is being sold off and hence falling in value. In such a situation, the specialist may simply widen the spread, thereby increasing the cost of the trade and preventing additional participants from entering the market. Or, specialists can simply drastically alter the quotes they are offering, thus manipulating

the price to accommodate their own needs.

Hierarchy of Participants

While the foreign exchange market is decentralized, and hence employs multiple market makers rather than a single specialist, participants in the FX market are organized into a hierarchy; those with superior credit access, volume transacted, and sophistication receives priority in the market. At the top of the hierarchy is the interbank market, which trades the highest volume per day in relatively few, mostly G7 currencies. In the interbank market, the largest banks can deal with each other directly, via interbank brokers or through electronic brokering systems like EBS or Reuters. The interbank market is a credit-approved system where banks trade based solely on the credit relationships they have established with one another. All the banks can see the rates everyone is dealing at, however, each bank must have a specific credit relationship with the other bank in order to trade at the rates being offered. Other institutions such as online FX market makers, hedge funds and corporations must trade FX through commercial banks. Many banks (small community banks, banks in emerging markets), corporations, and institutional investors do not have access to these rates because they have no estab-

lished credit lines with big banks. This forces small participants to deal through just one bank for their foreign exchange needs, and often times this means much less competitive rates for the participants further down the participant hierarchy. Those receiving the least competitive rates are customers by banks and exchange agencies. Recently, technology has broken down the barriers that used to stand between the end-users of foreign exchange services and the Interbank market. The online trading revolution opened its doors to retail clientele by connecting market makers and market participants in an efficient, low cost manner. In essence, the online trading platform serves as gateway to the liquid FX market. Average traders can now trade alongside the biggest banks in the world, with virtually similar pricing and execution. What used to be a game dominated and controlled by the "big boys" is slowly becoming a level playing field where individuals can profit and take advantage of the same opportunities as big banks. FX is no longer an old boys club, which means opportunity is abound for aspiring online currency traders.

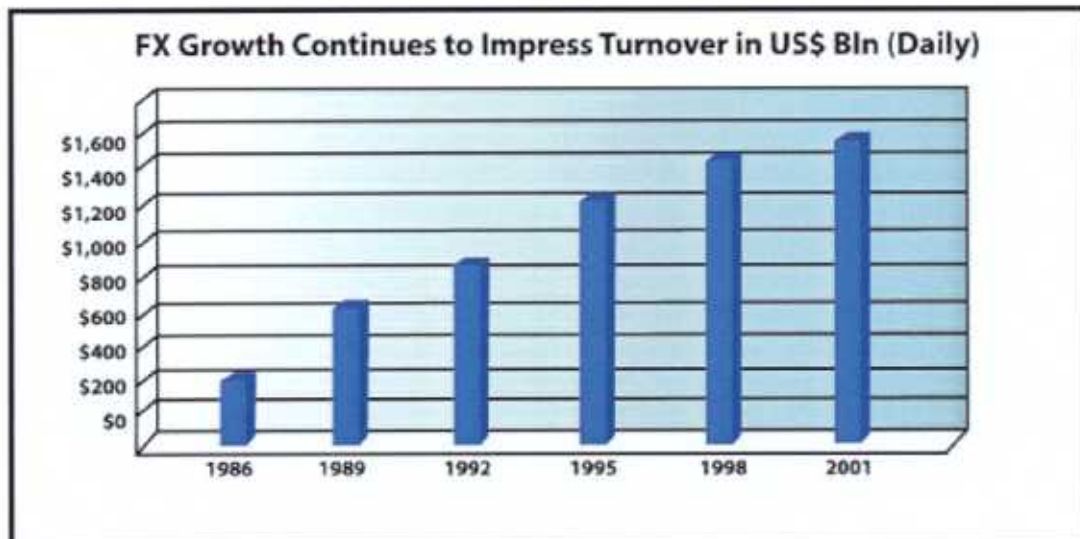


Market Participants

In the last 25 years, increasing globalization has had a profound impact on the foreign exchange market, resulting in staggering growth as well as an impressive rise in the number and diversity of players. The market has expanded from one of banks trading predominantly amongst each other to one in which many different kinds of financial and non-financial institutions all participate for a variety of reasons. There have been many contributing factors to the growth of the foreign exchange market but the major developments that are worth noting are advancement in technology and the continuing growth of international and cross-border capital movement, i.e. foreign investment. Only ten years ago most foreign exchange activity in the US was focused on international trade in goods and services, i.e. for import/export purposes. Now foreign exchange activity reflects the changing financial environment. Investment to and from overseas (i.e. capital flows) has expanded far more rapidly than trade. Institutional investors, insurance companies, and mutual funds have become major participants in the FX markets in addition to the more traditional

players such as central banks, commercial/investment banks, and commercial participants. The size and diversity of players involved in the foreign exchange market contribute to the overall liquidity and price stability of the market. Simply put, in the foreign exchange market there are always buyers and sellers, which creates an orderly market. The equities market is a speculators market, meaning, the majority of market participants watch the market to buy low and sell high for profit. When any kind of market news is released, which affects the intrinsic value of the stock, the market will immediately correct itself and trade at that level. For example, if Coca Cola releases corporate earnings that are substantially lower than market expectations, the stock will immediately begin trading at a level that reflects its new intrinsic value. The stock would have to reach a lower level than it is perceived to be worth before buyers will come back into the market looking to pick up the stock on the cheap.

FX Growth Continues to Impress Turnover in US\$ Bln (Daily)



A Closer Look at the Key Participants

The foreign exchange market has become far more democratized in recent years due to advances in technology, expanding beyond simply banks executing transactions amongst themselves, to include a wide variety of market participants with many different reasons for participating in the market including: To earn short-term profits from fluctuations in exchange rates, to protect themselves from loss due to changes in exchange rates, to acquire the foreign currency necessary to buy goods and services from other countries, or seeking to influence the exchange rate. Regardless of the motivation, the key market participants affect the supply and demand of the currencies involved, and subsequently play a role in determining the exchange rate at that moment; therefore it is important to know who are the key market participants. They include **commercial/investment banks, central banks, corporations, funds, and individuals.**

Commercial/Investment Banks

Commercial banks account for the largest proportion of total FX trading volume. The interbank market caters to both the majority of commercial turnover as well as enormous amounts of speculative trading every day. These banks will trade currencies among themselves as part of the system of balancing accounts. The interbank market is a credit-approved system where banks trade solely on the credit relationships they have established with one another. About three quarters of all foreign exchange trading is between banks: in fact billions of dollars worth of currency is traded between banks each day. Essentially Commercial/Investment Banks are the sell side of the FX market, as all other participants must trade through them. Commercial and investment banks are in the FX market on behalf of both their customers and themselves. Authorized foreign exchange banks deal through electronic brokering systems, which automatically match sellers and buyers using orders for spot deals through terminals established at banks. Reuters was set up in 1992, followed by Electronic

Brokering Services Limited (EBS) in 1993, which primarily replaced the voice broker system. Electronic brokering has dramatically changed interbank trading. As a result spreads have tightened dramatically, making trading within the spread (a favorite strategy in the 1980's) virtually non-existent. The advance of electronic brokering owes much to its lower costs, higher efficiency and, most importantly, greater transparency compared to traditional means of dealing. All the banks can see the rates everyone is dealing at, however, each bank must have a specific credit relationship with that bank in order to trade at the rates being offered. Although most trading activity is undertaken on behalf of customers, proprietary desks also conduct a large amount of trading, where dealers are trading to make the bank profits. Banks are very much in the know, as they can see order flow and when other important participants, such as central banks and large hedge funds, are entering the market.

A Brief History of Electronic Trading in Foreign Exchange

Traditionally foreign exchange transactions took place over the phone, and to a much lesser extent on the telex machine. The old system of voice brokering was a conglomeration of two-way phone conversations between interbank dealers. Not only were these systems slow, and error prone, but they also allowed for a true market price that was "fuzzy" as prices could differ from dealer to dealer. In order to stay current about the market price, dealers would execute smaller trades regularly throughout the trading session, not only for profit, but to get an idea of the current price. Now, this old system of telephones and brokers has been replaced by electronic systems, and most voice brokers have been forced out of the market due to cost savings and benefits provided by these systems. The first venture into electronic trading in foreign exchange markets was the launch of Reuter's "Monitor Dealing Service" in the early 1980s, which was later replaced by Reuters Dealing 2000-1 in 1989. The earliest systems allowed for communi-

cation between foreign exchange dealers with a single counterparty, but did not serve as a matching system between numbers of potential counterparties. In 1992, however, this changed when Reuters launched Dealing 2000-3, a true electronic brokering system that automatically matched buy and sell quotes from dealers. Next, the Minex Corporation, a Japanese group of brokers and bankers, set up its own system in April 1993. In September 1993, EBS (Electronic Brokering Service) was formed by a group of large dealing banks launched its trading system. Once Minex Corporation transferred its business rights to EBS in 1996; the foreign exchange market was left with two major inter-dealer electronic brokering systems. Order matching systems are much more reliable, and faster, allowing traders to conduct many simultaneous trades, rather than one or two over the phone.

Example of the EBS Dealing Screen

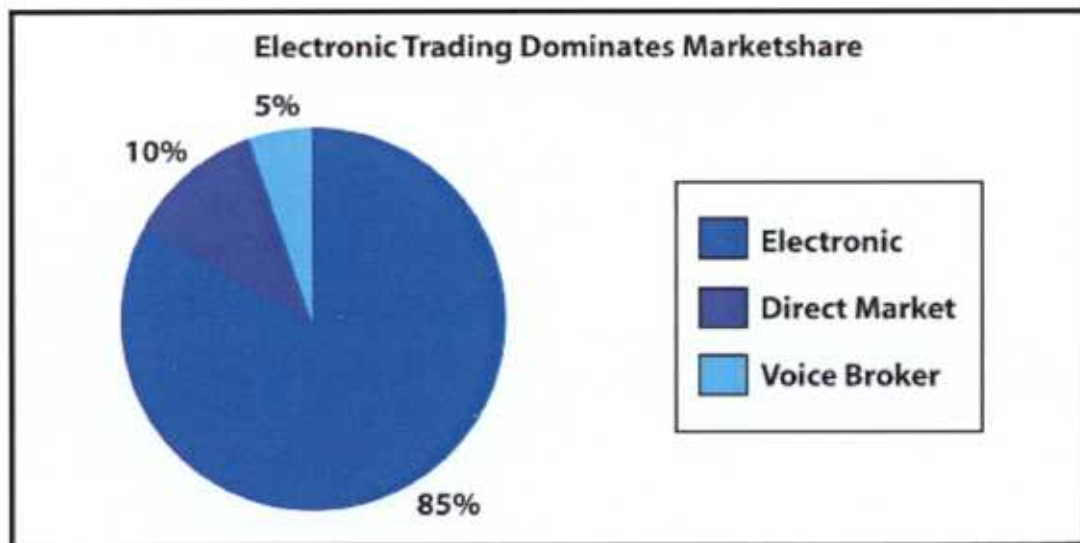
The screenshot displays the EBS Dealing Screen interface. It features a grid of currency pairs with bid and offer prices, and a list of trade orders on the right side.

Pair	Rate	Order Type	Quantity	Price	Time
eurusd	0.96	bid	26	0.96	11-Apr
eurusd	0.96	offer	27	0.96	11-Apr
usdjpy	106.97	bid	97	106.97	11-Apr
usdjpy	106.98	offer	98	106.98	11-Apr
eurjpy	102.96	bid	96	102.96	11-Apr
eurjpy	102.97	offer	97	102.97	11-Apr
usdchf	1.63	bid	35	1.63	11-Apr
usdchf	1.63	offer	36	1.63	11-Apr
eurchf	1.57	bid	15	1.57	11-Apr
eurchf	1.57	offer	17	1.57	11-Apr
gbpusd	1.50	bid	63	1.50	11-Apr
gbpusd	1.50	offer	65	1.50	11-Apr

Time	Order Type	Quantity	Price	Pair
19:25	SELL	10	109.37	USD/JPY
19:31	BUY	5	106.96	USD/JPY
19:32	SELL	10	0.9676	EUR/USD
19:32	SELL	5	1.5395	USD/CHF
19:34	BUY	10	0.9677	EUR/USD
19:34	SELL	5	0.9677	EUR/USD
19:45	SELL	10	0.9677	EUR/USD
19:46	BUY	5	0.9676	EUR/USD
19:46	BUY	10	0.9676	EUR/USD
19:47	SELL	5	106.36	USD/JPY

These systems have become the predominant vehicle for inter-dealer transactions. Because of the decentralized over-the-counter nature of foreign exchange markets, the exact share of global foreign exchange trading volume conducted through electronic brokering services cannot be determined precisely but comprises approximately 85% if not higher.

A Brief History of Electronic Trading in Foreign Exchange



Central Banks

Central banks are large players in the currency markets and can play an important role in spot price fluctuations. Central banks are not speculators and enter the FX markets primarily for: 1). Market supervision and 2). To control money supply and interest rates. Government and central banks closely monitor economic activity to keep money supply at a level appropriate to achieve their economic goals. Central banks influence money supply and interest rates through open market operations or the active trading of government securities. For example, too much money can lead to inflation whereby the value of money declines and real prices rise.

Central banks also often attempt to restore order to volatile markets through interventions. The reasons for central bank intervention may be a result of a variety of factors: to restore stability, protect a certain price level, slow down currency movements, or to reverse a trend. Interventions may be coordinated with other central banks or undertaken by a single central bank. The operations may be announced or unannounced. They may operate openly and directly, or through brokers or agents. Ultimately different objectives

will require different approaches. To restore stability, the central banks often work together. However, a country taking a conservative view on intervention would act only in response to unusual circumstances that require immediate action, like political unrest or natural disasters. Most monetary authorities would be less likely to intervene to counteract the fundamental forces that drive FX markets, such as trade patterns, interest rate differentials, and capital flows. There are some noteworthy exceptions however, such as the Bank of Japan, which has been known to intervene on behalf of the yen on numerous occasions. One reason is a result of Japan's major exporters influencing the banks to protect their interests. In protecting certain price levels a central bank may intervene from time to time to resist moves that seem excessive in either direction. For example, the United States has on occasion sold dollars when the currency was deemed to be getting "too strong" relative to economic fundamentals and bought back dollars when it was regarded as becoming "to weak" (it should be noted that U.S interventions are infrequent). The transactions in the intervention are small compared to the total volume of trading in the FX market and these actions do not shift the balance of supply and demand immediately. Instead, intervention is used as a device to signal a desired exchange

A Brief History of Electronic Trading in Foreign Exchange

rate movement and affect the behavior of participants in the FX market. Often the mere mention of intervention will violently move a market.

It is also important to note that a significant side effect of the increase of international economic activity over the past few decades has been the creation and growth of the Eurocurrency market (bank deposits in any country held in a different country's currency like U.S. dollars in a British bank). A great deal of foreign exchange market activity involves the transfer of Eurocurrency deposits. Since central banks have such large amounts of reserves to juggle, it is easy for them to have "unintentional" influence on the currency markets when they make re-positioning decisions.

Overview of the Major Central Banks

The Federal Reserve (Fed):

The Federal Reserve Board (Fed) is the central bank of the United States. They are responsible for setting and implementing monetary policy. The board consists of a 12-member committee, which comprise the Federal Open Market Committee (FOMC). The voting members of the FOMC are the seven Governors of the Federal Reserve Board, plus five presidents of the twelve district reserve banks. The FOMC holds 8 meetings per year, which are widely watched for interest rate announcements or changes in growth expectations. The Fed has a high degree of independence to set monetary authority. They are less subject to political influences, as most members are accorded long terms that allow them to remain in office through periods of alternate party dominance in both the Presidency and Congress. The US Treasury is responsible for issuing government debt and for making fiscal policy decisions. Fiscal policy decisions include determining the appropriate level of taxes and government spending. The US Treasury is the actual government body that determines dollar policy. That is, if they feel that the USD rate on the foreign exchange market is under or overvalued, they are the ones giving the NY Federal Reserve Board the instructions to intervene in the foreign exchange market by physically selling or buying USD. Therefore, the Treasury's view on dollar policy and changes to that view is very important to the currency market.

The European Central Bank (ECB):

The European Central Bank (ECB) is the governing body responsible for determining the monetary policy of the countries participating in the EMU. The Executive Board of the EMU consists of the President of the ECB, the Vice President of the ECB and four other members. These individuals along with the governors of the national central banks comprise the Governing Council. The ECB is set up such that the Executive Board implements the policies dictated by the Governing Council. New monetary policies decisions are typically made by majority vote, with the

President having the casting vote in the event of a tie, in biweekly meetings. Primary objective of European Central Bank is price stability. ECB is considered "inflation paranoid" as it has strong German influence. ECB and the ESCB are independent institutions from both national governments and other EU institutions giving them total control over monetary and currency policy. The European central bank is a strict monetarist and much more likely to keep interest rates high. Two edicts of monetary policy are: to keep Harmonized CPI below 2% and M3 annual growth (Money supply) around 4.5%. Refinance rate is the main weapon used by the ECB to implement EU monetary policy. ECB watches the fiscal discipline of its members closely. If countries are undisciplined, the ECB is less likely to remain hawkish. ECB is considered an untested central bank and doubts linger as to how they will react to any future crisis. The ECB keeps close tabs on budget deficits of the individual countries as the Stability and Growth Pact states that they must be kept below 3% of GDP. The ECB does intervene in the FX markets, especially when inflation is a concern. Comments by members of the Governing Council are widely watched by FX market participants and frequently move the EUR.

Bank of England (BoE):

The Bank of England (BoE) is the central bank of United Kingdom. Bank was founded in 1694, nationalized in 1946, and gained operational independence in 1997. The BoE is committed to promoting and maintaining a stable and efficient monetary and financial framework as its contribution to a healthy economy. In 1997 parliament passed the Bank of England act giving the BoE total independence in setting monetary policy. Prior to 1997, the BoE was essentially a governmental organization with very little freedom. Treasury's role in setting monetary policy diminished markedly since 1997. However, the Treasury still sets inflation targets for the BoE, currently defined as 2.5% annual growth in Retail Prices Index excluding mortgages (RPIX). The treasury is also responsible for making key appointments at the Central Bank. The BoE's nine member

Overview of the Major Central Banks

Monetary Policy Committee (MPC) is responsible for making decisions on interest rates. Although MPC has independence in setting interest rates, the legislation provides that in extreme circumstances the government may intervene. The Bank of England's main policy tool is the minimum lending rate or base rate. Changes to the base rate are usually seen as a clear change in monetary policy. BoE most frequently affects monetary policy through daily market operations (the buying/selling of government bonds). The BoE is infamous for attempting to influence exchange rates through unsterilized market interventions.

Swiss National Bank (SNB):

The Swiss National Bank is the central Bank of Switzerland. The Swiss National Bank enjoys 100% autonomy in determining the nation's monetary and exchange rate policies. In December 1999, the SNB shifted from a monetarist approach to an inflation-targeting one (2% annual inflation target). Discount rate is official tool used to announce changes in monetary policy however; it is rarely used as the bank relies more on the 3-month LIBOR to manipulate monetary policy. SNB officials often affect the Franc spot movements by making remarks on liquidity, money supply and the currency itself. Intervention is frequent, however, most often intervention is used to enforce economic policy and uses open market operations such as raising or lowering interest rates to affect the value of its currency. As a country where international trade has been the primary source of the country's economic development, its preference is for a weaker franc (in order for its exports to remain competitive). SNB is highly regarded and the franc is considered by most market participants to be the "world's best managed currency."

The Bank of Japan (BOJ):

The Bank of Japan (BoJ) is the key monetary policymaking body in Japan. In 1998, the Japanese government passed laws giving the BoJ operational independence from the Ministry of Finance (MoF) and complete control over mon-

etary policy. However, despite the government's attempts to decentralize decision-making, the MoF still remains in charge of foreign exchange policy. MoF is considered the single most important political and monetary institution in Japan. MoF officials frequently make statements regarding the economy, which have notable impacts on the Yen. The BoJ is responsible for executing all official Japanese foreign exchange transactions at the direction of the MoF. Bank of Japan does possess total autonomy over monetary policy and can have significant indirect impacts on foreign exchange rates. The BoJ's main economic tool is the overnight call rate. The call rate is controlled by the open market operations and any changes to it often signify major changes in monetary policy. Since the introduction of a floating exchange rate system in February 1973, the Japanese economy has experienced large fluctuations in foreign exchange rates, with the yen on a long rising trend. The reason for yen strength (despite the plethora of problems that have plagued the Japanese economy) is the fact that Japan has a trade surplus accounting for 3% of GDP. This is the highest of the G-7 countries and therefore creates a strong inherent demand for the currency for trade purposes, regardless of their economic conditions. The Japanese government is notorious for directly intervening on behalf of yen through market interventions. BOJ interventions are frequent and violent. As an export-driven country, there are strong political interests in Japan for maintaining a weak yen in order to keep exports competitive. Accordingly, the BOJ has been known to go into the market and sell off yen when the yen rate is perceived to be too strong.

Bank of Canada (BOC):

The Bank of Canada (BOC) is the central bank of Canada. The Governing Council of the Bank of Canada is the board that is responsible for setting monetary policy and is an independent Central bank that has a tight reign on its currency. This council consists of seven members: the Governor and six Deputy Governors. The Bank of Canada does not have regular periodic policy setting meetings.

Overview of the Major Central Banks

Instead, the council meets on a daily basis and changes in policy can be made at any time. Due to its tight economic relations with the United States, the Canadian dollar has a strong connection to the U.S. dollar.

Commercial Participants

With the rapid increase in globalization, corporations have been forced more and more to focus on foreign exchange and in the process have become very important players. Corporations comprise a diverse group and include small and large corporations, import/exporters, financial service firms, and consumer service firms amongst others. Corporations' interests in foreign exchange are derived from several sources. For example, multinational corporations may need to make payments to foreign entities for materials, labor, marketing/advertising costs and/or distributions, which would require the exchange of currencies. Generally, exporters prefer to be paid in their country's currency or in U.S. dollars, which are accepted all over the world. The primary use of multinational corporations in the marketplace is to offset risk by hedging against currency depreciation, which would affect future payments. The decision for a corporation to hedge depends on a variety of factors. For example, if the corporation believes that the home currency is expected to depreciate, and as a result the outstanding position is at risk, it would most likely enter the market via a hedging strategy. Some currencies are more volatile than others. For example, a EU member may be less inclined to hedge its currency risk against the Swiss Franc (as these currencies tend to move in tandem due to their economic links); however, a company would surely consider hedging against the Japanese yen. The correlation between the Swiss Franc and Japanese yen is much lower for the Swiss Franc and Japanese yen, which would certainly allow for more fluctuations in the EUR/JPY pair. Now, however, a minority has begun to use the marketplace as a speculative tool; meaning, they enter the foreign exchange market purely to take advantage of expected currency fluctuation. This group of corporations using the FX market for speculative purposes is growing, and as very

active participants they have a great impact on spot market prices. Corporations' approach to trading tends to be longer-term since they use the market for covering commercial needs, hedging, and speculations. Generally corporations do not like volatility- they have a natural demand, which is derived from the nature of their business and are therefore required to be actively involved in order to hedge their exposure. Accordingly the directions of the market and price levels are extremely important.

Global Fund Managers

Global fund managers, large mutual, pension, and arbitrage funds that invest in foreign securities and other foreign financial instruments can have substantial impacts on spot price movements as they are constantly re-balancing and adjusting their international equity and fixed income portfolios. These portfolio decisions can be influential because they often involve sizable capital transactions. During periods where local stocks and bonds are attractive, a national economy can get substantial allocations of global capital driving that national currency up. Portfolio hedging activities are also beginning to affect the FX markets as more and more international funds have begun to implement currency hedging strategies. When this group wishes to hedge existing investments, they can generate selling flows.

FX Funds

Funds that invest in FX are commonly called Global Macro funds. These funds depending, on size, tend to take different positions in the FX market. Many large funds tend to take large carry trade positions exploiting global interest rate differentials (a detailed explanation of carry trades can be found in the "what moves the market" section of the manual). Others tend seek to take advantage of misguided economic policies or currencies that overshoot their "real value," by entering large positions and betting on a return to equilibrium. Others simply gauge global events and take a longer-term view on which currencies will

Overview of the Major Central Banks

strengthen/weaken in the next six to eight months. Fund participation in the FX market has risen sharply in the recent years and its total trading share is now around 20%. There is no doubt that with the increasing amount of money some of these investment vehicles have under management, the size and liquidity of foreign exchange markets is very appealing. While relatively small compared to other market participants, when acting together, they can have a profound effect on the currency spot movements.

Individuals

Retail spot currency trading is the new frontier of the trading world. Up until 1996 foreign exchange trading was only available to banks, institutions and extremely high net-worth individuals. The only access individual investors had to currencies prior to 1996 was through the highly illiquid futures and option markets and the un-tradable cash bank market. Prior to online retail FX dealers, individuals could not realistically participate in the foreign exchange market from a speculative standpoint. The interbank market operated as a tight circle; it acted somewhat like a specialist, as it manipulated the fates of tiers 2 and 3 to accommodate its own needs. Accordingly, individual traders looking to trade FX could not find a market maker capable of providing competitive spreads, fair quotes, and equitable customer service. With the advent of online foreign exchange trading, retail clients are provided with access to trading functionality that is highly comparable to the offerings of the inter-bank market. Spreads are slightly wider - 5 pips on most currency pairs as opposed to the interbank standard of 3 - but execution is unsurpassed: competitive firms will honor all quotes and entry orders, and execute them at exactly the rate specified. Now retail clients and multinational institutions can participate in the FX market on a highly equitable playing field.

Investor protections Reaches Retail Level

For many years the retail online foreign exchange industry languished for years due to the lack of a regulatory environment to uphold investor protection. In December 2000, however, Congress passed and the President signed the Commodities Modernization Act in December of 2000. The Act finally regulated the foreign exchange industry and placed its oversight under the auspices of the Commodities Futures Trading Commission (www.cftc.gov).

CFTC

Government Regulation Enters The FX Market

The Commodity Futures Trading Commission (CFTC) was created by Congress in 1974 as an independent agency with the mandate to regulate commodity futures and option markets in the United States. The agency protects market participants against manipulation, abusive trade practices and fraud. Through effective oversight and regulation, the CFTC enables the markets to better serve their important functions in the nation's economy--providing a mechanism for price discovery and a means of offsetting price risk. The CFTC sets forth many of the guidelines the National Futures Association is required to follow.

NFA: Maintaining Integrity

The National Futures Association (NFA) officially began operations on October 1, 1982, with the goal of maintaining the integrity of the futures marketplace. All companies trading in futures must become NFA members. Those companies that are not registered with the NFA are subject to closure by the CFTC. The passage of the Commodities Modernization Act requires that any company trading online forex be registered with the NFA. The NFA has many capital requirements and makes sure companies maintain high book-keeping and ethical standards in order to be registered. With the passage of the Modernization Act, the NFA required forex market makers to register as Futures Commission Merchants (FCMs).

Overview of the Major Central Banks

Market Hours

Time Zone	US	London	Tokyo	GMT
Tokyo Open	7:00pm	0:00	9:00	0:00
Tokyo Close	4:00am	9:00	18:00	9:00
London Open	3:00am	8:00	17:00	8:00
London Close	12:00pm	5:00	14:00	5:00
NY Open	8:00am	13:00	22:00	13:00
NY Close	5:00pm	22:00	7:00	22:00

The spot FX market is unique to any other market in the world, as trading is available 24-hours a day. Somewhere around the world, a financial center is open for business, and banks and other institutions exchange currencies, every hour of the day and night with only minor gaps on the weekend. The major financial centers around the world overlap; while some markets are winding up their business day, other markets around the world are just beginning to trade. Essentially foreign exchange markets follow the sun around the world.

The International Date Line is located in the western Pacific, and each business day arrives first in the Asian financial center- first in Wellington, New Zealand, then Sydney, Australia, followed by Tokyo, Hong Kong, and Singapore. Only a few hours later markets open in the Middle East (beginning in Bahrain). When the markets in Tokyo are beginning to wind down, Europe opens for business. Finally, New York and other U.S. centers begin. Towards the late afternoon in the United States, the next day has arrived in the Asia areas, and the first markets there have opened and the process begins again.

While spot trades just about everywhere, the three main markets of Tokyo, London, and New York are the most influential since they represent almost 70% of the world's FX volume. Foreign exchange activity does not flow even-

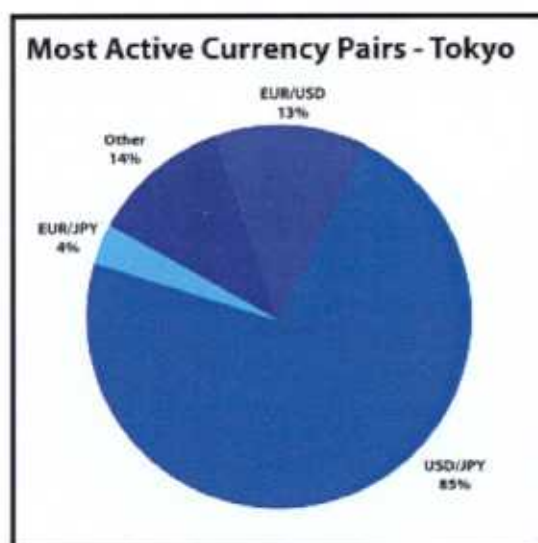
ly, and throughout the course of the international trading day, there certain markets are characterized by very heavy trading activity in some (or all) currency pairs, and other periods are characterized by light activity in some (or all) currency pairs. Foreign exchange activity tends to be the most active when markets overlap, particularly the U.S. markets and the major European markets, i.e. when it is the morning in New York and the afternoon in London. On the next page, are the major characteristics of the three main markets are outlined:

The FX Structure

Overview of the Major Central Banks

**TOKYO: 7:00pm EDT - 3:00am EDT/
Avg. Daily Volume \$150bn**

As Japan's economy has dwindled over the past decade, Japanese banks have been unable to commit to FX the large amounts of capital they once did in the 1980's. Despite this, Tokyo is the first major market to open, and many large participants use it to get a read on dynamics or to begin scaling into positions. Approximately 10% of all FX trading volume takes place during the Tokyo session. Trading can be relatively thin and hedge funds and banks have been known to use the Tokyo lunch hour to run important stop and option barrier levels. Yen, Kiwi, and Aussie pairs tend to be the biggest movers during Tokyo hours as other currencies are quite thin and usually do not move.



**LONDON: 3:00am EDT to
11:00am EDT/Avg. Daily Volume
\$570bn**

London is by far the most important and influential FX market on the planet, with approximately 30% of all transactions. Most big bank's dealing desks are run out of London and the market is responsible for roughly 28% of total spot volume. London tends to be the most orderly market due to the large liquidity and ease of completing transactions. Most large market participants use London hours to complete serious FX deals.

**NEW YORK: 8:00am EDT - 5:00pm EDT
/Avg. Daily Volume \$330bn**

New York is the second most important market in FX, with approximately 16 % of market volume. In the United States spot market, the majority of deals are executed between 8 AM and 12:00 PM, when European traders are still active. Trading often becomes quite choppy after midday however, as liquidity dries up. In fact, there is a drop of over 50% in trading activity since California never served to bridge the gap between U.S and Asia. As a result, traders tend to pay less attention to market development in the afternoon. NY is very much influenced by the US equity and bond markets and pairs will often move closely in tandem with the capital markets.

Currency	Sell	Buy
EUR/USD	0.8778	0.8782
USD/JPY	133.56	133.61
GBP/USD	1.4240	1.4245
USD/CHF	1.6819	1.6824
EUR/CHF	1.4767	1.4775
AUD/USD	0.5124	0.5129

Review: FX A Brief History

Bretton Woods

Determined to re-establish the gold standard and provide for the economic needs and stability of the postwar international system, 44 countries met in Bretton Woods, New Hampshire on July 1944 to establish a fixed exchange rate system. Goals included financial stability, convertible currencies, free trade, full employment, and economic growth. The system was centered on the US dollar. Major currencies were pegged to the dollar, which was in turn tied to gold at a value of \$35 per ounce. The dollar was the primary reserve currency and member countries were able to sell currency to the Federal Reserve in exchange for gold at the present rate. In addition to these parameters, Bretton Woods established the International Monetary Fund (IMF), and the International Bank for Reconstruction and Development (World Bank). These multilateral organizations were designed to ensure that the Bretton Woods system operated effectively.

Trading under the Bretton Woods system had unique characteristics. Since exchange rates were fixed, intense trading occurred surrounding devaluations or revaluations, known as "creeping pegs". Speculation against the British pound in 1967 demonstrated creeping pegs trading patterns. Following intense speculation the Bank of England, along with other central banks, took action to support the pound. However, despite their attempts they failed and the pound was devalued that November. The failure was monumental because it was the first time that central bank intervention failed under the Bretton Woods system.

Failure of central bank intervention continued in the following years in the case of the dollar. The Bretton Woods system was dependent on a strong US dollar. Therefore, when the dollar began to experience pressure in 1968, there were implications for the future of the system. Speculation against the dollar increased as investors suspected that it was overvalued and confidence plummeted. By 1971, the dollar was in crisis and devaluation became imperative.

Smithsonian Agreement

A multilateral effort to improve the exchange rate mechanism was finally accomplished in December 1971 when the Smithsonian Agreement was signed. The agreement devalued the dollar against major European currencies by around eight percent. Currency was allowed to fluctuate within a wider band, 2.25% instead of 1%, and the price of gold rose to \$38 an ounce.

Despite the provisions of the Smithsonian Agreement, the US current account drastically deteriorated in 1972 and speculation against the dollar continued. In February 1973, intense speculation forced foreign exchange markets to close and a 10 percent devaluation of the dollar ensued. Following continued speculation, FX markets were once again forced to close.

Birth of the Current Market

The currencies of Japan and most European countries were floating against the dollar when the market reopened in March of 1973. As the result, the US dollar was devalued at a full 10% and floating rates. The arrangement was considered temporary but continues to operate to this day.

The new method of placing value upon currency influenced the way that currency was traded and opened up new avenues for speculation. The majority of currency trading today is not for the purpose of buying or selling goods, but rather, is intended for profit.

During the 1970s, the FX market was dominated by bank brokers. However, deregulation and electronic trading has made the FX market the most liquid market in the world and more easily accessible to smaller investors. Central banks remain powerful in this system; however, their influence has fallen from previous levels. Furthermore, The National Futures Association (NFA) and the Commodity Futures Trading Commission (CFTC) were established in the 1970s and 1980s to protect individual market participants.

Review: FX A Brief History

As technology increased in the 1980s, cross-border capital movement followed. In the 1980s, FX daily trading volume was \$70 billion a day whereas today it is 1.5 trillion. Furthermore, electronic brokers in London currently account for about 70% of the broker market in that area and the majority of speculation is electronic.

European Monetary System

In March of 1979 nine of the European Community's members launched the European Monetary System. The goals of the EMS included a common currency (European Currency Unit), regulation in the fluctuations between currencies (Exchange Rate Mechanism), and the creation of a central reserve fund (European Monetary Cooperation Fund). Following the implementation guidelines set forth by the Maastricht Treaty (implemented in 1993), the European Central Bank (ECB) was created in 1998, the Euro was introduced in 1999 for purposes of foreign exchange and electronic payments, and Euro banknotes were introduced in January 2002. The European Monetary System was considered a revolutionary step toward achieving increased integration and liberalization, the conceptual bedrock upon which the EC was first founded post WWII.

PART 2: Currency Trading Basics

In the foreign exchange market currencies are not referred to by their full name. Rather, standardized codes, developed by the International Organization for Standardization, known as ISO codes, are used. Accordingly, throughout this manual all currencies will be referred to by their codes. ISO abbreviations, however, are not used in conversation; rather traders generally refer to currencies by their nicknames. The U.S. dollar, for example, is known as the buck or green-back; the British pound sterling is commonly referred to as the cable, the Swiss franc, the swissy, the Australian dollar, aussie, and the New Zealand dollar, the kiwi.

Currency Abbreviations

EUR = euro
GBP = Great British pound
USD = US dollar
CHF = Swiss franc
NZD = New Zealand dollar
AUD = Australian dollar
CAD = Canadian dollar
JPY = Japanese yen

Buying and Selling

In the forex market currency trading is always done in currency pairs, such as EUR/USD or USD/JPY, reflecting the exchange rate between two currencies. An exchange rate is simply the ratio of one currency valued against another currency. For example, the USD/JPY exchange rate specifies how many U.S. dollars can purchase one Japanese yen, or conversely how many Japanese yen you need to buy one U.S. dollar.

The first currency in the pair is referred to as the base currency, and the second currency is the counter or quote currency. For example for USD/JPY, the U.S. dollar is the base currency and the Japanese yen is the counter currency. When buying, the exchange rate specifies how much you

have to pay in units of the counter currency to buy one unit of the base currency; in the above example, you have to pay 117.10 yen to buy 1 US dollar. When selling, the foreign currency exchange rate specifies how much units of the quote currency you get for selling one unit of the base currency; in the above example, you will receive 117.10 Japanese Yen when you sell 1 US dollar.

The order in which currencies are quoted is fixed. For example, when entering a spot transaction between the U.S. dollar and Japanese Yen, the U.S. dollar will always be quoted first in the pair. The U.S. dollar is placed first in most currency pairs because of its role as the world's main currency (i.e. USD/JPY, USD/CAD, USD/CHF). This means that quotes are expressed as a unit of \$1 USD per the other currency quoted in the pair. The exceptions are the Euro, Great Britain pound, and Australian dollar. These currencies are quoted as dollars per foreign currency.

Keeping in Straight: Trading in Pairs

For practical purposes it is useful to consider the currency pair as an instrument, which can be bought or sold and it is useful to think of the base currency as the "basis" for the buy and sell. Simply put, when you BUY a currency pair implies that you are buying the first (base) currency and selling the second (quote or counter) currency. A trader buys the pair if he believes the base currency will appreciate relative to the quote currency. Selling the currency pair implies selling the first (base) currency and buying the second (quote or counter) currency. A trader sells the pair, if he believes the base currency will depreciate relative to the quote currency.

This is a key example to grasp, therefore, let's go through a few examples.

EUR/USD:

When trading the EUR/USD the euro is the base currency and the U.S. dollar is the counter currency; therefore the

PART 2: Currency Trading Basics

euro is the basis for the buy and sell. If you think the US stock market will fall and that will hurt the USD, then you would BUY the currency pair. By buying the pair, you are buying euros expecting them to appreciate against the USD. If you SELL the pair then the opposite is true: you buy US Dollars expecting them to climb against the Euro.

USD/JPY:

When trading the USD/JPY the U.S dollar is the base currency and the yen is the counter currency; therefore the dollar is the basis for the buy and sell. If you think that the Japanese government is going to weaken the Yen in order to help their export industry, you would BUY the currency pair. By buying the pair, you are buying dollars with the expectation that it will increase in value against the Yen. You would SELL the pair if you think that Japanese investors are pulling money out of US financial markets and repatriating funds back to Japan . By selling the pair, you expect the Yen to strengthen against the US Dollar as Japanese investors sell their assets and convert their dollars to Yen.

GBP/USD:

When trading the GBP/USD, the pound is the base currency and the U.S dollar is the counter currency; therefore the pound is the basis for the buy and sell. If for example you think the British Economy will continue to be the leading economy amongst the G7 nations in terms of growth thus buoying the Pound, you would BUY the currency pair. By buying the pair, you are expecting the British Pound to strengthen against the US Dollar. If you believe the British are about to commit themselves to adopting the Euro and this will weaken the pound, you would SELL the pair. By selling the pair, you expect the Pound to weaken against the Dollar as the British devalue their currency in anticipation of merging with the Euro.

USD/CHF:

When trading the USD/CHF the U.S dollar is the base currency and the Swiss franc is the counter currency; therefore the dollar is the basis for the buy and sell. If for example you think the Swiss Franc is overvalued you would BUY the currency pair. By buying the pair, you are expecting the US Dollar to strengthen against the Swiss Franc. If you believe that due to instability in the Middle East and in US Financial Markets the Dollar will continue to weaken, you would SELL the currency pair. By selling the pair, you are expecting the Swiss Franc to strengthen against the Dollar.

PART 2: Currency Trading Basics

How an FX Trade Works

The objective of currency trading is to exchange one currency for another in the expectation that the market rate or price will change so that the currency you bought increases in value relative to the one you sold. In trading idiom, a long position is one in which a trader buys a currency at one price and aims to sell it later at a higher price. In this scenario, the investor benefits from a rising market. When a trader buys a currency and the price appreciates in value, the trader must sell the currency back in order to lock in the profit. A short position is one in which the trader sells a currency in anticipation that it will depreciate. If a trader sells a currency and the price depreciates in value, the trader must buy the currency back in order to lock in the profit. An open trade or position is one in which a trader has either bought/sold one currency pair and has not sold/bought back the equivalent amount to effectively close the position.

All FX quotes include a two-way price, the bid and ask. The bid price is always lower than the ask price. The bid is the price at which a market maker is willing to buy (and traders can sell) the base currency in exchange for the counter currency. The ask is the price at which a market maker will sell (and traders can buy) the base currency in exchange for the counter currency. The difference between the bid and the ask price is referred to as the spread, which can be recovered with a favorable currency movement.

In this example, there is a 5-pip spread that represents the cost of the transaction. It is important to note that since the FX market is a decentralized market the spreads that a trader receives for a given currency pair will vary according to the market maker one trades with. Typically spreads in the retail FX market are 4-5 pips in the major currency pairs and slightly wider on the cross currency pairs.

Currency	Sell	Buy
EUR/USD	0.8778	0.8782
USD/JPY	133.56	133.61
GBP/USD	1.4240	1.4245
USD/CHF	1.6819	1.6824
EUR/CHF	1.4767	1.4775
AUD/USD	0.5124	0.5129

In the above example, the bid price for GBP/USD is 1.4240 USD, which indicates the price at which traders can SELL the currency pair, and the ask price is 1.4245 USD, indicating the price where traders can BUY the currency pair. In

PART 2: Currency Trading Basics

Calculating Profits and Losses

A pip is the smallest increment a price moves and will determine the profit/loss of the trade. A pip in most currencies is 0.0001 or .01% but depends on currency pair. When a currency moves from 1.0650 to 1.0655 it has moved 5 pips. When you have an open position, each upward or downward pip movement in the market price can be either a profit or a loss depending on which currency you bought and which currency you sold. The value of a pip is determined by the pair of currencies being traded and the rate at which the currency pair is trading. For currency pairs where the dollar is not the base currency (EUR/USD, AUD/USD, NZD/USD, GBP/USD), each pip has a fixed value of \$10. For example, if you are trading EUR/USD and the market moves 5 pips in your favor, then your profit would be exactly \$50. On the other hand, when a currency other the dollar is the counter currency (USD/JPY, USD/CHF, USD/CAD) the pip value in dollar terms fluctuates based on prevailing market rates.

Currency Pair	Pip Value in \$ 100,000 lot
EUR/USD	Fixed \$10
USD/JPY	Varies - about \$8
GBP/USD	Fixed \$10
USD/CHF	Varies-about \$7
EUR/CHF	Varies-about \$7
AUD/USD	Fixed \$10
USD/CAD	Varies-about \$7
NZD/USD	Fixed \$10
EUR/GBP	Varies-about \$15
EUR/JPY	Varies - about \$8
GBP/JPY	Varies - about \$8
CHF/JPY	Varies - about \$8
GBP/CHF	Varies-about \$7
EUR/AUD	Varies-about \$6
EUR/CAD	Varies-about \$7
AUD/CAD	Varies-about \$7
AUD/JPY	Varies - about \$8

Calculating the Value of a Pip

Although most online trading platforms with reputable brokers feature live P/L tracking whereby profits and losses are calculated and re-calculated every time the exchange rate moves, it is important to have an intuitive understanding of the value of a pip.

Calculating pip values when the dollar is the counter currency:

If the current exchange rate for EUR/USD is 1.0700, then one euro is worth 1.0700 US dollars. Consequently, 100,000 euros are worth 107,000 US dollars [Keep in mind that the standard Interbank lot size is 100,000 units of the base currency or 100,000 euros]. If the market price moves one pip to 1.0701, then one euro is now worth 1.0701 US dollars. This is a pretty small change in the value of the euro (one ten thousandth of a dollar to be exact) but this can be substantial when we are talking about a lot of euros...100,000 Euros are now worth 107,010 dollars.

If a trader had bought 100,000 euros by selling 107,000 dollars when the market price was 1.0700, then those 100,000 Euros would be worth 107,010 dollars (10 US dollars more) when the market price moves to 1.0701. The trader could choose to close the position out and take this \$10 profit.

Conversely, let's say the trader initially sold 100,000 euros by buying 107,000 dollars when EUR/USD was trading at 1.7000. If the market price moves to 1.0701 and the traders chooses to close the position, he/she would have to buy back the 100,000 Euros with 107,010 dollars. The loss on the trade would be \$10.

Calculating pip values when the dollar is the base currency:

If the current exchange rate for USD/JPY is 120.00, then

PART 2: Currency Trading Basics

Calculating Profits and Losses

one dollar is worth 120.00 yen. With this market rate in mind, then 100,000 dollars are worth 12,000,000 yen. If the market price of USD/JPY moves up one pip to 120.01, then 1 dollar will be worth 120.01 yen, so a lot of 100,000 dollars equal 12,001,000 yen. In this particular case, a one pip fluctuation is valued at 1000 Japanese Yen for a standard lot of 100,000 units. A pip value of 1000 yen is hence valued at \$8.33 when the USD/JPY price is 120.01. The calculation is simple, since at this time $1 \text{ USD} = 120.01 \text{ YEN}$, then $1000 \text{ YEN} = 8.33 \text{ USD}$. Simply divide 1000 by 120.01. If a trader closes out a position at a one pip profit when the USD/JPY market price is 120.01, he/she automatically locks in a 1000 yen profit which is equivalent to \$8.33 at that time. At a different market price, however, such as 117.00, those 1000 yen will have a different dollar value (\$8.54 to be exact).

Profiting When the Exchange Rate Moves Up- A Sample Trade

Suppose Trader A wishes to speculate on the exchange rate between the GBP/USD. Believing that the GBP will rise against the USD - or that the exchange rate will move upwards - the trader places an order to buy GBP/USD at a market rate of 1.5755.

In terms of volume, let's assume that Trader A is speculating on 100,000 units of the base currency - which is the standard lot size, or trading increment, used in the retail foreign exchange market. Since the base currency is the first currency of the pair, we know that Trader A is speculating on the value of 100,000 British pounds with respect to the US dollar.

For Trader A, the value of the amount borrowed is a function of the exchange rate. Since the exchange rate at the time of the transaction was 1.5755, we know that the market cost for 1 British pound was 1.5755 US dollars. Accordingly, 100,000 pounds costs \$157,550 ($1.5755 * 100,000$). This borrowed amount of 157,550 US dollars must be paid back when the transaction is closed.

Let's assume that Trader A is correct in assuming that the British pound would rise in value with respect to the US dollar, and that the exchange rate moved to 1.5855 - 100 pips above the rate that Trader A entered. If Trader A were to close his position now, the 100,000 pounds he purchased at the onset of the transaction would be sold, and his debt of 157,550 dollars could be paid off.

At an exchange rate of 1.5855, Trader A's 100,000 pounds are now worth 158,550 US dollars ($100,000 * 1.5855$). The amount he borrowed - 157,550 - can now be repaid, leaving him with \$1,000 extra. This is Trader A's profit from the trade.

PART 2: Currency Trading Basics

Calculating Profits and Losses

Summary: In this scenario, the trader benefits from a rising market. The trader bought one lot (100,000 position) of GBP/USD at 1.5755, and the GBP/USD rose to 1.5855, realizing a profit of 100 pips. The value of a pip for GBP/USD is \$10 per pip; therefore 100 pip profit multiplied by \$10 per pip constitutes a profit of \$1000.

Profiting When the Rate Moves Down - A Sample Trade

Since each FX trade involves the buying and selling of a currency, clients can profit in either direction of the exchange rate's movement; they simply need to buy and sell the right currencies at the right time. If, for example, Trader A believes the pound will fall against the value of the US dollar - meaning 1 pound will buy fewer US dollars - than he can simply place an order to sell GBP/USD. The trade works in essentially the same manner:

Let's assume Trader A believes the exchange rate for the GBP/USD will fall from the 1.5755 level, i.e. as the pound will fall in value against the US dollar. Accordingly, he places an order to sell GBP/USD - or in other words, borrowing pounds and buying US dollars. Trader A places an order to sell 1 lot - or 100,000 units of currency - of the GBP/USD. Since FX transactions are initially denominated in terms of the base currency, or the first currency in the pair, we know that Trader A is borrowing 100,000 pounds, and buying US dollars with the proceeds.

Since 1 pound can purchase 1.5755 US dollars at the time Trader A places his trade, he can purchase 157,550 US dollars with the 100,000 pounds he borrowed. Just as in the previous example, the borrowed amount will be repaid when the transaction is closed.

Let's assume that Trader A is correct in his belief that the pound will fall in value against the USD, and that the GBP/USD reaches 1.5655 - a drop of 100 pips from where Trader A entered the market. At this point, Trader A decides

to take his profit and close out the trade. Accordingly, he must repay the 100,000 pounds that were borrowed. Since the cost of 1 pound has now dropped to 1.5655, this means that the cost of 100,000 pounds is 156,550 ($100,000 \times 1.5655$). This amount is then subtracted from 157,550, which was the number of dollars that Trader A received when he initially placed the trade. The result is a profit of \$1,000 ($157,550 - 156,550$).

Summary: In this scenario, the trader benefits from a falling market. The trader sold one lot (100,000 position) of GBP/USD at 1.5755, and GBP/USD fell to 1.5655, realizing a profit of 100 pips. The value of a pip for GBP/USD is \$10 per pip, therefore, 100-pip profit multiplied by \$10 per pip constitutes a profit of \$1000.

PART 2: Currency Trading Basics

Other Key Concepts in Currency Trading

Interest Rollover

Since every FX transaction involves buying and selling - one currency is borrowed or sold and used to finance the purchase of another currency - the interest rates associated with those currencies come into play. Traders that hold a position overnight pay interest on the currency they borrow, and earn interest on the currency they purchase. Typically interest rollover charges are applied at 5 PM (17:00) New York time (9 PM GMT; 10 PM GMT when New York is operating on daylight savings time from late October to late March) in coordination with the international trading day.

Interest rollover fees are a function of the interest rates established by the various central banks and federal authorities used to regulate the official policy of the currency. Since interest rates raise the cost of the currency - it is more expensive to borrow currencies with a high interest rate - a central bank's interest rate policy can be used to adjust the economy to its respective needs. For example, economies that are growing at an extremely rapid rate - and thus encountering inflation, where prices of all goods and services are rising rapidly - may often raise interest rates: this works to increase the cost of the currency, and hence can be used to decrease overall demand for consumption. The decrease in consumption will prevent prices from continuing to rise at an excessively rapid rate, and thus can be used to combat inflation.

Alternatively, economies facing recessionary times may need economic stimuli to restart businesses and consumer spending. A cut in interest rates can make money more accessible and cheaper to borrow, and hence decreases the risk entrepreneurs face in borrowing capital to start ventures. Ideally, such a scenario would allow for a cut in interest rates to revitalize the economy and thereby ward off any depression or serious economic drought.

The rate established by the central banks essentially determines at what rate private banks can borrow from the government. Private banks then can lend amongst themselves

and to individual and institutional clients at whatever rate they establish via the free market. Ultimately, though, the rate established by the central banks serves as a foundation of the currency's value, and hence is of prime importance from both economic and speculative perspectives.

For the FX trader, interest rollover charges can have a small impact on their overall profit and loss from exchange rate speculation. On a daily basis, the trader is paying interest on the currency that is borrowed, while earning interest on the one that has been purchased. To illustrate how interest rollover charges work, consider the example:

Rollover Example

Trader A buying GBP/USD at 1.5755. In this case, Trader A is borrowing US dollars, and hence will pay interest on the borrowed funds. Trader A is, however, earning interest on the British pounds that have been purchased. If the Bank of England - which regulates the pound - offers a higher interest rate than the Federal Reserve - which regulates the US dollar - the client has an opportunity to earn interest. Alternatively, if the Federal Reserve issues a higher interest rate on the US dollar than the Bank of England offers on the British pound, then the client will experience a net interest payment.

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Calculating an Approximation of Interest Rollover

The interest rollover charge is generally quite small, and hence should not serve as the core of a trading strategy. A sample calculation is as follows:

Suppose the Bank of England has an official interest rate of 4.0%, while the Federal Reserve has an official interest rate of 1.25%. A client who is buying GBP/USD will thus earn interest, since he is only paying 1.25% but earning 4%.

Since interest rates are quoted on a yearly basis - meaning the cost of the currency will be, for instance, 1.25% of the principal amount for the entire year - this must be divided down to a daily basis, since rollover charges are applied daily. Since financial transactions round off a year to 360 days, as opposed to 365, the rate is divided by 360.

The following is a simple formulaic example of how interest rollover is calculated:

No. of Lots x No. of Units per lot x Yearly Interest Rate Differential / 360 x No. of Days.

Example 1

Transaction: Sell 2 lots of USD/JPY on Monday and close on the next day

Lot Value: USD 100,000 or JPY12, 200,000

Opening Price: 122.00

Yearly Interest Rate Differential: USD 1.25% - JP .0% = 1.25%

Calculation: $USD\ 100,000 \times 2 \times (-1.25\%/360) \times 1 = -6.94$

Because banks can lend to each other at rates different from what the central bank lends to them, the rollover calculations can never be reduced to an exact science. Like the currency exchange rate, the rollover interest rates are subject to market conditions, and hence can fluctuate as well.

Triple Rollover on Wednesday

Since there is a two-day settlement period in foreign exchange, the transactions that are open on Wednesday at 5 PM - which is the Thursday trading day - should not get settled until Saturday. Of course, banks are closed during the weekend, so the transaction cannot effectively be settled until Monday (which begins on Sunday at 5 PM New York time). As a result, rollover fees are tripled in the FX market on Wednesday.

PART 2: Currency Trading Basics

Types of Orders

Market Order

A market order is an order to buy or sell a currency pair at the current market price. One of the key advantages of trading in spot market is that market orders are guaranteed when dealing with a reputable broker, as the vast liquidity of the market ensures that there are always buyers and sellers.

Limit Orders (or take profit order)

A limit order allows a client to specify the rate at which they will take profits and exit the market. Essentially, it defines the amount of profit that the trader is looking to capture on this particular trade. Let's assume a trader has an open position where he is long (meaning he has bought) GBP/USD at 1.5800. In such a scenario, a trader can place a limit order to determine at what rate he will close his position and take his profits. So, for instance, if the aforementioned trader were looking to capture 100 pips on the GBP/USD, he would place a limit order at 1.5900; if the market reached that rate, he would be taken out of the market, and his profit from the trade would immediately be reflected in his balance.

Alternatively, a trader could place a limit order to an existing sell position.

Example:

Suppose a trader sold GBP/USD at 1.5800. Since this is a short (sell) order, the trader profits from a downward movement in the exchange rate -- and hence must place their limit order, which is only used to determine the desired profit from the trade, below the market rate. Accordingly, a trader looking to capture 100 pips on the GBP/USD would place a limit order at 1.5700. If the market reaches that rate, the client will be closed out of the trade instantly, and will immediately be awarded the corresponding profit for the trade as well.

Stop-Loss Orders

A stop-loss order works like a limit order, but in an opposite fashion: it specifies the maximum loss that a trader is willing to accept on a given position. For example, if a trader is long USD/JPY at 121.50 with a limit at 121.70, he may wish to maximize the loss he is willing to accept by placing a stop-loss order at 121.30. In such a case, if the market reached 121.30, he would be stopped out of the position and would have suffered a loss no greater than 20 pips. Similarly, if a trader is short USD/JPY at 121.50 with a limit at 121.30 and only wants to suffer a loss of 20 pips, then he would place a stop order at 121.70. Accordingly, if the market reaches 121.70, the trader will be stopped out of the position and would have suffered a loss no greater than 20 pips.

Entry Order

All entry orders are essentially contingent orders: they will only be filled if the market reaches that rate. For example, suppose you are trading USD/JPY, and the current quote is 120.50-55. You can place an entry order to buy at 120.15, for example, so that your order will only be filled if the market reaches 120.15. Ultimately, there are two types of entry orders: stop entry orders and limit entry orders.

Limit Entry Orders

Limit entry orders are classified as entry orders whereby the rate specified is either below the current market rate if it is a buy order, or, alternatively, above the market rate if it is a sell order. Limit entry orders are often conducive to strategies pertaining to range-bound markets, whereby clients can place orders to buy at the bottom of the range and sell at the top. Suppose the current market rate for the EUR/USD is at 1.0800-04; in other words, traders can enter the market to sell at 1.0800, but must buy at 1.0804. There are two types of limit entry orders that a trader could place in such a situation 1) They could place an order to sell at a price above than the current market rate. So, for instance,

PART 2: Currency Trading Basics

Types of Orders

they could place an order to sell at 1.0820; if the sell rate in the spot market reaches 1.0820, their sell order would be activated. In this case, the trader expects that the market will reach 1.0820 and then reverse its direction.

2) Traders can place a limit entry order to buy at a price that is below the current market rate.

So, if the current market rate is 1.0800-04, a trader could place a limit entry order to buy at a rate below the current buying price of 1.0804. So, for instance, if the trader placed an order to buy at 1.0790, his order would only be activated -- meaning it would only begin to affect his P/L -- if the buy rate reached 1.0790. In this example as well, the trader is expecting a reversal of the trend after the market reaches the rate he/she specified. In other words, the trader will profit if the market bounces off the 1.0790 level. Since both buy and sell limit entry orders assume the reversal of a trend, they are most commonly used by traders who believe the market is trading within an upper and lower range, and that it will not break out of this range.

Stop Entry Orders

Stop entry orders rely on rationale that is the opposite of limit entry orders. If you wish to buy at a price above the current market rate, or, alternatively, sell at a price below the current market price, then you are placing a stop entry order. Stop entry orders are conducive to "breakout" strategies, whereby the trader believes that if the specified rate is reached, the trend's movement is confirmed and thus will continue in that direction.

Suppose the current market rate for the USD/JPY is at 117.04; in other words, traders can enter the market to sell at 117.04, and can buy at 117.09. There are two types of stop entry orders that a trader could place in such a situation

1) They could place an order to sell at a price below the current market rate. So, for instance, they could place an order

to sell at 116.75; if the sell rate in the spot market reaches 116.75, their sell order would be activated. In this case, the trader expects that the market will reach this level, it will break out and continue in this direction.

2) Traders can place a stop entry order to buy at a price that is above the current market rate. So, if the current market rate is 117.04, a trader could place a limit entry order to buy at a rate above the current buying price of 117.04. So, for instance, if the trader placed an order to buy at 117.85, his order would only be activated -- meaning it would only begin to affect his P/L -- if the buy rate reached 117.85. In this example, the trader is expecting a breakout if the market reaches the rate he/she specified. In other words, the trader will break through the 1.0790 level. Since both buy and sell stop entry orders assume a breakout, they are most commonly used by traders who believe the market will make a big move.

PART 2: Currency Trading Basics

Phone Etiquette

Although most trades are placed online, traders always have the option of calling the dealing desk to place an order. It is important for spot traders to get their point across quickly and accurately, leaving no room for interpretation or error. Let's take a look at a typical spot trade:

Please give me a price on USD/JPY (or USD/CHF, or EUR/USD, or GBP/USD) for (number of lots you want to trade) lot(s).

Example: "Please give me a price on USD/JPY for 3 lots."

The dealer will respond with a 2-way price quote. For example, he may quote USD/JPY at: 125.10 - 125.15 (but he will probably just say 125.10 - 15).

Example: Dealer, "125.10-15"

So you can either buy USD/JPY at 125.15, or you may sell USD/JPY at 125.10.

To buy USD/JPY you can say any of the following: "15", "I buy", "I buy at 15", "mine", or "mine at 15".

To sell USD/JPY, you can say any of the following: "10", "I sell", "I sell at 10", "yours", or "yours at 10".

Example: Trader, "I buy at 15."

You would normally have 3-5 seconds to respond (sometimes more sometimes less) prior to a price change, depending on market volatility. If no response is given and the price changes, the dealer will say "change", "price change", "off" or "your risk".

In this case you may ask for a price again. If you do respond with a buy or sell, the dealer will say, "done" or indicate to you that your trade is executed. You can also state to the dealer that you would like your stop-loss at _____, and a limit at _____.

Example:

Dealer, "Done"

Trader, "Place a stop-loss at 124.80 and a limit at 126.00"

Dealer, "Got it." (The dealer will then hang up)

PART 3: What Moves the Market

Movements of currencies are ultimately based upon supply and demand. That is, a currency rallies because there is demand for that currency. Regardless of whether the demand is for hedging, speculative or conversion purposes, true movements are based upon the need for the currency. Currency values decrease when there is excess supply. Supply and demand should be the real determinants for predicting future movements. However, predicting supply and demand is not as simple as many would think. There are many factors that contribute to the net supply and demand for a currency. This includes capital flows, trade flows, speculative needs and hedging needs.

There are two major ways to analyze financial markets: fundamental analysis and technical analysis. Fundamental analysis is based upon underlying economic conditions, while technical analysis uses historical prices to predict future movements. There is an ongoing debate as to which methodology is more successful. Short-term traders prefer to use technical analysis, focusing their strategies primarily on price action; while fundamental traders focus their efforts on determining a currency's proper current as well as future valuation.

Fundamental Analysis

Fundamental analysis focuses on the economic, social and political forces that drive supply and demand. Fundamental analysts look at various macroeconomic indicators such as economic growth rates, interest rates, inflation, and unemployment. They combine all of this information to assess current and future performance. This requires a lot of work and thorough analysis, as there is no single set of beliefs that guides fundamental analysis. In addition, fundamental analysts need to continually keep abreast of news and announcements, as they can indicate potential changes to the economic, social and political environment. There are many ways to value currencies from a fundamental perspective, including balance of payments and purchasing power parity. All of this will be discussed in further detail under the explanation of fundamental analysis.

There are two main factors that impact exchange rate movements from a fundamental perspective: capital flows and trade flows. Both of these components constitute a country's balance of payments. The balance of payments quantifies the amount of demand for a currency over a given period of time. Theoretically, a balance of payments equal to zero is required for a currency to maintain its current valuation. A negative balance of payments number reflects that capital is leaving the economy at a more rapid rate than it is entering, and hence it should fall in value.

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Technical Analysis

Prior to the mid 1980s, fundamental traders primarily dominated the FX market. However, with the rising popularity of technical analysis and the advent of new technologies, the influence of technical trading on the FX market has increased significantly. The availability of high leverage has led to an increased number of momentum or model funds, who have become important participants in the FX market, with the ability to influence currency prices.

Technical analysis focuses on the study of price movements. Technical analysts use historical currency data to forecast the direction of future prices. The premise of technical analysis is that all current market information is already reflected in the price of that currency; therefore, studying price action is all that is required to make informed trading decisions. In addition, technical analysis works under the assumption that history tends to repeat itself.

Technical analysis is a very popular tool for short to medium term traders. It works especially well in the currency markets because short-term currency price fluctuations are primarily driven by human emotions or market perceptions.

Charts are the primary tool in technical analysis. Charts are used to identify trends and patterns in order to find profit opportunities. The most basic concept of technical analysis is that markets have a tendency to trend. Being able to identify trends in their earliest stage of development is the key to technical analysis. Technical analysis integrates price action and momentum to construct a pictorial representation of past currency price action to predict future performance. Technical analysis indicators such as Fibonacci retracement levels, moving averages, oscillators, candlestick charts and Bollinger bands provide further information on the value of emotional extremes of buyers and sellers to direct traders to levels where greed and fear are the strongest.



Source: Stratagem Charts

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Key Factors in Fundamental Analysis

There are two main factors that impact exchange rate movement from a fundamental perspective: capital flows and trade flows. Below is a more detailed explanation on these components:

Capital Flows

Capital flows measure the net amount of a currency that is being purchased or sold due to capital investments. A positive capital flow balance implies that foreign inflows of physical or portfolio investments into a country exceed outflows. A negative capital flow balance indicates that there are more physical or portfolio investments bought by domestic investors than foreign investors.

To clearly explain this, suppose for example, that the UK economy is booming, and that its stock market is rallying as well. Meanwhile, in the United States, a lackluster economy is creating a shortage of investment opportunities. In such a scenario, the natural result would be for US residents to sell their dollars and buy GBP to allow for participation in the rallying UK economy. This would result in capital outflow of capital for the US and inflow of capital for the UK. From an exchange rate perspective, this would induce a fall in the USD coupled with a rise in the GBP as demand for USD declines and the demand for GBP increases; in other words, the GBP/USD would rise.

Capital flows can be divided into two categories - **Physical Flows** and **Portfolio Flows**:

Physical Flows

Physical flows encompass actual foreign direct investments by corporations such as investments in real estate, manufacturing and local acquisitions. All of these require that a foreign corporation sell their local currency and buy the foreign currency, which leads to movements in the FX market. This is particularly important for global corporate acquisitions that involve more cash than stock.

Physical flows are important to watch, as they represent the underlying changes in actual physical investment activity. These flows shift in response to changes in each country's financial health and growth opportunities. Changes in local laws that encourage foreign investment also serve to promote physical flows. For example, due to China's entry in the WTO, their foreign investment laws have been relaxed. As a result of their cheap labor and attractive revenue opportunities (population of over 1 billion), global corporations have flooded China with investments. From a FX perspective, in order to fund investments in China, foreign corporations will need to sell their local currency and buy Chinese Renminbi (RMB).

Portfolio Flows

Equity Markets: As technology has enabled greater ease with respect to transportation of capital, investing in global equity markets has become far more feasible. Accordingly, a rallying stock market in any part of the world serves as an ideal opportunity for all, regardless of geographic location. The result of this has become a strong correlation between a country's equity markets and its currency: if the equity market is rising, investment dollars are coming in to seize the opportunity. Alternatively, falling equity markets will have domestic investors selling their shares of local publicly traded firms only to seize investment opportunities abroad.

The attraction of equities markets over fixed income markets has increased over the years. Since the early 1990s, the ratio of foreign transactions in US government bonds over US equities has declined from 10:1 to 2:1. From the chart below, it is evident that the Dow has a high correlation with the USD (against the EUR). The time period from 1994 to 1999 shows a 78.9% positive correlation between the two. In addition, from 1991-1999, the Dow increased 300%, while the USD index appreciated nearly 30% for the same time period. As a result, currency traders closely follow the global equity markets to predict short and intermediate term equity based capital flows. The most commonly

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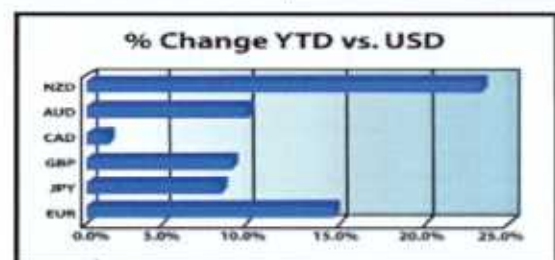
watched stock indices are the Dow Jones Industrial Index (Dow), S&P 500, NASDAQ, NIKKEI, DAX and FTSE. The Dow is the most influential index on the dollar. The Nikkei performance impacts the JPY, while the FTSE impacts the GBP and the DAX impacts the EUR.



Source <http://www.kshitij.com/research/dowdollar.shtml>

In terms of relative strength, historical evidence shows that the stronger the performance of a country's equity market, the stronger its currency appreciation. Relative strength of an equity index measures the number of periods the index finishes up instead of down for a specified time frame. As evidenced in the 12-month relative strength data below, countries such as New Zealand has had a high relative strength, which has correlated with a significant appreciation of the NZD/USD.

Equity Market	12 Month Relative Strength
EU	38
Japan	54
UK	35
Switzerland	62
Canada	69
Australia	81
New Zealand	85

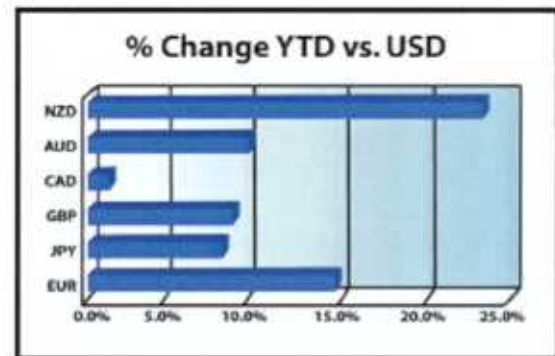


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Fixed Income Markets: Just as the equity market is correlated with exchange rate movement, so too is the fixed income market. In times of global uncertainty, fixed income investments can become particularly appealing, due to the inherent safety they possess. As a result, economies boasting the most valuable fixed income opportunities will be capable of attracting foreign investment - which will naturally first require the purchasing of the country's respective currency.

A good gauge of fixed income capital flows are the short and long-term yields of international government bonds. It is important to monitor the spread differential between the yield on the 10-year US Treasury note and that on foreign bonds. Reason being that international investors tend to place their funds in countries with the highest yielding assets. Therefore if US assets have one of the highest yields, this would encourage more investments in US financial instruments, hence benefiting the USD. Investors can also use short-term yields such as the spreads on 2-year government notes to gauge short-term flow of international funds. Current yield spreads are approximately:

Yield Spreads vs. US (Basis Points)	10 Year
Germany	40
Japan	302
UK	56
Canada	99
Australia	137
New Zealand	236



Aside from government bond yields, Fed fund futures can also be used to estimate movement of US funds, as they price in the expectation of future fed interest rate policy. Euribor futures are a barometer for the Euro region's expected future interest rates and can give an indication of Euro region future policy movements.

Trade Flows: Measuring Exports vs. Imports

Trade flows are the basis of all international transactions. Just as the investment environment of a given economy is a prime cause in determining its currency valuation, trade flows represent a country's net trade balance. Countries that are net exporters - meaning they export more to international clients than they import from international producers, will experience a net trade surplus. Countries with a net export are more likely to have their currency rise in value, as from the perspective of international trade, their currency is being bought more than it is sold: international clients interested in buying the exported product/service must first buy the appropriate currency, thus creating demand for the currency of the exporter.

Japan is an example of an export driven economy with a trade surplus. Japan's trade surplus is the major reason that the JPY has not depreciated sharply as a result of their severe economic weakness. They are a net exporter with a current account surplus representing 3% of their GDP.

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This is the highest of the G-7 countries, and creates a strong inherent demand for the currency for trade purposes, regardless of their economic conditions.

Countries that are net importers - meaning they make more international purchases than international sales - experience what is known as a trade deficit, which in turn has the potential to drive the value of the currency down. In order to engage in international purchases, importers must sell their currency to purchase that of the retailer of the good or service; accordingly, this could have the effect of driving the currency down. For example, the US is a net importer, with a very high trade deficit that requires \$1.9 billion in daily inflow to prevent a further trade-based depreciation of the USD.

Clearly a change in the balance of payments has a direct effect on currency levels. Therefore, it is important for traders to keep abreast of economic data relating to this balance and understand the implications of changes in the balance of payments.

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Other Fundamental Factors That Impact Currency Movements

Purchasing Power Parity:

Purchasing power parity (PPP) is a valuation-based theory that states that currency rates should be determined relative to the prices of goods in each country. This means that the exchange rate of two countries should be equal to the ratio of the two countries' price level based on a fixed basket of goods and services. Therefore, if prices increase or inflation occurs, currencies should depreciate to adjust for the arbitrage opportunity. An arbitrage opportunity occurs when there are different prices for the same product, allowing buyers and sellers to take advantage of short-term price differentials.

Under PPP, an exchange rate is determined by comparing the prices of the same product in two different countries.

The simplest example would be the following:

Can of Coke costs: 2.3 Euros in France
\$2.00 in the US

Based on PPP: $\text{EUR/USD} = 2.3/2.00 = 1.15$

If current market rate is > 1.1500 —————> exchange rate overstates current values, should depreciate until it reaches the PPP value

If current market rate is < 1.1500 —————> exchange rate understates current values, should appreciate until it reaches the PPP value

Generally, the formula used to calculate PPP is:

Exchange Rate = Price of goods in country A / Price of goods in country B

It is important remember that PPP is not calculated based on one good, but instead a basket of goods and services. This basket can vary based upon the entity analyzing the data, but a comprehensive basket would include consumer

goods and services, government services, equipment goods and construction projects.

The OECD ([Organization for Economic Cooperation and Development](#)) publishes PPP values for all currencies every few years. For their calculation, their basket of goods and services includes 2,500 consumer goods and services, 34 occupations in government, education and health services, 186 types of equipment goods and 20 construction projects.

The primary use of PPP is as the first step to comparing two countries, because it can be used to translate GDP into a common currency. However, PPP is a long-term indicator and does not take into account short term fluctuations based upon market news or rumors. In addition, there are inconsistencies that are not accounted for under PPP, such as trade restrictions and differencing tax regulations. This also includes non-tradable inputs such as differences in rent in NYC compared to rent for a comparable store selling the exact same goods and services in Mexico. Therefore, PPP is a good barometer for currency analysis, but is not useful for short term trading. PPP equilibrium values can be viewed as values toward which exchange rates should converge to over the very long term.

You can access the latest OECD report showing current PPP values at www.oecd.org



IMAGE FINDER

To view the image for this page, please go to the URL listed on the appendix, page 135.

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Productivity / Economic Growth

Aside from capital and trade flows, perceptions of economic growth and interest rate policy also serve to impact currency movements. Therefore it is important to keep abreast of monetary and fiscal policy. Central banks regularly publish reports after their meetings that reflect their views on their economy and their bias for changes in policy. The major central bank websites are the following:

Australia	www.rba.gov.au
Canada	www.bankofcanada.ca
Denmark	www.nationalbanken.dk/uk
Euro Union	www.ecb.int
Japan	www.boj.or.jp/en/index.htm
New Zealand	www.rbnz.govt.nz
Norway	www.norges-bank.no/
Sweden	www.riksbank.se
Switzerland	www.snb.ch
United Kingdom	www.bankofengland.co.uk
United States	www.federalreserve.gov

Our currency profiles section includes a general outlook on the major currencies and what impacts their movements.

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How To Use Fundamental Analysis in Trading

Strategy #1: Using interest rates for carry trades

Carry Trades

The carry trade strategy is a long-term strategy that is very popular in the FX Market and is used by investment banks and large macro hedge funds. A carry trade is an interest rate arbitrage strategy whereby an investor takes advantage of the interest rate differentials between major economies, while also hoping to benefit from the general direction or trend of the currency pair.

Current Interest Rates	
Australia	4.75%
Euro	2.75%
Japan	0.00%
US	1.25%
UK	3.75%
New Zealand	5.75%
Switzerland	0.75% mid of target range

This strategy would be implemented by selling (borrowing) the lowest yielding currency, while buying (lending) the highest yielding currency. The most commonly used currency pairs for carry trades are AUD/JPY, NZD/JPY, GBP/JPY, and GBP/CHF. To minimize individual currency exposure and portfolio volatility, institutions will generally buy a basket of these currencies (ex: invest in GBP/JPY, AUD/JPY, GBP/CHF and NZD/JPY instead of only investing in GBP/JPY).

This strategy can also be implemented in conjunction with technical indicators. That is, if the AUD/JPY, NZD/JPY, GBP/JPY or GBP/CHF chart moves above the 200 day moving average, this can serve as further indication that aside from benefiting from positive interest, the investor could also benefit from the upside potential of the currency

pair.

Although the carry trade strategy has made billions of dollars for many hedge funds, it is not fool proof. Many professional investors have also lost a significant amount of money while using this strategy. Here are the most common reasons that this strategy fails:

1) **Improper time horizon:** A carry trade is a long term strategy. An investor must be able to commit a time horizon of a minimum of 6 to 12 months. This is because currency valuations reflect economic fundamentals over time. There are frequently temporary imbalances between the currency pair and its true economic picture that is difficult to accurately predict.

2) **Misuse of Leverage:** Interest rate differentials tend to be fairly small and the way to increase returns is by using leverage. The application of too much leverage will lead to the inability of the investor to weather short-term fluctuations in the market.

3) **Fundamental Shifts:** In The Capital Flow Picture: While interest rate differentials are a fairly accurate way of determining where portfolio flows go; in many economies there are exceptions. The advent of an equity investment culture in the United States has made this strategy very tough to trade using the US dollar. Equity investors tend to value lower interest rates and will reward countries with lower interest rates, which goes against everything that the carry trade is meant to accomplish.

4) **Risk Environment:** Risk aversion is an important driver of FX markets. Carry trades tend to be most successful in a risk-seeking environment, and least successful in a risk aversion environment. That is in risk seeking environments, investors tend to reshuffle their portfolios and sell low risk, but high value assets and buy higher risk and low value assets. Risk your currencies with large current account deficits are forced to higher interest rates to compensate investors for the risk of a sharper depreciation than that

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predicted by uncovered interest rate parity. The profit from a carry trade is an investor's payment for taking this risk. Carry trades are more likely to go wrong in times of risk aversion. In such times, the riskier currencies - upon which carry trades rely for their returns - tend to depreciate. Typically, riskier currencies have current account deficits and, as risk appetite wanes, investors retreat to the safety of their home markets, making these deficits harder to fund. It makes sense to unwind carry trades in times of rising risk aversion, since adverse currency moves tend to at least partly offset the interest rate advantage. Many investment banks have developed measures of early warning signals for rising risk aversion. This includes monitoring of emerging market bond spreads, swap spreads, high yield spreads, FX volatilities and equity market volatilities. Tighter bond, swap and high yield spreads are risk-seeking indicators. While lower FX and equity market volatilities indicate risk aversion.

Although there are risks to carry trades, proper diversification and close attention to levels risk aversion will improve returns.

Strategy #2: Using equity markets to trade FX

How Can the Equity Markets be Used to Predict Currency Movements?

Equity markets have a significant impact on exchange rate movements because they are a major place for high volume currency movements (portfolio flows). Movements of currencies will occur when foreign investors move their money to a particular equity market in search of better returns. Thus they convert their capital in a domestic currency and push up the demand for that particular currency.

Equity Market Rises: Domestic Currency Rises, Foreign Currencies Decline

When a domestic equity market rises, we expect to see a rise in consumer and business confidence, which will lead to an inflow of foreign funds. For example, in the US, if the US equity market rallied, this will likely fuel USD strength across the board since there will be strong demand for USD in terms of capital flow. Foreign investors who are attracted to the potential of high returns from the US equity market will need to sell their local currency and buy USD. The same is true for performance in the FTSE and the DAX. The FTSE is Britain's equity market. If it rallies, we expect to see the GBP rise and foreign currencies, such as the EUR and USD decline. The DAX is Germany's equity market, as well as a barometer for Euro strength. When the DAX rallies, the EUR will tend to appreciate.

Equity Market Declines: Domestic Currency Declines, Foreign Currencies Rise

When capital markets performance is sluggish, foreign investors tend to repatriate their funds back into their domestic currency creating a lack of demand in the local currency. This lack of demand or selling of current equity holdings would put pressure on the exchange rate. For example, if the demand for US assets decline, we expect to see the USD take a hit across the board as foreign investors sell their US equity holdings. The same argument is applicable for noticeable weakness in the DAX and FTSE. As investors retreat from investing in European markets, the demand for pounds and euro will decrease, while foreign currencies will appreciate, as investors convert their funds back into their local currencies.

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How To Use Fundamental Analysis in Trading

Strategy #3: Use Bond or Fixed Income Markets to Trade FX

Using Fixed Income Markets to Predict Currency Movements

Interest rate differentials between foreign bonds are important to follow, as they are strong indicators of potential currency movements. With fixed income markets, economies boasting the most valuable fixed income opportunities with the highest yields will be capable of attracting foreign investment.

Euribors and Eurodollars: Gauge International Yield Spreads

For example, traders may consider looking at the differentials between Eurodollars and Euribors. Eurodollars are USD denominated assets held outside of the US. Euribors are fixed income products reflecting Europe's short-term interest rates. Since the US and Europe have the most developed fixed income and equity markets, if Euribors are offering premiums to Eurodollars, investors would ~~be more~~ be more induced to sell their US assets and purchase foreign assets. The selling of US fixed income or equity assets would influence the currency market because that would require selling the USD and buying the foreign currency. If the positive differential between Euribors and Eurodollars decrease, this implies that Europe is offering less of a yield premium to US assets. This decreases the attractiveness of European assets to US assets, which may induce investors to sell their European assets.

Gilts, Euribors and Eurodollars: Fixed Income Spreads Throughout the Europe

Gilts are the UK's fixed income product. Traders of the GBP/USD and EUR/GBP need to pay particular attention to the differentials between Gilts (UK), Euribors (Europe) and Eurodollars (US). As the positive interest rate differentials

between the UK's rates and the rates of Europe and the US decline, the UK's fixed income investment opportunities become less attractive to foreign investors. This may induce profit taking in the GBP as investors sell their GBP denominated assets in search for higher yields elsewhere.

Other Countries: Looking at the International Fixed Income Market

Traders also need to pay attention to the fixed income products and their yield differentials in other countries besides the UK, US and Europe. For example, Australia and New Zealand offer attractive yields, which may drive investors to sell their local currencies and buy AUD or NZD. This is especially true if the interest rates in the other major countries decline. If interest rates in US, UK and Europe increase, this could possibly drive funds away from Australia and New Zealand, hence putting pressure on those currencies.

It is therefore apparent that traders can use fixed income products to predict FX movements. Daily fluctuations and developments in any of the fixed income markets can reflect movement of foreign portfolio investments, which would require foreign exchange transactions.

Key Technical Analysis Indicators

The most important technical analysis tools are the following:

- 1) Fibonacci Retracement Levels
- 2) Moving Averages
- 3) Oscillators
- 4) Candle Stick Charts
- 5) Bollinger Bands

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Candlesticks

What is it?

Candlesticks are a Japanese charting technique that was developed as early as the 1600's, when they were used for predicting rice prices - rice futures was one of the world's first futures markets. In light of the military environment of the Japanese feudal system during that time, Japanese traders gave colorful names to the candlestick formations, with many references to military terminology. This charting technique has been used successfully by the Japanese financial community for hundreds of years, but has only gained popularity over the past decade in the US and European financial community. This technique is now frequently used in all financial markets, but especially in the FX market. Due to this popularity, it is imperative for all FX traders to have a sound knowledge of the most commonly used candlestick formations and the corresponding trading signals.

Candlesticks are very similar to bar charts, but the easy to read color depiction of the price action makes it simpler for traders to gauge market psychology and price action. Candlestick bars are composed of a currency pair's open, high, low and close. The candlestick consists of a rectangular section and two thin lines above or below this section. This rectangular section is known as the body, while lines above or below the body are the wicks. The body of the candlestick represents the difference between the open and the close. This body will be shaded green if the price closed up and red if the price closed down. The wicks depict the high and low of the respective time period (daily, hourly, 15 min etc).

How can Candlesticks be Used for Trading?

Candlestick formations can be used to trade reversals in price or to confirm a trend continuation. The following is an explanation of the most important patterns and the corresponding trading signal.

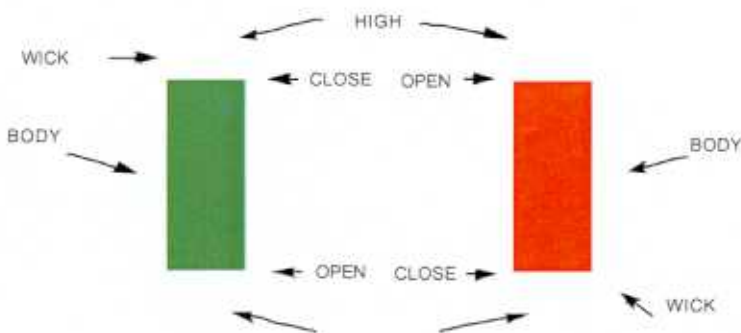
Hammer / Hanging Man: Trend Reversals

Hammer and hanging man formations have long lower wicks and small bodies.



The hammer pattern appears after a currency pair has had a significant down move and is typically viewed as a bullish signal, implying a base and a trend reversal. This formation is particularly important if it appears after a number of significant down days (i.e. more than 3 periods)

and it must close as a hammer to confirm the trend reversal. There are two ways that hammers are typically traded. Some traders will buy once a hammer formation appears, in case the market does not have a pull back and the reversal occurs immediately. Other traders will buy after the currency pair attempts to retest the hammer level and does not break through, which would imply that the hammer area provides a solid support level, confirming the trend reversal.



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The chart below shows a graphical depiction of a hammer formation in EUR/USD (note: the Stratagem charts use blue candles to represent uptrend, which is the same as green candles).



The hanging man pattern appears after a currency pair has had a significant rally and is typically viewed as a bearish signal, implying a top and a trend reversal. This is a bearish signal because it shows that the currency was not able to close on a positive note, which would indicate weakening market sentiment. However, with a hanging man pattern, it is important to wait for the next period's close to confirm the trend reversal. This is key

because the long lower wick of the hanging man candle shows that there is still strength in the price action. The next period's candle must close under the hanging man's body. The chart below shows a graphical depiction of a hanging man formation in USD/CAD.

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Bearish Engulfing Pattern Forecasts Reversal

The bearish engulfing pattern is a trend reversal pattern that requires two candles. This pattern typically occurs after a severe uptrend and is formed when a red candle "engulfs" a green candle. This shows that sellers have gained control of the market. The importance of the bearish engulfing pattern is dependent on the sizes of the candles, the smaller the green candle and the larger the red candle, the more significant the pattern signal. The chart below shows a bearish engulfing pattern in GBP/USD. Typically, traders who are looking for bearish engulfing patterns will sell once the currency pair closes in this formation.



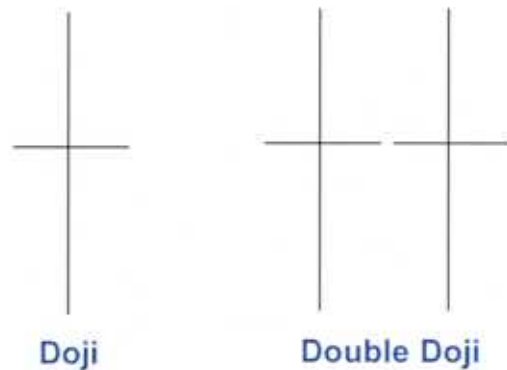
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Doji / Double Doji: Indecision in the Marketplace

A doji is one of the most important candlestick formations. This pattern implies indecision in the marketplace, as buyers and sellers are exerting equal pressure on the markets. In addition, this pattern shows that there has been a large trading range, but the price does not close on an upside or downside bias. A true doji formation has a horizontal line instead of a body, with long wicks. If the market is range trading, a doji indicates a neutral market. If the market is rallying, a doji is a signal that the rally may be losing steam and the price may start to decline from here. If the market is declining, a doji signals that the decline may be ending and the market may start to rally. Therefore, a doji provides signals of potential market tops or bottoms. However, it is also important to compare the doji to recent price action. If there has been a series of "near doji" or small candles, the doji formation is less significant. A doji formation is significant if it appears after a long green candle in an uptrend or

a long red candle in a downtrend. A double doji shows that buyers and sellers are still in equilibrium, which further indicates that a trend reversal is probably imminent. The chart below shows a doji formation in GBP/USD.



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Candlesticks

Bullish Engulfing Forecasts Reversals

The bullish engulfing pattern is a trend reversal pattern that usually appears after dramatic downtrends and is a signal that the downside momentum may be lost. The formation of this pattern involves a red candle that is "engulfed" by a green candle. The longer the green candle, the more significant the trading signal. As mentioned earlier, the candle sizes are important, because if the two candles are equal sizes, it may signal that the market will begin range trading. Typically, traders looking for bullish engulfing patterns will buy once they see the currency pair close after forming this pattern.

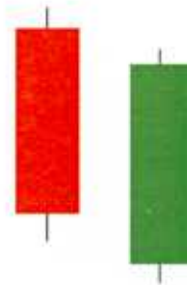


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Piercing Line as a Bullish Indicator

The piercing line pattern is a bullish signal that involves the body of a green candle closing within the body of the previous red candle. This pattern shows that there is strong buying power at lower levels and that the downward pressure is starting to subside. The more the green candle "pierces" into the red candle, the more significant the bullish signal. If the green candle only pierces a small part of the red candle, it implies that there are not enough buyers to counter the selling pressure. The chart below shows a piercing line pattern in USD/CHF.

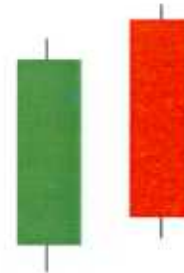


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Dark Cloud Cover Signifying Bearish Reversal

A dark cloud cover is a bearish reversal pattern that signifies weakening buying pressure. This pattern involves the body of a red candle closing within the body of the previous green candle. Graphically, this pattern shows that despite a strong session, the currency pair is meeting resistance at higher levels. If the green candle does not close at least halfway into the body of the red candle, traders need to be careful with the formation, as it may be giving a false signal. In such cases, it is probably prudent for traders to wait for a trend reversal confirmation in the next candle. The deeper the second candle covers the first candle, the stronger the signal. The chart below shows a dark cloud cover formation in USD/JPY.

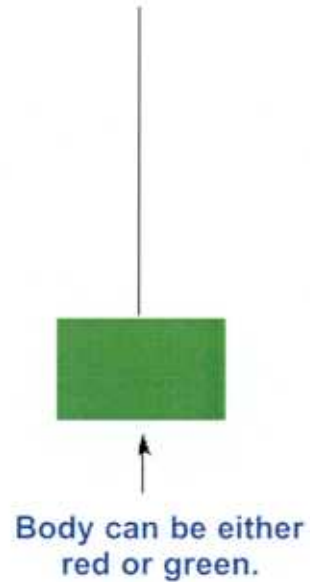


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Shooting Star: Reversal Pattern

A shooting star is a reversal pattern that typically occurs after gaps. This is a bearish signal that involves a long wick and a small body that is near the end of the trading range. This pattern shows that the market rallied and attempted to make a new high, but met with intense selling pressure, which forced the currency pair to end up closing near the bottom of the range. A shooting star can have either a red or green body. The chart below shows a shooting star formation in GBP/USD. Traders will typically sell if they see the currency pair closes the period with the formation.

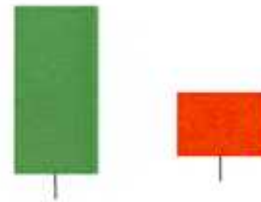


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Candlesticks

Harami: Weakening Trend

The Harami pattern is a reversal pattern that signals an exhausting downtrend or a rally that is losing steam. The formation is comprised of two candles; the first candle has a long body, while the second candle has a smaller body that is within the first candle. Typically, the smaller the second candle, the stronger the price reversal signal. The smaller the wicks of the second candle, the more accurate the signal. If the second candle hovers near the top of the first candle during an uptrend, this indicates that there is a higher probability for consolidation than a reversal. The same is true in a downtrend, which is if the second candle hovers near the bottom of the first candle, it indicates a higher probability for consolidation as opposed to a reversal.

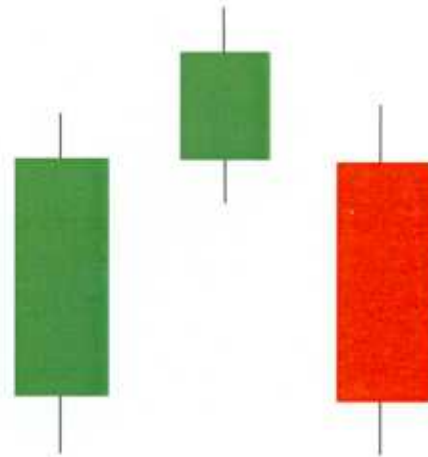


PART 3: What Moves the Market

Candlesticks

Evening Star: When the Market Comes Down

The evening star formation occurs in an uptrend and is a reversal pattern that indicates that sellers have gained control of the market, after the market has made a new high. This formation involves three candles; first a green candle with a long body, followed by small candle with a short body (can be red or green) and then a long red body candle that does not touch the body of the second candle and closes well into the body of the first candle. The pattern appears in the diagram below. To confirm the reversal pattern, the third candle must close with this formation. Traders who are trading based on evening stars should not place trades until after seeing the third candle. They must wait for the third candle to appear and close before selling the currency pair. The chart below shows an evening star pattern in the GBP/USD.

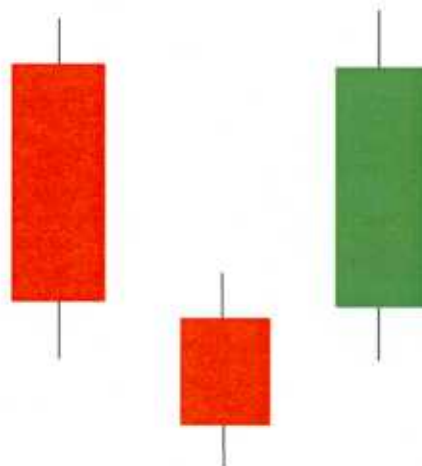


PART 3: What Moves the Market

Candlesticks

Morning Star: When the Market Will Rise

The morning star pattern occurs in a downtrend and is a bullish reversal pattern that indicates a buyers market after the currency pair has made a new low. This formation involves three candles: first a red candle with a long body, then a small red or green candle with a small body and a green candle with a long body that does not touch the body of the second candle and closes well into the body of the first candle. The morning star pattern appears in the diagram below. Similar to the evening star pattern, traders must wait for the third candle to close prior to buying the currency pair. The chart below shows a morning star formation in the USD/CAD.



PART 3: What Moves the Market

Candlesticks

Putting It All Together

All of the technical analysis indicators outlined in this manual are the most commonly used indicators. Alone, none of these indicators yield great results. However, when combined and used in unison, they can give traders the extra edge needed to better understand short term trading dynamics. Therefore it is important for traders to look for relationships between the different indicators as multiple signals can provide the most accurate trading predictions. We have added a number of indicators onto the charts below and will explain how they can be used in unison.

The GBP/USD chart below uses the stochastic, Fibonacci retracements, exponential moving average indicators as well as candlesticks.

Taken apart, we can see that there is a piercing line candlestick pattern, stochastics showed a divergence, which is a bullish signal, and GBP/USD found support at the 61.8% retracement and 200-day EMA. Coupled together, these tools confirm that in the area circled, a trend reversal appeared imminent, as all of the indicators are providing bullish signals. Technical traders who are able to understand these indicators and use them together on this chart could have taken advantage of the 500 pip move that occurred afterwards.

PART 3: What Moves the Market

Candlesticks

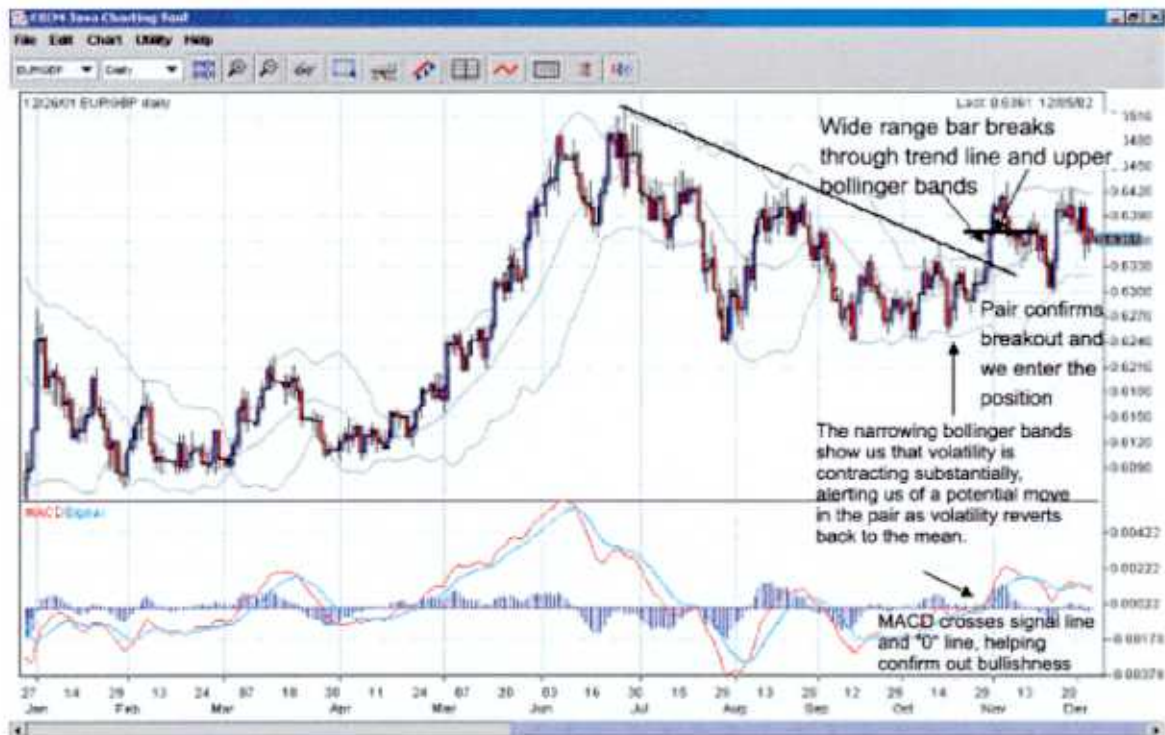
The EUR/USD chart on this page uses the exponential moving average (EMA), relative strength index (RSI) and candlesticks. In the continued uptrend, traders could have combined these indicators to look for profitable entry points. In the area circled, the higher lows in the RSI confirmed the strength of the uptrend, while the EUR/USD continually found support at the 20-day EMA. The candlesticks show that after the pair pulled back to the 20-day EMA, the next candle closed with a bullish engulfing pattern, which was confirmed after the strong break of the 3 period resistance. Traders who bought at this point, would have been able to benefit from the 400 pip rally that occurred afterwards.



PART 3: What Moves the Market

Candlesticks

This EUR/GBP chart on this page uses candlesticks, Bollinger bands, and MACD. The narrower Bollinger bands indicate that volatility is contracting substantially, alerting to a potential larger move. When the MACD crossed the signal and "0" line, it indicated bullishness. When the pair broke the upper range of the Bollinger band and found support at the top of the band, this confirmed the breakout. Short-term traders could have used the indicators and taken advantage of the 50 pip move that occurred afterwards, with a stop below the breakout level.



PART 3: What Moves the Market

Fibonacci Retracement Levels

What is it?

Leonardo Pisano Fibonacci is a renowned European mathematician who lived during the Roman Empire. His fame stems from the unique series of numbers that he discovered. He found that 38.2%, 50% and 61.8% hold a very peculiar mathematical relationship, as they continually "pop up" throughout nature (reproduction rates, planetary relationships, etc).

Based upon historical studies, it has been determined that after a significant move in currency prices and the rate begins to retrace, it tends to find support or resistance at 38.2%, 50% and 61.8% of the larger move. These levels represent areas where there is a high likelihood that the retracement will stop and the larger move will resume. Many traders also believe these percentages have become a self-fulfilling prophecy as the use of these numbers has become more and more popular. Regardless, Fibonacci relationships are significant and widely watched, and if used in conjunction with other indicators can serve as a

lucrative trading tool.

How can it be used for trading?

Fibonacci levels are used by drawing a trend line between two significant points; usually from a base to a recent high, and inserting percentage levels. The red lines in the NZD/USD chart below shows the low and high points from which the retracement levels are measured. The blue lines represent the corresponding Fibonacci retracement levels, which are 38.2%, 50% and 61.8%. The move from the low to the high was 848 pips. 38.2% of that move is 324 pips, 50% is 424 pips, while 61.8% is 524 pips. Subtracting these numbers from the high point will show that the NZD would be expected to retrace its larger bull trend and stall at 0.4682, 0.4582 and/or 0.4482. When price moves to one of the levels and stops, it is likely that the correction may be over and the trend will resume. If the trend is a downtrend, the retracement of the correction would be up. If the trend is an uptrend, the retracement will be down.



In the above graph shows the following:
Move from A to B was 848 pips
38.2% of move = 324
50% of move = 424

61.8% of move = 524
Subtract numbers from B, which give you the retracement levels
of .4682, .4582, and .4482

*Fibonacci calculation is available on most charting pack-

PART 3: What Moves the Market

Fibonacci Retracement Levels

Fibonacci retracement levels can also be used to determine entry points. In the chart below, GBP/USD pulls back from its larger uptrend and is finding support at the 38.2% retracement level. Traders at this point can consider going long near this level with a stop placed slightly below the retracement level. Aggressive traders prefer to see pairs only retrace 38.2% of the move, as they feel any deeper correction puts the trend's validity at risk. Other traders

may prefer entries at deeper correction levels such as 61.8%, as they feel the trade is safer after other traders are shaken out of their positions. In the chart below, the termination of the bull trend would have occurred when the GBP/USD broke below the 61.8% retracement level on a closing basis. Terminations of bear trends would occur when the currency pair rallies above the 61.8% retracement of the primary move.

Using Fibonacci



Chart Key

- A) Strong Trending Market
- B) Sterling pulls back, we begin looking for possible entries
- C) Doji, Pivot point low made at the 38.2% retracement
- D) Stop placed near swing point lows
- E) Pair takes out 8/25 high, confirming reversal, good entry
- F) The Fib levels you use to spot possible entries depends on your trading style. Aggressive traders prefer to see pairs only retrace to the 38.2% level because they feel any deeper correction puts a trend's validity in question. Others prefer entries at deeper corrections as they feel the trade is safer after other traders are shaken out of positions. In this example we took the more aggressive approach.

Below are some guidelines that may increase the validity and the importance of the Fibonacci retracement levels:

- 1) The longer the time frame, the more important the retracement level.
- 2) If there are two different retracement levels that are close together, such as a 50% retracement of a monthly chart and a 38.2% on a daily chart, this increases the significance of the retracement levels.
- 3) Rates must close beyond the retracement levels to signify that the levels have been broken.
- 4) If there is a confirmation of the support or resistance in other studies, such as RSI or Stochastics, this increases the probability that the correction will end at these retracement levels.

PART 3: What Moves the Market

Moving Average

What is it?

The moving average is one of the most popular indicators in technical analysis as it helps eliminate minor fluctuations and gives traders a clear, smoothed depiction of price over a standard period of time. Moving averages can be built in a number of different ways, but the most commonly used ones are simple exponential and moving average envelopes. The primary difference between simple moving averages and exponential moving averages is that exponential moving averages are weighted and give more importance to recent data.

Moving average envelopes are moving averages shifted up or down by a specified fixed percentage. For example, if 3% is the chosen moving average envelope percentage, the moving average envelopes would be the moving average times one plus the percent and one minus the percent.

How are moving averages used?

Moving averages can be used in a number ways:

1) Determine entry points

Buy signal when the price is rising and closes above the moving average.

Sell signal when the price is falling and closes below the moving average.

Buy signal when a fast moving average crosses above a slower moving average.

Sell signal when a fast moving average crosses below a slower moving average.

As shown in the USD/JPY chart below, when the 200-day EMA crossed over 50-day EMA, it provided a sell signal that could have indicated the potential for the larger downtrend

that occurred later.



Chart Key

- A). Moving averages not in "proper" order
- B). Moving averages cross and revert to "proper" order, Crossover traders enter the market
- C). Pair takes out expansion bar low, good entry
- D). Pair takes out 20-day EMA sucking out MA crossover traders
- E). Stop placed a few pips above recent highs

The following can remain on the graph...but please expand the text inside the text box.

- 1). 200-day EMA
- 2). 50-Day EMA
- 3). 20-day EMA

2) Determine support or resistance levels

The moving averages are frequently looked at as support and resistance points. As shown in the EUR/CAD chart below, the 20-day EMA served as a significant level of support for the entire trend. A prudent place to place a stop or an exit order could be a few pips below the EMA.

PART 3: What Moves the Market

Moving Average

Using Moving Averages



Chart Key

- A). Moving Averages in proper order and all gradually rising, a good indication of a strong trend.
- B). Pair pulls back to the 20-day EMA. 20-day EMAs are key levels as institutions often look to add on to their positions there. It is now on our watch list.
- C). Takes out pattern high, good entry.
- D). 20 day EMA
- E). 50-day EMA
- F). Stop placed a few pips a few pips below pattern low
- G). Bullish Engulfing Pattern that takes out the highs of the prior 4 days

3) Reversion to the mean

The Moving Average envelopes are signals for overbought and oversold conditions. There are two ways that these envelopes can be interpreted. Traders can trade against the envelope, assuming that the price will revert back to the mean, or closer to the center of the band, which would indicate a neutral price level. This means that if the price is at the top of the envelope, it is a sell signal. If the price is at the bottom of the envelope, that would indicate a buy signal. Alternatively, if the price is near the top or bottom of the band, some traders may view this as indications for a potential breakout scenario.

When just looking at a single moving average (i.e. simple or exponential), reversion to the mean may indicate the tendency for a currency to revert back to average levels after having made a more extreme move.

4) Slopes of moving averages can indicate strength of trend

Traders can also use the slopes of the moving averages to

gauge the strength of a trend. A moving average with a steep slope would imply a strong trend, while a moving average with a flatter slope would imply a weak trend. In addition, visually, an upward sloping moving average immediately tells traders that the currency is in an uptrend, while a downward sloping moving average immediately tells traders that the currency is in a downtrend.

Moving averages alone are less accurate. However, when it is combined with other indicators, it is a useful for pinpointing important trading levels. This indicator is so commonly used that it is important for any and all currency traders to watch and understand.

PART 3: What Moves the Market

Bollinger Bands

What is it?

Bollinger bands are very similar to moving averages. John Bollinger of Bollinger Capital Management invented the Bollinger bands because he felt that the bands should be correlated with the price action of the currency rather than a fixed percentage amount (which is what is used in moving average envelopes). In order to incorporate price action, the calculation includes two standard deviations, which in statistical theory implies that 95% of price movement should be contained within the two bands. The statistical component also allows the bands to self adjust to changing market conditions.

The bands are plotted at two standard deviations above or below the moving average. This is typically based off of the simple moving average, but an exponential moving average can be used to increase the sensitivity of the indicator. Increased sensitivity, however, implies increased market noise.

How can Bollinger Bands be used for trading?

Bollinger bands are typically used by traders to detect extremely unsustainable price moves, capture changes in

trends, identify support/resistance levels and spot contractions/expansions in volatility. There are a number of ways to interpret Bollinger Bands.

Method #1 - Breakouts

Some traders believe that when the price breaks above or below the upper or lower band, it is an indication that a breakout is occurring. These traders will then take a position in the direction of the breakout.

Method #2 - Overbought / Oversold Indicators

Alternatively, some traders use Bollinger Bands as an overbought and oversold indicator. As shown in the chart below, when the price touches the top of the band, traders will sell, assuming that the currency pair is overbought and will want to revert back to mean or the middle moving average band. If the price touches the bottom of the band, traders will buy the currency pair, assuming that it is oversold and will rally back towards the top of the band. The spacing or width of the band is dependent upon volatility of the prices. Typically, the higher the volatility, the wider the band; the lower the volatility, the narrower the band.

Using Bollinger Bands



Chart Key

- A). Doji at top of band, we will look to short any weakness
- B). Reverse Hammer at band resistance, we look to short weakness
- C). Pivot point low, we will look to buy strength
- D). Pivot point high at band
- E). Pivot point low at bollinger support
- F). Bollinger bands used in conjunction with pattern recognition can be useful in trading "trendless" markets, although traders need to be cautious when doing so.

PART 3: What Moves the Market

Oscillators

Relative Strength Index

What is it?

The relative strength index or RSI is probably the most popular oscillator used by the FX trading community. It was developed by J. Welles Wilder Jr. to gauge the strength or momentum of a currency pair. This indicator is calculated by comparing a currency pair's current performance against its past performance, or its up days versus its down days. RSI is on a scale of 1-100, where any point above 70 is considered overbought, while any point below 30 is considered oversold. The standard time frame for this measure is 14 periods, although 9 and 25 periods are also commonly used. Generally, more periods tend to yield more accurate data.

How can RSI be used for trading?

- 1) RSI can be used to identify extreme conditions or reversals.
- 2) Patterns in RSI filter out "noise" on price charts to clarify trading patterns.
- 3) RSI can be used to indicate divergence.

As mentioned earlier, RSI above 70 is considered overbought and indicating a sell signal. RSI below 30 is considered oversold, which would imply a buy signal.

A diversion between the RSI oscillator and the current price trend is an accurate indicator that a market turning point is imminent. This is apparent in the EUR/USD chart below where the EUR/USD was continuing its rally while the RSI was starting to turn downwards. This divergence provided a sell signal that forecasted the decline that occurred from 0.9960 to 0.9720.

Using RSI



Chart Key

- A). Price action positive as pair is making new highs
- B). RSI does not make a new high, indicating that the move is losing strength
- C). Pair makes short-term low and attempts rally
- D). Pair takes out short-term low, good entry
- E). Pair in overbought territory.

PART 3: What Moves the Market

Stochastics

What is it?

The stochastic oscillator measures the current currency price compared to its historical price for a given time period. This indicator is one of the most commonly followed indicators in the FX market. It looks to gauge the strength and momentum of a currency pair's price action by measuring the degree by which a currency is overbought or oversold. The scale for the indicator is 0 to 100. Readings above 80 indicate overbought conditions, as it reflects the fact that the currency is strong and the price is closing near the high of the trading range. Readings below 20 indicate oversold conditions and reflects the fact that the currency is weak and is closing near the low of the trading range.

There are 2 lines in the stochastic indicator. One line is the %K line, which is the fast line, and the other is the %D line, which is the slow line. The %K line is calculated using the high, low, and closing data. %D is the moving average of %K. A moving average is an average of the %K for the specified period of time. It "moves" because for each calculation it uses the latest data multiply number of time periods for the data.

How can stochastics be used for trading?

1) Detect overbought and oversold conditions

The most common way to analyze stochastics is to sell when the reading is above 80, which implies overbought conditions, and to buy when the reading is below 20, which implies oversold conditions.

2) Divergence

Stochastics can show divergence when Slow %K and Slow %D values decline and closing price values increase, or Slow %K and Slow %D values increase and closing price values decrease. The stochastic values are moving in one direction and the price values are moving in the opposite direction. Divergences can be used as reliable indicators of possible trend reversals.

The GBP/JPY chart below shows that when the %K crossed over the %D indicating overbought conditions around 192.80, this confirmed the downtrend and forecasted the further decline to 189.00.

Using Stochastics



Chart Key

- A). Trending Market
- B). Pair consolidates
- C). Pair resumes trend, but is unable to make new highs
- D). Bearish Harami/ Pivot point high, Pair likely to reverse
- E). Pivot point high confirms, we short on new lows
- F). %K crosses %D at overbought levels, confirming pair's weakness

PART 3: What Moves the Market

Stochastics

3) Trade signals

Professional technical analysts find that stochastics are very useful for timing the market. The most important buy and sell signals occur when the %K and %D lines cross. For example, a strong overbought signal occurs when a stock makes a new high and the %D and the %K lines cross above the 80 level. Conversely, a stock is severely oversold and ready to reverse when it makes a new low and the %D and %K lines cross below the 20 level to confirm that low.

Traders should use time intervals that best suit their trading strategy. A time interval that is too short increases the sensitivity of the indicator to short term market noise. Therefore the indicator would provide signals too frequently, which decreases the accuracy of the signal. On the other hand, a time span that is too long may not generate enough signals and may not pick up important moves. Only major trend reversals would force the stochastic to generate a signal. An example of too fast of a time interval could be 1 period, whereas too slow of a time interval could be 500 periods.

The primary difference between the fast and slow stochastic is that the fast stochastic is based upon the actual price data (considered raw data), whereas each data point for the slow stochastic is based upon the average of the fast stochastic for the specified time period. Therefore the slow stochastic usually provides more accurate trading signals.

The popularity of stochastics has risen tremendously over the past couple of decades, as technology has advanced making the indicator easier to calculate. Judging from its recent track record, many FX traders are likely to continue using it, making it an important tool that should be understood and closely watched by all traders.

PART 3: What Moves the Market

Moving Average Convergence/Divergence (MACD)

The MACD is another popular oscillator used by currency traders. This is a momentum indicator and can be used to confirm trends, while also indicating reversals, or overbought/oversold conditions. The MACD is calculated by taking the difference between 2 exponential moving averages. The two often used are the 26-day and 12-day moving averages.

How can MACD be used for trading?

The MACD is most commonly used during volatile trading markets. It can be used to indicate crossovers, divergences or overbought/oversold conditions.

1) Crossovers

The most common way to use the MACD is to buy/sell a currency pair when it crosses the signal line or zero. A sell signal occurs when the MACD falls below the signal line, while a buy signal occurs when the MACD rallies above the signal line.

2) Overbought / Oversold

The MACD can also be used as an overbought/oversold indicator. When the shorter moving average moves away significantly from the longer moving average (i.e., the MACD rises), it is likely that the currency's price movements are starting to exhaust and will soon return to more realistic levels.

3) Divergences

When the MACD diverges from the trend of the currency price, this may signal a trend reversal. In addition, if the MACD makes a new low while the currency pair does not also make a new low, this is a bearish divergence, indicating a possible oversold condition. Alternatively, if the MACD is making new highs while the currency pair fails to confirm these highs, this is a bullish divergence, indicating a possible overbought condition.

The USD/JPY chart below shows a divergence when the price makes a new high, while the MACD does not make a new high. This is a bearish indication that forecasted the trend reversal and a further move from 125.20 to 119.60.

Oscillators - MACD



Chart Key

- A). Price makes new highs
- B). Break of bar marks a good short entry
- C). Bar takes out previous lows of prior 8 days
- D). Divergence as MACD does not make new highs Pair is looking weak
- E). MACD crosses signal line, Another Bearish indication

Part 4: Currency Profiles and Outlook

United States Economic Overview

It is important to understand the general economic characteristics of the most commonly traded currencies in order to gauge what economic data have the most significant impact on the currency's movements.

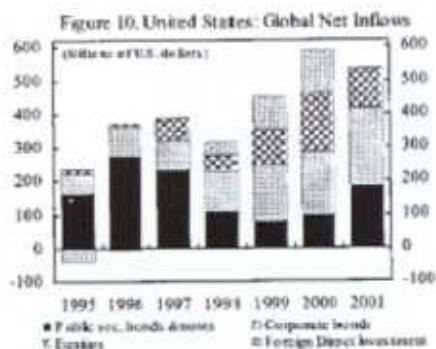
United States Economic Overview

The US is the world's leading economic power, with GDP valued at over US\$10Tr in 2001. This is the highest in the world and based upon PPP, it is 3 times the size of Japan's output, 5 times the size of Germany's and 7 times the size of the UK's. As the most liquid equity and fixed income markets in the world are in the United States, foreign investors have consistently increased their purchases of US assets. This is evident in the figure below, which shows foreign direct investments to be approximately 40% of total global net inflows for US. On a net basis, the US absorbs 71% of total foreign savings. This means that if foreign investors are not satisfied with their returns in US asset markets and they decide to repatriate their funds, this would have a significant effect on US asset values and the USD. Specifically, if foreign investors sell US assets in search of

The import and export volume of the US also exceeds that of any other country. This is due to the country's sheer size, as true import and export volume represent only approximately 11% of GDP. Despite this large activity, on a netted basis, the US is running a very large trade deficit of nearly \$500bln. This means that the country is importing significantly more goods than it is exporting. In addition, the large absolute number indicates that the US is heavily reliant on capital flows and the dollar is highly sensitive to changes in those flows. In fact, in order to prevent a further decline in the USD as a result of the trade deficit, the US would need to attract close to \$1.9 trillion in capital inflows per day. The breakdown of the most important trading partners for the US are as following:

Leading Exports	% of Total
Canada	22.7
Mexico	14.1
Japan	7.8
UK	5.5
EU	21.7

Source: Economist 12/02 report (2001 data)



Leading Imports	% of Total
Canada	19.1
Mexico	11.5
Japan	11
UK	8.9
EU	19.2

Part 4: Currency Profiles and Outlook

The US is also the largest trading partner for most countries, representing 20% of total world trade. The figure below details countries that conduct significant trade activity with the US and correspondingly, the percentages that US trade represents for their total import and export activities.

Country	Exports	Imports
Australia	10%	18%
Canada	85%	73%
China	20%	11%
Germany	11%	8%
Japan	30%	18%
Mexico	89%	80%
New Zealand	14%	16%
Switzerland	11%	5%
UK	16%	13%

Source: Economist 12/02 report (2001 data)

The US is primarily a service-oriented country with nearly 80% of their GDP coming from real estate, transportation, finance, healthcare, and business services. With the advent of new technology such as the internet, productivity in the US has consistently increased. This is particularly interesting in light of the US's recent economic downturn. Many economists argue that despite the current downturn, increased productivity indicates that we are in a "new economy." The importance of this comment is that if the US is indeed in a "new economy," previous reactions to recessionary conditions may not repeat themselves in this downturn.

Monetary & Fiscal Policy Makers

The Federal Reserve Board (Fed) is the central bank of the United States. They are responsible for setting and implementing monetary policy. The board consists of a 12-member committee, which comprise the Federal Open Market Committee (FOMC). The voting members of the FOMC are the seven Governors of the Federal Reserve

Board, plus five presidents of the twelve district reserve banks. The FOMC holds 8 meetings per year, which are widely watched for interest rate announcements or changes in growth expectations.

The Fed has a high degree of independence to set monetary authority. They are less subject to political influences, as most members are accorded long terms that allow them to remain in office through periods of alternate party dominance in both the White House and Congress.

The Federal Reserve issues a biannual Monetary Policy Report in February and July, followed by the Humphrey-Hawkins testimony where the Federal Reserve Chairman responds to questions from both the Congress and the Banking Committees in regards to this report. This report is important to watch, as it contains the FOMC forecasts for GDP growth, inflation and unemployment.

The Fed, unlike most other central banks, has a mandate or "long-run objectives" of "price stability and sustainable economic growth." In order to adhere to these goals, the Fed has to use monetary policy to limit inflation, unemployment and to achieve balanced growth. The most popular tools that the Fed uses to control monetary policy include the following:

Open Market Operations

These involve Fed purchases of government securities, including Treasury bills, notes and bonds. This used to be one of the most popular methods for the Fed to signal and implement policy changes. As the Fed purchases government securities, they in effect decrease interest rates. When the Fed sells government securities, interest rates increase.

Fed Funds Target

This rate is the key policy target of the Fed. It is in essence, the level of borrowing that the Fed offers its member banks.

Part 4: Currency Profiles and Outlook

The Fed tends to increase this rate to curb inflation or decrease this rate to promote growth and consumption. Changes in this rate tend to imply major changes in policy and typically has large ramifications for global fixed income and equity markets.

Over the past few decades, the Treasury and Fed officials have maintained a "strong dollar" bias. This is particularly true under former Treasury secretary Paul O'Neill who was frequently very vocal in advocating a strong dollar. Under the new Treasury secretary, John Snow, the dollar policy currently remains unchanged.

Important Characteristics of the US Dollar

Over 90% of all currency deals involve the USD

The most liquid currencies are EUR/USD, USD/JPY, GBP/USD and USD/CHF. These currencies represent the most frequently traded currencies, and clearly all of these pairs involve the USD. Therefore it is important to keep abreast of US developments and movements of the USD index, as they will impact the majority of currency positions.

Prior to 9/11, the USD was the world's premier "safe-haven" currency

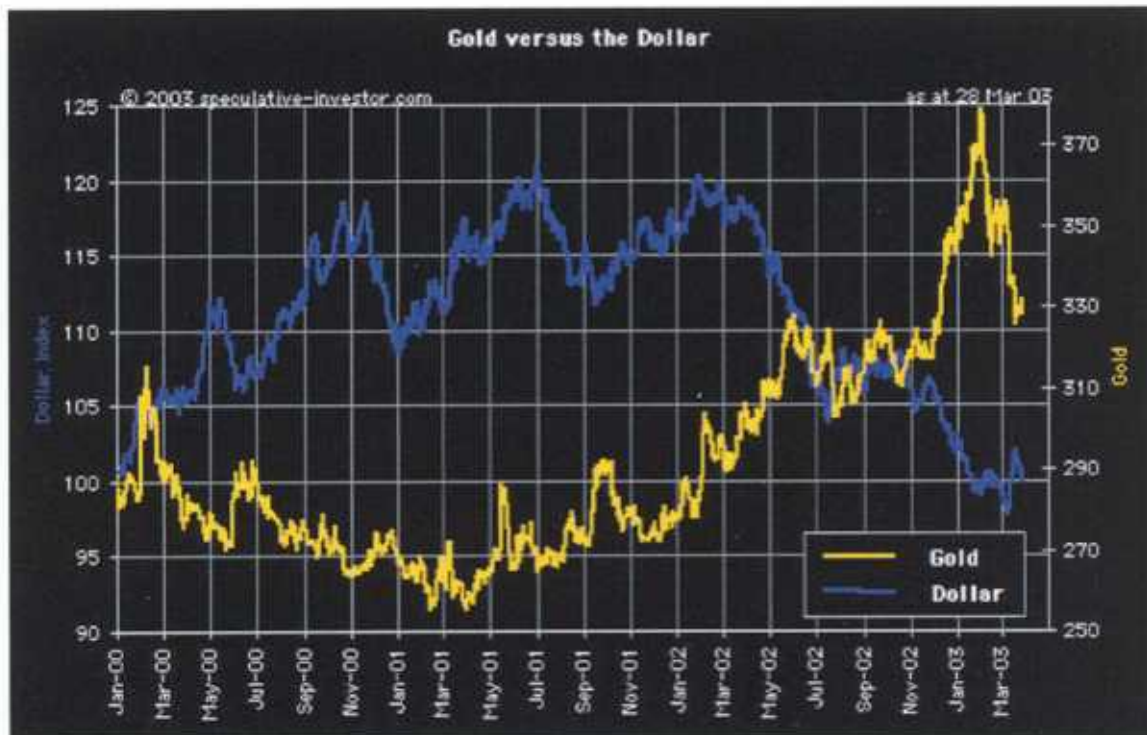
The reason why the USD was previously considered one of the world's premier "safe-haven" currencies was because prior to 9/11, the risk of severe US instability was very low. This safe haven status allowed the US to attract investment at a discounted rate of return. Therefore, seventy-six percent of global currency reserves are held in USD. Another reason why currency reserves are held in USD is the fact that the USD is the dominant factoring currency, but the safe haven status has been a factor as well when other central banks decide to overweight their USD holdings within their reserve portfolio. However, after September 11, 2001, foreign holders of US assets, including central banks have pared their USD holdings as a result of increased US

uncertainty and decreased interest rates.

Gold and USD tend to have inverse relationships

As indicated in the chart below, gold and the USD have historically had an inverse relationship; that is when gold rises, the USD falls and vice versa. This inverse relationship has developed as a result of the fact that gold is measured in dollars. Recent USD depreciation due to global uncertainty has been the primary reason for gold appreciation, as gold is commonly viewed as the ultimate store of value.

Part 4: Currency Profiles and Outlook



Many emerging market countries "peg" their local currencies to the USD

Pegging a currency to the USD pertains to the basic idea that a government agrees to maintaining the USD as a reserve currency by offering to buy or sell any amount of domestic currency at the pegged rate for the reserve currency. In addition, the government typically must also promise to hold reserve currency at least equal to the amount of local currency in circulation. Countries with currencies pegged to the USD include Mexico and China. This is particularly important because countries such as those will take an active interest in managing their fixed or floating pegs. China is a very active participant in the currencies market because their maximum float per day is controlled within a narrow band based upon the previous day's weighted-average rate against the USD. Any fluctuations beyond this band will be subject to intervention by the central bank, which will include buying or selling USD.

The Treasury and Fed favor a "strong dollar" policy

As mentioned earlier, over the past few decades, the Treasury and Fed officials have maintained a "strong dollar" bias. This is particularly true under former Treasury secretary Paul O'Neill who was frequently very vocal in advocating a strong dollar. Under the new Treasury secretary, John Snow, the dollar policy currently remains unchanged. However, as the economy weakens, it may be important to watch for potential changes in this policy.

Interest Rate Differentials between US treasuries and foreign bonds ensued

The interest rate differentials between US treasuries and foreign bonds are important to follow, as it is a strong indicator of potential currency movements. The reason is that investors are looking for assets with the highest yields. Should yields in the US decrease or if yields abroad increase, this would induce investors to sell their US assets and purchase foreign assets. Selling US fixed income or

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equity assets would influence the currency market because that would require selling the USD and buying the foreign currency. If US yields increase or foreign yields decrease, investors would be more inclined to purchase US assets, therefore boosting the USD.

Following the USD Index

Market participants closely follow the US Dollar Index as a gauge to overall USD strength or weakness. The USD index is a futures contract traded on the NY Board of Trade that is calculated using the trade-weighted geometric average of six currencies. It is important to follow this index because when market participants are reporting general USD weakness or decline in the trade-weighted USD, they are typically referring to this index.

US currency trading impacted by stock and bond markets

There is a strong correlation between a country's equity and fixed income markets and its currency: if the equity market is rising, investment dollars are coming in to seize investment opportunities. If equity markets are falling, domestic investors will be selling their shares of local publicly traded firms only to seize investment opportunities abroad. With fixed income markets, economies boasting the most valuable fixed income opportunities with the highest yields will be capable of attracting foreign investment. Daily fluctuations and developments in any of these markets reflect movement of foreign portfolio investments, which would require foreign exchange transactions.

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Important Economic Indicators for the US

Employment Report to Gauge Unemployment

The Employment report is the most important and widely watched indicator on the economic calendar. Its importance is mostly due to political influence rather than pure economic reasons, as the Fed is under strict pressure to keep unemployment under control. As a result, interest rate policy is directly influenced by employment conditions. The monthly report consists of data from two different surveys, the Establishment Survey and the Household Survey. The Establishment survey takes data from non-farm payroll employment, average hourly workweek and the aggregate hours index. The Household Survey gives information on the labor force, household employment and the unemployment rate. Currency traders tend to focus on seasonally adjusted monthly unemployment rates and any meaningful changes in non-farm payrolls.

Determining Inflation Through CPI

The Consumer Price Index is a key gauge of inflation. The index measures the prices on a fixed basket of consumer goods. Economists tend to focus more on the CPI-U or the Core inflation rate which excludes the volatile food and energy components. The indicator is widely watched by the FX markets as it drives a lot of activity.

PPI: Gauging Business Prices

The Producer Price Index (PPI) is a family of indexes that measures average changes in selling prices received by domestic producers for their output. The PPI tracks changes in prices for nearly every good-producing industry in the domestic economy, including agriculture, electricity and natural gas, forestry, fisheries, manufacturing, and mining. Foreign exchange markets tend to focus on seasonally adjusted finished goods PPI and how the index has reacted on a m/m, q/q, h/h and y/y basis.

GDP to Determine Aggregate Economic Health

Gross Domestic Product is a measure of the total production and consumption of goods and services in the U.S. The Bureau of Economic Analysis constructs two complementary measures of GDP, one based on income and the other based on expenditures. The advance release of GDP, which occurs the month after each quarter ends, contains some BEA estimates for data not yet released including inventories and trade balance, and is the most important. Other releases of GDP are typically not very significant unless a major revision is made.

International Trade Balance

The balance of trade represents the difference between exports and imports of foreign trade in goods and services. Merchandise data are provided for U.S. total foreign trade with all countries, details for trade with specific countries and regions of the world, as well as for individual commodities. Traders tend to focus on seasonally adjusted trade numbers over a three-month period as single-month trade periods are regarded to be unreliable.

The Fed's Indicator of Choice: ECI

The employment cost index data is based on a survey of employer payrolls in the 3rd month of the quarter for the pay period ending on the 12th day of the month. The survey is a probability sample of approximately 3,600 private industry employers and 700 state and local governments, public schools and public hospitals. The big advantage of ECI is that it includes non-wage costs, which can add as much as 30% to total labor costs. Reaction to the ECI, however, is often muted as it is generally very stable. It should be noted that it is a favorite indicator of the Fed.

ISM (Formerly NAPM) Survey to Forecast Manufacturing Growth

The Institute for Supply Management releases a monthly

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Important Economic Indicators for the US

composite index based on surveys of 300 purchasing managers nationwide representing 20 different industries regarding manufacturing activity. Index values above 50 indicate an expanding economy, while values below 50 are indicative of contraction. The number is widely watched, as Greenspan once stated it is one of his favorite indicators.

Industrial Production: Determining Physical Output

The Index of Industrial Production is a set of indexes that measures the monthly physical output of US factories, mines and utilities. The index is broken down by industry type and market type. Foreign exchange markets focus mostly on the seasonally adjusted monthly change in aggregate figure. Increases in the index are typically dollar positive.

Consumer Confidence to Gauge Market Sentiment

The Consumer Confidence Survey measures the levels of confidence individual households have in the performance of the economy. Survey questionnaires are sent out to a nationwide representative sample of 5,000 households, of which approximately 3,500 respond. Households are asked five questions that include; (1) a rating of business conditions in the household's area, (2) a rating of business conditions in six months;(3) job availability in the area; (4) job availability in six months; and (5) family income in six months. Responses are seasonally adjusted and an index is constructed for each response and then a composite index is fashioned based on the aggregate responses. Market participants perceive rising consumer confidence as a precursor to higher consumer spending. Higher consumer spending is often seen as a spark that accelerates inflation.

Retail Sales: Is there Spending or Hoarding?

The Retail Sales Index measures the total goods sold by a sampling of retail stores over the course of a month. This index is used as a gauge of consumer consumption and consumer confidence. The most number typically does not include autos, as auto sales can vary month-to-month. Retail sales can be quite volatile, due to seasonality; however, it is an important indicator of the general health of the economy.

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Canada (CAD)

Economic Performance

Canada is the 7th largest country in the world with a GDP of \$700 billion in 2001. The country has been growing consistently since 1991. It is typically known as a resource-based economy, as the country's early economic development hinged upon exploitation and export of natural resources. It is now the world's 5th largest producer of gold and the 14th largest producer of oil. However, in actuality nearly two-thirds of the country's GDP comes from the service sector, which also employs every 3 out of 4 Canadians. The strength in the service sector is partly attributed to the trend by businesses to subcontract a large portion of their services. Despite this, manufacturing and resources are still very important for the Canadian economy, as it represents over 25% of the country's exports and

is the primary source of income for a number of provinces.

The Canadian economy started to advance with the depreciation of its currency against the US dollar and the Free Trade Agreement that came into effect on January 1, 1989. This agreement eliminated almost all tariffs on trade between the US and Canada. As a result, Canada now exports over 85% of its goods to the US. Further negotiations to incorporate Mexico created the North American Free Trade Agreement (NAFTA), which took into effect on January 1, 1994. This more advanced treaty eliminated most tariffs on trading between all three countries. The following is a breakdown of Canada's trading partners:

Leading Exports	% of Total
US	85.0
UK excl UK	3.7
Japan	2.3
UK	1.6

Leading Imports	% of Total
US	72.8
UK excl UK	6.6
Japan	3.4
UK	3.0

Monetary & Fiscal Policy

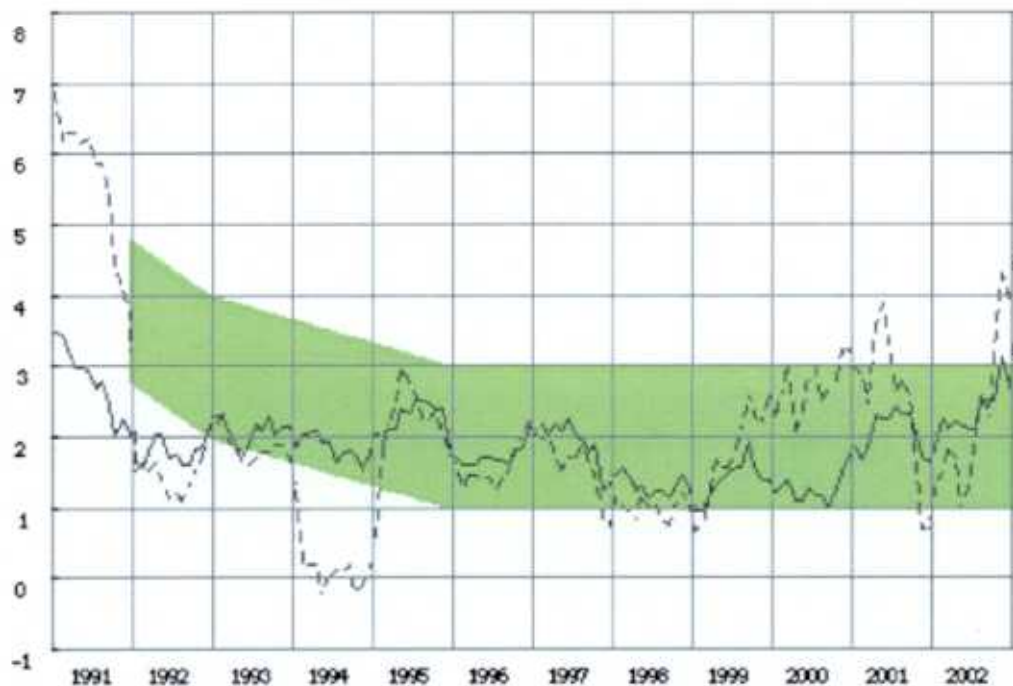
The Bank of Canada (BoC) is the central bank of Canada. The Governing Council of the Bank of Canada is the board that is responsible for setting monetary policy. This council consists of seven members: the Governor and six Deputy Governors. The Bank of Canada does not have regular periodic policy setting meetings. Instead, the council meets on a daily basis and changes in policy can be made at any time.

The Bank of Canada's focus is on maintaining the 'integrity and value of the currency.' This primarily involves ensuring price stability. Price stability is maintained by adhering to an

inflation target agreed upon with the Department of Finance. This inflation target is currently set between 1% - 3%. The Bank believes that high inflation can be damaging to the functioning of the economy. Low inflation would equate to price stability, which can help foster sustainable long-term economic growth. The BoC controls inflation through short-term interest rates. If inflation is above the target, the Bank will apply tighter monetary conditions. If it is below the target, the Bank will loosen monetary policy. The graph on the next page shows that inflation has been successfully maintained within the inflation target band since 1998. Monetary conditions tighten when short-term rates increase or the trade weighted Canadian dollar appreciates.

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Total CPI, core CPI and target range, 31 January 1998 - 31 December 2002



Total CPI - - Core CPI — Inflation target range ■

Source: Bank of Canada

The Bank measures monetary conditions using its Monetary Conditions Index, which is a weighted sum of changes in the 90-day commercial paper rate, and G-10 trade weighted exchange rates. The weight of the interest rate versus the exchange rate is 3 to 1, which is the result of a change in interest rates on the exchange rate based upon historical studies. This means that a 1% increase in short-term interest rates is the same as a 3% appreciation of the trade weighted exchange rate. In order to change monetary policies, the Bank would manipulate the Bank Rate, which would affect the exchange rate. If the currency appreciates to undesirable levels, the BoC can decrease interest rates to offset the rise. If it depreciates, the BoC can raise rates. However, interest rate changes are not used for the purpose of manipulating the exchange rate. Instead it is used to control inflation.

The following are the most commonly used tools by the BoC to implement monetary policy:

Bank Rate:

This is the main rate used to control inflation. This is the rate of interest that the Bank of Canada charges to commercial banks. Changes to this rate will affect other interest rates, including mortgage rates and prime rates charged by commercial banks. Therefore changes to this rate will filter into the overall economy.

Open Market Operations:

The Large Value Transfer System (LVTS) is the framework for the BoC's implementation of monetary policy. It is through this framework that Canada's commercial banks borrow and lend overnight money to each other in order to fund their daily transactions. The LVTS is an electronic platform through which these financial institutions conduct large transactions. The interest rate charged on these overnight loans is called the overnight rate or bank rate. The BoC can manipulate the overnight rate by offering to

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Important Characteristics of the Canadian dollar

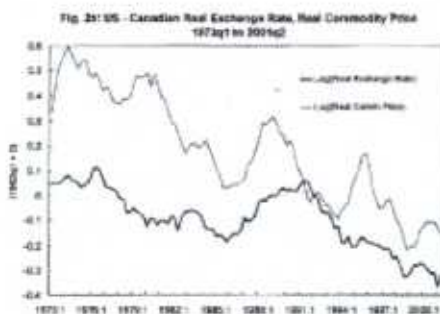
lend at rates lower or higher than the current market rate if the overnight lending rate is trading above or below the target banks.

On a regular basis, the bank releases a number of publications that are important to watch. This includes a biannual Monetary Policy Report that contains an assessment of the current economic environment and implications for inflation and a quarterly Bank of Canada Review that includes economic commentary, featured articles, speeches by members of the Governing Council and important announcements.

Important Characteristics of the Canadian dollar

Commodity-linked currency

Canada's economy is highly dependent on commodities. As mentioned earlier, they are currently the world's 5th largest gold producer and the 14th largest oil producer. The positive correlation between the Canadian dollar and commodity prices is close to 60%. This strong correlation is evident in the figure below, which compares the CAD rate with commodity prices. Strong commodity prices benefit domestic producers and increase their income from exports.



Source: Bank of Canada

Strong correlation with the US

The US imports 85% of Canada's exports. Canada has been running merchandise trade surpluses with the US since the 1980s. The current account surplus with the US reached a record high of US\$43bn in 2001. Strong demand from the US and strong energy prices led to record highs in the value of energy exports of approximately US\$36bn in 2001. Therefore the Canadian economy is highly sensitive to changes in the US economy. As the US economy accelerates, trade increases with Canadian companies, benefitting the performance of the overall economy. However, as the US economy slows, the Canadian economy will be hurt significantly as US companies reduce their importing activities.

Mergers and acquisitions

Due to the proximity of the US and Canada, cross border mergers and acquisitions are very common as companies worldwide strive for globalization. These mergers and acquisitions lead to money flowing between the two countries, which ultimately impacts the currencies. Specifically, the significant US acquisition of Canadian energy companies in 2001 led to US corporations injecting over US\$25bn into Canada. In order to purchase these companies, the US companies needed to sell USD and buy CAD.

Interest rate differentials

Interest rate differentials between the cash rates of Canada and the short term interest rate yields of other industrialized countries are closely watched by professional CAD\$ traders. These differentials can be good indicators of potential money flows as they indicate how much premium yield CAD\$ short term fixed income assets are offering over foreign short term fixed income assets, or vice versa. This differential provides traders with indications of potential currency movements as investors are always looking for assets with the highest yields. This is particularly important to carry traders who enter and exit their positions based

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Important Characteristics of the Canadian dollar

upon the positive interest rate differentials between global fixed income assets.



Source: RBA Nov 2002 Monthly Bulletin

Carry trades

The Canadian dollar became a popular currency to use for carry trades after its 3/4 point rate increases between April and July of 2002. A carry trade involves buying or lending a currency with a high interest rate and selling or borrowing a currency with a low interest rate. The popularity of the carry trade has contributed to the rise of the CAD\$, as many foreign investors are looking for a high yield. If global central banks increase their interest rates, the positive interest rate differential between Canada and other countries would narrow. In such situations, pressure would be put on the CAD\$ when carry traders start to close their positions.

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Important Economic Indicators for Canada

Unemployment

The unemployment rate represents the number of unemployed persons expressed as a percentage of the labor force.

Consumer Price Index (CPI)

This measures the average rate of increase in prices. When economists speak of inflation as an economic problem, they generally mean a persistent increase in the general price level over a period of time, resulting in a decline in a currency's purchasing power. Inflation is often measured as a percentage increase in the consumer price index (CPI). Canada's inflation policy, as set out by the federal government and the Bank of Canada, aims to keep inflation within a target range of 1 to 3 per cent. If the rate of inflation is 10 percent a year, \$100 worth of purchases last year will, on average, cost \$110 this year. At the same inflation rate, those purchases will cost \$121 next year, and so on.

Gross Domestic Product (GDP)

The total value of all goods and services produced within Canada during a given year. It is a measure of the income generated by production within Canada. GDP is also referred to as economic output. To avoid counting the same output more than once, GDP includes only final goods and services - not those that are used to make another product. GDP would not include the wheat used to make bread, but would include the bread itself.

Balance of Trade

The balance of trade is a statement of a country's trade in goods (merchandise) and services. It covers trade in products such as manufactured goods, raw materials and agricultural goods, as well as travel and transportation. The balance of trade is the difference between the value of the goods and services that a country exports and the value of the goods and services that it imports. If a country's

exports exceed its imports, it has a trade surplus and the trade balance is said to be positive. If imports exceed exports, the country has a trade deficit and its trade balance is said to be negative.

Producer Price Index

The Producer Price Index (PPI) is a family of indexes that measures average changes in selling prices received by domestic producers for their output. The PPI tracks changes in prices for nearly every goods producing industry in the domestic economy, including agriculture, electricity and natural gas, forestry, fisheries, manufacturing, and mining. Foreign exchange markets tend to focus on seasonally adjusted finished goods PPI and how the index has reacted on a m/m, q/q, h/h and y/y basis.

Consumer Consumption

This is a national accounts measure that reflects current expenditure by households and producers of private non-profit services to households. It includes purchases of durable as well as non-durable goods. However, it excludes expenditure by persons on the purchase of dwellings and expenditure of a capital nature by unincorporated enterprises.

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United Kingdom (GBP)

Economic Overview

The United Kingdom is the world's fourth largest economy with GDP valued at over USD\$1.4Trl in 2001. The economy is very healthy, with low unemployment, expanding output, and resilient consumption. The strength of consumer consumption has in large part been due to a strong housing market, which is currently 16% above the peak in 1988. The UK has a service-oriented economy, with manufacturing representing an increasingly smaller portion of GDP, equivalent to only one-fifth of national output. Their capital market systems are one of the most developed in the world, and as a result finance and banking have become the strongest contributors to GDP. Although the majority of the UK's GDP is from services, it is important to know that they are also one of the largest producers and exporters of natural gas in the EU. The energy production industry accounts for 10% of GDP, one of the highest shares of any industrialized nation. This is particularly important, as increases in energy prices (such as oil), will significantly benefit the large number of UK oil exporters.

Overall, the UK is a net importer of goods with a consistent trade deficit. Its largest trading partner is the EU, with trade between the two constituencies accounting for over 50% of all of the country's import and export activities. The US, on an individual basis, still remains the UK's largest trading partner. The breakdowns of the most important trading partners for the UK are the following:

Leading Exports	% of Total
US	15.5
Germany	12.5
France	10.2
Netherlands	7.7
Ireland	7.3

Leading Imports	% of Total
US	13.3
Germany	12.7
France	8.5
Netherlands	6.7
Ireland	5.8

The central issue that the UK is grappling with is whether or not to join the Euro. The decision on Euro entry has significant ramifications for the UK economy. Currently, this is the key political and economic topic on the government's agenda. The Treasury has specified five economic tests that must be met prior to Euro entry. These tests are:

UK's Five Economic Tests for Euro

- 1) Is there sustainable convergence in business cycles and economic structures between the UK and other EMU members, so that the UK citizens could live comfortably with euro interest rates on a permanent basis?
- 2) Is there enough flexibility to cope with economic change?
- 3) Would joining the EMU create an environment that would encourage firms to invest in the UK?
- 4) Would joining the EMU have a positive impact on the competitiveness of the UK's financial services industry?
- 5) Would joining the EMU be good for promoting stability and growth in employment?

The UK is a very political country where government officials are highly concerned with voter approval. If voters do not support Euro entry, the likelihood of EMU entry would decline. The following are some of the arguments for and against adopting the Euro:

Arguments in favor of adopting the Euro

- Reduced exchange rate uncertainty for UK businesses and lower exchange rate transaction costs or risks
- The prospect of sustained low inflation under the governance of the European Central Bank should reduce long-term interest rates and stimulate sustained economic growth
- Single currency promotes price transparency

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United Kingdom (GBP)

- The integration of national financial markets of the EU will lead to higher efficiency in the allocation of capital in Europe
- The Euro is the second most important reserve currency after the USD
- Should the UK join the Euro, the political clout of the EMU would increase dramatically

Arguments against adopting the Euro:

- Currency unions have collapsed in the past
- Economic or political instabilities of one country would impact the Euro, which would have exchange rate ramifications for otherwise healthy countries
- Strict EMU criteria
- Entry would mean a permanent transfer of domestic monetary authority to the European Central Bank
- Joining a currency union with no monetary flexibility would require the UK to have more flexibility in the labor and housing markets
- There are fears about which countries might dominate the ECB
- Adjusting to a new currency will require large transaction costs

One of the primary reasons for not joining the Euro is that the UK government has sound macroeconomic policies that have worked very well for the country. Their successful monetary and fiscal policies have led them to outperform most major economies in the current economic downturn, including the EU.

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Monetary & Fiscal Policy Makers

The Bank of England (BoE) is the United Kingdom's central bank. The Monetary Policy Committee (MPC) is a nine-member committee that sets monetary policy for the UK. It consists of a Governor, two Deputy Governors, two executive directors of the central bank and four outside experts. The committee was granted operational independence in setting monetary policy in 1997. Despite this independence, their monetary policies are centered around achieving an inflation target dictated by the Treasury Chancellor. Currently, this target is RPIX (Retail Price Index) inflation of 2.5%. The central bank has the power to change interest rates to levels that they believe will allow them to meet this target. The MPC holds monthly meetings, which are closely followed for announcements on changes in monetary policy, including changes in the interest rate (bank repo rate).

The MPC publishes statements after every meeting, along with a quarterly Inflation Report detailing the MPC's forecasts for the next two years of growth and inflation and justification for their policy movements. In addition, another publication, the Quarterly Bulletin provides information on past monetary policy movements and analysis of the international economic environment and its impact on the UK economy. All of these reports contain detailed information on the MPC's policies and biases for future policy movements.

The main policy tools used by the MPC and BoE are:

Bank Repo Rate: This is the key rate used in monetary policy to meet the Treasury's inflation target. This rate is set for the bank's own operations in the market, such as their short term lending activities. Changes to this rate affect the rates set by the commercial banks for their savers and borrowers. In turn, this rate will affect spending and output in the economy, and eventually costs and prices. An increase in this rate would imply an attempt to curb inflation, while a decrease in this rate would be an attempt to stimulate growth and expansion.

Open Market Operations:

The goal of open market operations is to implement the changes in the bank repo rate, while assuring adequate liquidity in the market and continued stability in the banking system. This is reflective of the three main objectives of the BoE: maintaining the integrity and value of the currency, maintaining the stability of the financial system, and seeking to ensure the effectiveness of the United Kingdom's financial services. To ensure liquidity, the Bank conducts daily open market operations to buy or sell short-term government fixed-income instruments. If this were not sufficient to meet liquidity needs, the Bank would also conduct additional overnight operations.

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Important Characteristics of the British Pound

GBP is very liquid

GBP/USD is one of the most liquid currencies in the world, with 6% of all currency trades involving GBP as either the base or counter currency. It is one of the four most liquid currencies, which are EUR/USD, GBP/USD, USD/JPY and USD/CHF. One of the reasons for the currency's liquidity is the country's highly developed capital markets. Many foreign investors seeking investment opportunities other than the US have sent their funds to the UK. In order to create these investments, foreigners need to sell their local currency and buy GBP.

GBP carry trades

GBP has one of the highest interest rates among the developed countries. Australia and New Zealand have higher interest rates, but their financial markets are not as developed. As a result, many investors who are currently in or are interested in participating in carry trades, use the GBP as the lending currency. A carry trade involves buying or lending a currency with a higher interest and selling or borrowing a currency with a lower interest rate. In recent years, carry trades have increased in popularity, which has positively benefited the GBP.

Rate differentials between Gilts and foreign bonds are closely followed

Interest rate differentials between UK Gilts/US Treasuries and UK Gilts/German Bunds are widely watched by FX market participants. These differentials indicate how much premium yield UK fixed income assets are offering over US and European (German Bunds is usually used as a barometer for European yield) fixed income assets, or vice versa. This differential provides traders with indications of potential currency movements, as investors are always looking for assets with the highest yields. The UK currently provides these yields, while also providing the safety of having the same credit stability as the US.

Eurosterling futures can give indications for interest rate movements

Since the UK interest rate or bank repo rate is the primary tool used in monetary policy, it is important to keep abreast of potential changes to the interest rate. Comments from government officials is one way to gauge biases for potential rate changes, but the BoE is one of the only central banks that require members of the Monetary Policy Committee to publish their voting records. This personal accountability indicates that comments by individual committee members represent their own opinions and not that of the BoE. Therefore, it is necessary to look for other indication of potential BoE rate movements. The 3-Month Euro sterling futures reflect market expectations on eurosterling interest rates 3 months into the future. These contracts are also useful in predicting UK interest rate changes, which will ultimately affect the GBP.

Comments on Euro by UK politicians will impact the Euro

Any speeches, remarks (especially from the Prime Minister or Treasury Chancellor) or polls in regards to the Euro will impact the currency markets. Positive indications of the UK adopting the Euro tends to put downward pressure on GBP, while further opposition to Euro entry will typically boost the GBP. Reason being that in order for the GBP to come in line with the Euro, interest rates would have to decrease significantly (at the time of this writing, UK interest rates is 4%, versus Euro interest rates of 2.75%). A decrease in the interest rate, would induce carry trade investors to close their positions, or in essence sell GBP. GBP would also decline because of the uncertainties involved with Euro adoption. The UK is performing very well under the direction of its current monetary authority. The EMU is currently encountering many difficulties with member countries breaching EMU criteria. With one monetary authority dictating 12 countries (plus UK would be 13), the EMU has yet to prove that it has developed a monetary policy suitable for all member states.

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Important Characteristics of the British Pound

GBP has positive correlation with energy prices

The UK houses some of the largest energy companies in the world, including British Petroleum. Energy production represents 10% of GDP. As a result, the GBP has a positive correlation with energy prices. Specifically, since many members of the EU import oil from the UK, if oil prices increase, they will have to buy more GBP to fund their energy purchases. In addition, rises in the price of oil will also benefit the earnings of the nations' energy exporters.

GBP crosses

Although the GBP/USD is more liquid than EUR/GBP, the EUR/GBP is typically the leading gauge for GBP strength. The reason is because Britain's primary trade and investment partner is Europe. As a result, moves in the EUR/GBP cross can filter into movements in GBP/USD. Of course, movements in GBP/USD will also affect the EUR/GBP rate. The EUR/GBP rate should be exactly equal to the rate of EUR/USD divided by GBP/USD. Small differences in these rates are often exploited by market participants.

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European Monetary Union (EUR)

Economic Overview

The European Union (EU) was developed as an institutional framework for the construction of a united Europe. The EU consists of 15 member countries; Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and the United Kingdom. All of these countries share the Euro as a common currency, except for Denmark, Sweden and the United Kingdom. Aside from a common currency, these countries also share a single monetary policy dictated by the European Central Bank or (ECB). These common currency countries constitute the European Monetary Union (EMU).

The EMU is the world's second largest economic power, with a GDP valued at over US \$8 trillion in 2002. With a highly developed fixed income, equity and futures market, the EMU has the second most attractive investment market for domestic and international investors. In the past, the EMU has had difficulty attracting foreign direct investment or large capital flows. In fact, the EMU is a net supplier of foreign direct investments, accounting for approximately 45% of total world capital outflows and only 19% of capital inflows. The primary reason being that historically, US assets have had solid returns. As a result, the US absorbs 71% of total foreign savings. However, with much higher EMU interest rates compared to US interest rates, this lead is declining. In 2002, Europe incurred capital inflows in excess of \$110 Billion, as compared to capital outflows of \$10 Billion last year.

The EMU is both a trade and capital flow driven economy, therefore trade is very important to the economies within the EMU. Unlike most major economies, the EMU does not have a large trade deficit or surplus. In fact, the EMU went from a small trade deficit in 2001 to a small trade surplus in 2002. EU exports comprise approximately 19% of world trade, while EU imports account for only 17% of total world imports. Due to the size of the EMU's trade with the rest of the world, it has significant power in the international trade

arena. International clout is one of the primary goals in the formation of the EU, because it allows the individual countries to group as one entity and negotiate on an equal playing field with the US, who is their largest trading partner. The breakdown of the most important trading partners for the EU are the following:

Leading Exports	% of Total
US	24.4
Switzerland	7.6
Japan	4.6
Poland	3.6
China	3.1

Leading Imports	% of Total
US	19.1
Japan	7.4
China	7.4
Switzerland	5.9
Russia	4.6

The EMU is primarily a service-oriented economy. Services in 2001 accounted for approximately 70% of GDP, while manufacturing, mining and utilities only accounted for 22% of GDP. In fact, a large number of the companies whose primary purpose is to produce finished product, still concentrate their EU activity on innovation, research, design and marketing, while outsourcing most of their manufacturing activities to Asia.

The EU's growing role in international trade has important implications for the role of the Euro as a reserve currency. It is important for countries to have large amount of reserve currencies to reduce exchange risk and transaction costs. Traditionally, most international trade transactions involve the British Pound, the Japanese Yen, and/or the US Dollar. Before the establishment of the Euro, it was unreasonable to hold large amounts of every individual EU national currency. As a result, currency reserves tended toward the dollar. At the end of the 1990s, approximately 65% of the worlds reserves were held in US dollars, but with the intro-

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Important Economic Indicators for the UK

All of the following indicators are important for the UK. However, since the UK is primarily a service-oriented economy, it is particularly important to pay attention to numbers from the service sector.

Employment Situation

This is a monthly survey conducted by the Office of National Statistics. The objectives of the survey are to divide the working-age population into three separate classifications: employed, unemployed and not in the labor force, and to provide descriptive and explanatory data on each of these categories. Data from the survey provides market participants with information on major labor market trends such as shifts in employment across industrial sectors, hours worked, labor force participation and unemployment rates. The timeliness of the survey makes it a closely watched statistic by the currency markets as it is a good barometer of the strength of the UK economy.

Retail Price Index

The RPI is a measure of the change in prices of a basket of consumer goods. The markets however focus on the underlying RPI or RPI-X, which excludes mortgage interest payments. The RPI-X is closely watched as the treasury sets inflation targets for the BoE, currently defined as 2.5% annual growth in RPI-X.

GDP

Quarterly report conducted by the Bureau of Statistics. GDP is a measure of the total production and consumption of goods and services in the U.K. GDP is measured by adding expenditures by households, businesses, government and net foreign purchases. The GDP price deflator is used to convert output measured at current prices into constant-dollar GDP. This data is used to gauge where in the business cycle the UK finds itself. Fast growth often is perceived inflationary while low (or negative) growth indicates a recessionary or weak growth.

Industrial Production

The industrial production (IP) index measures the change in output in U.K. manufacturing, mining and quarrying, and electricity, gas, and water supply. Output refers to the physical quantity of items produced, unlike sales value, which combines quantity and price. The index covers the production of goods and power for domestic sales in the U.K. and for export. Because IP is responsible for close to a quarter of gross domestic product, IP is widely watched as it provides good insight into the current state of the economy.

PMI

Monthly Survey conducted by the Chartered Institute of Purchasing and Supply. The index is based on a weighted average of seasonally adjusted measures of output, new orders, inventory and employment. Index values above 50 indicate an expanding economy, while values below 50 are indicative of contraction.

UK Housing Starts

Housing starts measure the number of residential building construction projects that have begun during any particular month. This is important data for the UK as the housing market is the primary industry that is sustaining the economy's performance.

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European Monetary Union (EUR)

duction of the euro, foreign reserve assets are shifting in favor of the euro. This trend is expected to continue as the EU becomes one of the major trading partner for most countries around the world.

Monetary & Fiscal Policy Makers

The European Central Bank (ECB) is the governing body responsible for determining the monetary policy of the countries participating in the EMU. The Executive Board of the EMU consists of the President of the ECB, the Vice President of the ECB and four other members. These individuals along with the governors of the national central banks comprise the Governing Council. The ECB is set up in that the Executive Board implements the policies dictated by the Governing Council. New monetary policy decisions are typically made by majority vote, with the President having the casting vote in the event of a tie in bi-weekly meetings.

The EMU's primary objective is to maintain price stability and to promote growth. Monetary and fiscal policy changes are made to ensure that this objective is met. With the formation of the EMU, the Maastricht Treaty was developed by the Union to apply a set of criteria for each member country. These criteria were developed by the EMU to help them achieve their objective. Deviations from these criteria by any country will result in heavy fines. Listed below are the EMU criteria. It is apparent based upon these criteria that the ECB has a strict mandate focused on inflation and deficit. Generally, the ECB strives to maintain annual growth in HCPI (Harmonized Consumer Price Index) below 2% and M3 (Money Supply) annual growth around 4.5%.

The ECB and the ESCB (European System of Central Banks) are independent institutions from both national governments and other EU institutions, granting them complete control over monetary policy. This operational independence is accorded to them as per Article 108 of the Maastricht Treaty, which states that any member of the

The EMU Criteria

In the 1992 Treaty on European Union (the Maastricht treaty) the following criteria were formulated as preconditions for any EU member state joining economic and monetary union (EMU).

- A rate of inflation no more than 1.5% above the average of the three best performing member states, taking the average of the 12-month year-on-year rate preceding the assessment date.
- Long-term interest rates not exceeding the average rates of these low-inflation states by more than 2% for the preceding 12 months.
- Exchange rates which fluctuate within the normal margins of the exchange-rate mechanism (ERM) for at least two years.
- A general government debt/GDP ratio of no more than 60%, although a higher ratio may be permissible if it is "sufficiently diminishing".
- A general government deficit that does not exceed 3% of GDP, although a small and temporary excess can be permitted.

decision making bodies cannot seek or take instructions from any community institutions, any government of a member state or any other body. The primary tools the ECB uses to control monetary policy is the following:

Open Market Operations:

The ECB has four main categories of open market operations to steer interest rates, manage liquidity, and signal monetary policy stance. These include:

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Main refinancing operations:

These are regular liquidity-providing reverse transactions conducted weekly with a maturity of two weeks, which provide the bulk of refinancing to the financial sector.

Longer-term refinancing operations:

These are liquidity-providing reverse transactions with a monthly frequency and a maturity of three months, which provide counterparties with additional longer-term refinancing.

Fine-tuning operations:

These are executed on an ad hoc basis with the aim of both managing the liquidity situation in the market and steering interest rates, in particular in order to smooth the effects on interest rates caused by unexpected liquidity fluctuations.

Structural operations:

These involve the issuance of debt certificates, reverse transactions and outright transactions. These operations will be executed whenever the ECB wishes to adjust the structural position of the Eurosystem vis-à-vis the financial sector (on a regular or non-regular basis).

ECB Minimum Bid Rate (Repo Rate):

This rate is the key policy target for the ECB. It is the level of borrowing that the ECB offers to the central banks of its Member States. This is the rate that is subject to change at the biweekly ECB meetings. Since inflation is of high concern to the ECB, they are more inclined to keep interest rates at lofty levels to prevent inflation. Changes in the ECB's minimum bid rate have large ramifications for the EUR.

The ECB does not have an exchange rate target, but will factor in exchange rates in their policy deliberations, as exchange rates impact price stability. Therefore, the ECB is not prevented from intervening in the foreign exchange markets if they believe that inflation is a concern. As a result, comments by members of the Governing Council

are widely watched by FX market participants and frequently move the EUR.

The ECB publishes a monthly bulletin detailing analysis of economic developments and changes to their perceptions of economic conditions, which is important to follow for signals to changes in the bias of monetary policy.

Important Characteristics of the Euro

EUR/USD is the most liquid pair; all Euro crosses are very liquid

The Euro was introduced as an electronic currency in Jan 01, 1999. At this time, the Euro replaced all pre-EMU currencies, except for the Greece's currency, which was converted to the Euro in Jan 2001. As a result, the EUR/USD cross is now the most liquid currency in the world and its movements are used as the primary gauge of both general European and US strength/weakness.

EUR/JPY and EUR/CHF are very liquid currencies that are usually the gauge for general JPY or CHF strength/weakness. The USD/CHF cross is less liquid and tends to gap. The EUR/USD and EUR/GBP crosses are great trading currencies; as they have tight spreads, make orderly moves and have very little gapping movements.

Euro Risks

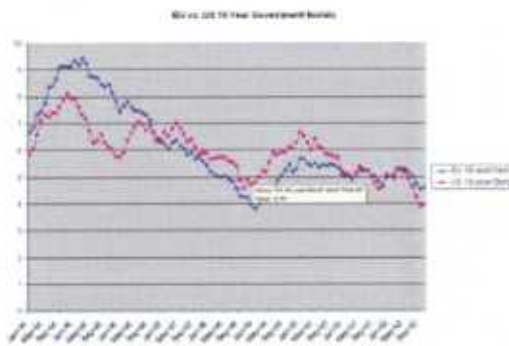
Since the Euro is a new currency, there are number of factors that need to be considered as risks to the Euro that are not factors for other currencies. Namely, the ECB is frequently considered an untested central bank, due to its short history. This short history does not give market participants a good gauge of how the central bank would react under different economic and political conditions. In addition, since the Euro is the currency for 12 member countries, it is highly sensitive to political and economical instabilities in any one country.

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Spread between US Treasuries and Bunds indicate Euro sentiment

The ten-year government bonds serve as an important indicator of future euro exchange rates, especially against the US dollar. The differential between the 10-year US government bond and the 10-year German Bund rates can provide a good indication for Euro movement. If Bund rates are higher than treasury rates and the differential increases, or the spread widens, this implies EUR bullishness. A decrease in the differential, or spread tightening is EUR bearish. The 10-year German Bund is typically used to represent the Eurozone.



Predictions for Euro area money flows

Another useful interest rate is the 3-Month Interest Rate, also known as the Euro interbank offer rate or the Euribor rate. This is the rate offered from one large bank to another on interbank term deposits. Traders tend to compare the Euribor futures rate with the Eurodollar futures rate. Eurodollars are deposits denominated in U.S. dollars at banks and other financial institutions outside the United States. Because investors like high yielding assets, European fixed income assets become more attractive as the spread between Euribor futures and Eurodollar futures widens, in favor of the Euribors. As the spread narrows, European assets become less attractive, whereby implying

a potential decrease in money flows into the Euro.

M&A activity also has important implications for EUR/USD movements. Recent years have seen increased M&A activity between EU and US multinationals. Large deals, especially if in cash, often have significant short-term impacts on the EUR.

Important Indicators for the Euro

All of the following economic indicators are important for the Euro. However, since the EMU consists of 12 countries, it is important to keep abreast of political and economic developments such as GDP growth, inflation, and unemployment for all member countries. The largest countries within the EMU are Germany, France and Italy. Therefore, in addition to the overall EMU economic data, the economic data of these three countries are the most important.

M3

M3 is a broad measure of money supply, which includes everything from notes and coins to bank deposits. The ECB closely monitors M3 as they view it as a key measure of inflation. At its session in December 1998, the Governing Council of the ECB set its first reference value for M3 growth at 4.5%. This value supports inflation below 2%, trend growth of 2-2.5% and a long-term decline in the velocity of money by 0.5-1%. The growth rate is monitored on a 3-month moving average basis in order to prevent monthly volatility to distort the information given by the aggregate. The ECB's approach to monetary targeting leaves considerable room for maneuver and interpretation. Because the ECB does not impose bands on M3 growth, as the Bundesbank used to do, there will be no automatic action when M3 growth diverges from the reference value. Moreover, although the ECB considers M3 to be the key indicator, it will also take into account the changes in other monetary aggregates.

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HCIP

The EU Harmonized Index of Consumer Prices (HICP) published by Eurostat is designed for international comparison as required by EU law. Eurostat has published the index since January 1995. Since January 1998, Eurostat has published a specific index for the EMU-11 area called MUICP. Information on prices are retrieved by each national statistical agency. They are required to provide Eurostat with the 100 indices used to compute the HICP. The national HICPs are totaled by Eurostat as a weighted average of these sub-indices. The weights used are country-specific. The HICP is released at the end of the month following the reference period, which is about ten days after the publications of the national CPIs from Spain and France, the final EMU-5 countries to release their CPIs. Even if the information is already partly in the market when the HICP is released, it is an important release because it serves as the reference inflation index for the ECB. The ECB aims to keep Euroland consumer price inflation in a range of 0-2%.

German Unemployment

The release by the Labor Office contains information on the number of unemployed, as well as the changes on the previous month, in both seasonally (SA) and non-seasonally (NSA) adjusted terms. The NSA unemployment rate is provided, along with data on vacancies, short-shift working arrangements and the number of employees (temporarily suspended in 1999). Within an hour after the FLO release, the Bundesbank releases the SA unemployment rate. The day ahead of the release, there is often a leak of the official data from a trade-union source. The leak is usually of the NSA level of unemployment in millions. When a precise figure is reported on Reuters as given by "Sources" for the NSA level of unemployment, the leak usually reflects the official figures. Rumors often circulate up to one week before the official release. These are notoriously imprecise. Moreover, comments by German officials have in the past been mistranslated by the international press, so care needs to be exercised in interpreting news reports of

rumors.

German Industrial Production

The data are seasonally adjusted (SA) and include a breakdown into four major subcategories: mining, manufacturing, energy, and construction. The manufacturing aggregate comprises four main product groups: basic & producer goods, capital goods, consumer durables, and consumer non-durables. The market tends to pay attention to the annual rate of change and the seasonally adjusted month-on-month figure. Additionally, the Finance Ministry highlights the two-month comparison to avoid over-emphasizing one-month aberrations. The initial release is based on a narrower data sample and hence subject to revision when the full sample has become available. The Ministry occasionally indicates the expected direction of the revision in the initial data release.

Preliminary GDP

Preliminary GDP is issued when Eurostat has collected data from a sufficient number of countries to produce an estimate. This usually includes France, Germany and the Netherlands. However, Italy is not included in the preliminary release and is only added in the final number. The yearly aggregates for EU-15 and EMU-11 are a simple sum of national GDP. For the quarterly accounts, the aggregation is more complex since some countries (Greece, Ireland and Luxembourg) do not yet produce quarterly national accounts data. Moreover, Portugal produces only partial quarterly accounts with a significant lag. Thus, both the EU-15 and EMU-11 quarterly paths are the result of estimates from quarterly data based on a group of countries accounting for more than 95% of total EU GDP (see the foreword for a detailed description of the weights of each country in the EU).

Individual Country Budget Deficits

Stability and Growth Pact states that deficits must be kept

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below 3% of GDP. Countries also have targets set to further reduce their deficits. Failure to meet these targets is widely watched by market participants.

IFO Survey

Germany is by far the largest economy in Europe and is responsible for over 30% of total GDP. Any insight into German business conditions is seen as an insight into Europe as a whole. The IFO is a monthly survey conducted by the IFO institute in which over 7,000 German firms are asked for their assessment of the German business climate and their short-term plans. The initial publication of the results consists of the business climate headline figure and its two equally weighted sub-indices: current business conditions and business expectations. The typical range is from 80 to 120. Where a higher number indicates greater business confidence. The measure is most valuable however when measured against previous data.

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Japan (JPY)

Economic Overview

Japan is the third largest economy in the world with GDP valued at over US\$4Trl in 2002. The country is also one of the world's largest exporters and is responsible for over \$400bln in exports per year. Manufacturing and exports of products such as electronics and cars are the signature drivers of the economy, accounting for nearly 20% of GDP. This has resulted in a consistent trade surplus, which creates an inherent demand for the JPY, despite severe struc-

Leading Exports	% of Total
US	30.1
China	7.7
South Korea	6.3
Taiwan	6.0
Hong Kong	5.8

tural deficiencies. Aside from being an exporter, Japan is also a large importer of raw materials for the production of their goods. As evidenced in the figures below, the primary trade partners for Japan in terms of both imports and exports are the US and China. China is becoming an increasingly important trade partner, as China's inexpensive goods have allowed it to gain a larger share of Japan's import market.

In the 1980s, Japan's capital market was one of the most attractive markets for international investors seeking investment opportunities in Asia. They had the most developed capital markets in the region and their banking system was considered to be the one of strongest in the world. The country was experiencing above-trend economic growth and near-zero inflation. This resulted in rapid growth expectations, boosted asset prices and rapid credit expansion, leading to the development of an asset bubble. Between 1990-97, the asset bubble collapsed, inducing a US\$10trl fall in asset prices, with the fall in real estate prices accounting for nearly 65% of the total decline, which is worth two years of national output. This fall in asset

prices sparked the banking crisis in Japan. It began in the early 1990s and then developed into a full blown systemic crisis in 1997 following the failure of a number of high profile financial institutions. Many of these banks and financial institutions extended loans to the builders and real estate developers at the height of the asset bubble in the 1980s, with the land as the collateral. A number of these developers defaulted after the asset bubble collapse, leaving the country's banks saddled with bad debt and collateral worth sometimes 60-80% less than when the loans were taken

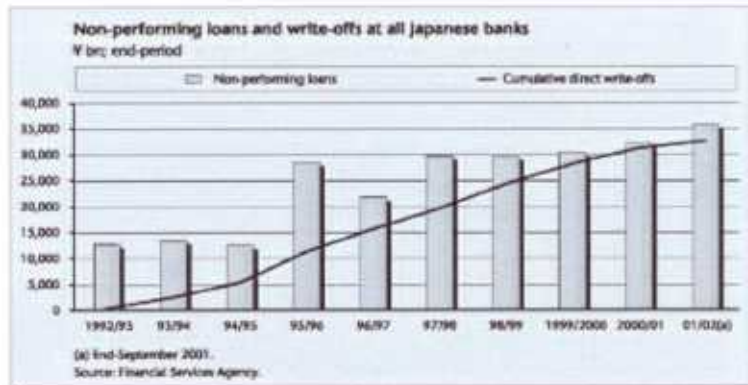
Leading Exports	% of Total
US	19.1
China	7.4
South Korea	7.4
Taiwan	5.9
Australia	4.6

out. Due to the large size of these banking institutions and their role in corporate funding, the crisis had profound effects on both the Japanese and global economy. As a result, enormous bad debts, falling stock prices and a collapsing real estate sector have crippled the Japanese economy for almost two decades.

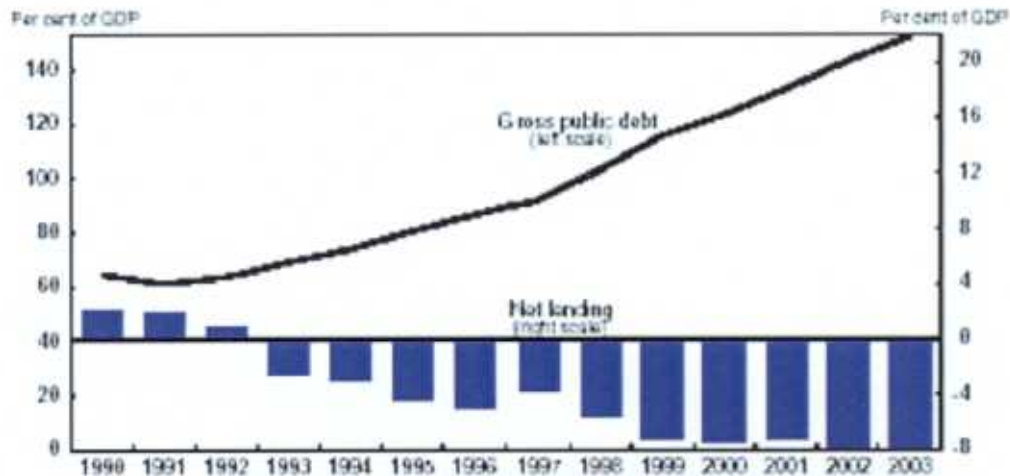
The figure below shows that the non-performing loans owned by Japanese banks have only increased since the onset of this crisis. With Japan experiencing deflationary conditions, each succeeding month of deflation raises the real burden of the banks' outstanding debt. To date, the Japanese Ministry of Finance and Bank of Japan is still grappling with this problem and has only injected capital into these ailing banks as a solution to prevent bankruptcies. Since the beginning of the crisis, they have hoped that the banks would grow their way back to health.

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Japan (JPY)



In addition to the banking crisis, Japan has the highest debt level of all of the industrialized countries, at over 140% of GDP. The chart below shows the country's deteriorating fiscal positions, with public debt continuing to rise, which has resulted in the country experiencing over 10 years of stagnation. With this high debt burden, Japan stands at risk of a liquidity crisis.



Note: OECD preliminary estimates for 2002 and 2003.
Source: OECD.

The banking sector has become highly dependent on a government bailout. As a result, the JPY is very sensitive to political developments such as speeches by government officials with rhetoric that may indicate potential changes in monetary and fiscal policy, attempted bailout proposals, and any other rumors.

PART 3: What Moves the Market

Japan (JPY)

Monetary and Fiscal Policy Makers

The Bank of Japan (BoJ) is the key monetary policy making body in Japan. In 1998, the Japanese government passed laws giving the BoJ operational independence from the Ministry of Finance (MoF) and complete control over monetary policy. However, despite the government's attempts to decentralize decision-making, the MoF still remains in charge of foreign exchange policy. The BoJ is responsible for executing all official Japanese foreign exchange transactions at the direction of the MoF. The Bank of Japan's Policy Board consists of the BoJ governor, two Deputy Governors and six other members. Monetary Policy Meetings are held twice a month with briefings and press releases provided immediately. The BoJ also publishes a Monthly Report issued by the Policy Board, and a Monthly Economic Report. These reports are important to watch for changes in BoJ sentiment and signals of new monetary or fiscal policy measures, as the government is constantly trying to develop initiatives to stimulate growth.

The MoF and the BoJ are very important institutions who both have the ability to impact currency movements. Since the MoF is the director of foreign exchange interventions, it is important to watch and keep abreast of the comments made from MoF officials. Being an export driven economy, the MoF favors a weak JPY. Therefore, if the JPY appreciates or the USD/JPY declines, the BoJ and MoF will become increasingly vocal about their concerns or disapproval in regards to the current JPY level. These comments are market movers, but it is important to note that if the government officials flood the market with comments and no action, the market would start to become immune to these comments. However, the MoF and BoJ do have a lengthy history of interventions in the currency markets to manipulate the JPY in Japan's best interests, therefore their comments cannot be completely disregarded.

The most popular tool that the BoJ uses to control monetary policy is the following:

Open Market Operations:

These activities are focused on controlling the uncollateralized overnight call rate. Since the discount rate is zero, the Bank of Japan cannot further decrease this rate to stimulate growth, consumption or liquidity. Therefore in order to maintain zero interest rates, the BoJ has to manipulate liquidity through open market operations, targeting zero interest on the overnight call rate. They manipulate liquidity by the outright buying or selling of bills, repos or Japanese government bonds.

In terms of fiscal policy, the Bank of Japan is currently considering a number of methods to deal with their non-performing loans. This includes inflation targeting, nationalizing a portion of private banks and repackaging the banks' bad debt and selling them at a discount. No policies have been decided upon, but the government is aggressively considering all of these and other alternatives.

Important Characteristics of the JPY

Proxy for Asian strength / weakness

Japan is a proxy for Asian strength because they have the largest GDP in Asia. With the most developed capital markets, Japan was once the primary destination for all investors who wanted access into the region. Japan also conducts a significant amount of trade with its Asian partners. As a result, economic problems or political instability in Japan, tend to spill over into the other Asian countries. However, this spillover is not one-sided. Economic or political problems in other Asian economies can also have dramatic impacts on the Japanese economy and hence, JPY movements. For example, with North Korean political instability, Japan and the JPY are at the greatest risk of the G7 countries, as they have the strongest ties to North Korea.

BoJ Intervention Practices

The BoJ and MoF are very active participants in the FX

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Japan (JPY)

Important Economic Indicators For Japan

All of the following economic indicators are important for Japan. However, since Japan is a manufacturing-oriented economy, it is important to pay particular attention to numbers from the manufacturing sector.

GDP

Gross Domestic Product is a broad measure of the total production and consumption of goods and services measured over quarterly and yearly periods in Japan. GDP is measured by adding total expenditures by households, businesses, government and net foreign purchases. The GDP price deflator is used to convert output measured at current prices into constant-dollar GDP. Preliminary reports are the most significant for FX market participants.

Tankan Survey

The Tankan is a short-term economic survey of Japanese enterprises published four times a year. The survey includes more than 9,000 enterprises, which are divided into four major groups: Large, small and medium-sized as well as principal enterprises. The survey gives an overall impression of the business climate in Japan and is widely watched and anticipated by foreign exchange market participants.

Balance of Payments

Balance of payments information gives investors insight into Japan's international economic transactions that include goods, services, investment income and capital flows. The current account side of BoJ is most often used a good gauge of international trade. Figures are released both monthly and semi-annually.

Employment

The Management and Coordination Agency of Japan

report employment figures on a monthly basis. The employment release a measure of the number of jobs and unemployment rate for the country as a whole. The data is obtained through a statistical survey of the current labor force. This release is a closely watched economic indicator because of its timeliness and its importance as a leading indicator of economic activity.

Industrial Production

The industrial production (IP) index measures trends in the output of Japanese manufacturing, mining and utilities companies. Output refers to the total quantity of items produced. The index covers the production of goods for domestic sales in Japan and for export. It excludes production in the agriculture, construction, transportation, communication, trade, finance, and service industries; government output, and imports. The IP index is then developed by weighting each component according to its relative importance during the base period. Investors feel IP and inventory accumulation have strong correlations with total output and can give good insight into the current state of the economy.

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Japan (JPY)

markets. That is, they have a lengthy history of entering the FX markets if they are dissatisfied with the current JPY level. As Japan is a very political economy, with close ties between government officials and principals of large private institutions, the MoF has a very narrow segment in mind when they decide to depreciate a strong JPY. Since the BoJ is such an active participant, they are very in tune with the market movements and its participants. Periodically they receive information on large hedge fund positions from banks and like to intervene when speculators are on the other side of the market, allowing them to get the most "bang for the bucks." There are typically three main factors behind BoJ and MoF intervention:

1) Amount of appreciation/depreciation in JPY - Intervention has historically occurred when the JPY moves by 7 or more JPY in under 6 weeks

2) Current USD/JPY rate - Historically, only 11% of all BoJ interventions to counter a strong JPY occur above the 115 level.

3) Speculative positions - In order to maximize the impact of intervention, the BoJ and MoF will intervene when market participants hold positions in the opposite direction. Traders can find a gauge for the positions of market participants by viewing the IMM positions from the CFTC website at www.cftc.gov

JPY movements are sensitive to time

JPY crosses can become very active towards the end of the Japanese fiscal year (March 31), as exporters repatriate their dollar denominated assets. This is particularly important for Japanese banks because they need to rebuild their balance sheets to meet FSA guidelines, which require the banks to mark to market their security holdings. Speculators expect this need for JPY, therefore they participate in buying JPY in anticipation of a year end repatriations. As a result, following fiscal year end, the JPY typically will depreciate when speculators close their positions.

Unlike traders in London or New York who typically have lunch at their trading desk, Japanese traders tend to take hour-long lunches between 10pm-11pm EST, leaving only a junior trader in the office. Therefore, the Japanese lunchtime can be volatile, as the market gets very illiquid. Aside from that time frame, the JPY tends to move fairly orderly during Japanese and London hours, unless breaking announcements or government official comments are made or surprising economic data is released. During US hours however, the JPY tends to have higher volatility, as US traders are actively taking both USD and JPY positions.

Banking stocks are widely watched

Since the crux of Japan's economic crisis stems from the non-performing loans (NPL) of the Japanese banks, banking stocks are closely watched by FX market participants. Any threat of default by these banks, disappointing earnings or further reports of significant NPLs can indicate even deeper problems for their economy. Therefore, bank stock movements can lead JPY movements.

Cross rate effect / Carry trade impacts

Movement in USD/JPY can be impacted by movements in the cross-currency pairs. The pairs that have the most substantial impact on USD/JPY are EUR/JPY and EUR/USD. For example, appreciating EUR/JPY (rather than the direct strength of USD against JPY) may cause USD/JPY to rise. EUR/JPY movements can "lead" USD/JPY movements or vice versa. Alternatively, carry trades in cross-currencies such as GBP/JPY or AUD/JPY will also impact both EUR/JPY and USD/JPY. A carry trade involves buying or lending a currency with a high interest rate and selling or borrowing a currency with a low interest rate. With JPY having the lowest interest rate of all industrialized countries, increased interest in carry trades will result in the need to sell JPY. Unwinding of carry trades will involve the need to purchase JPY.

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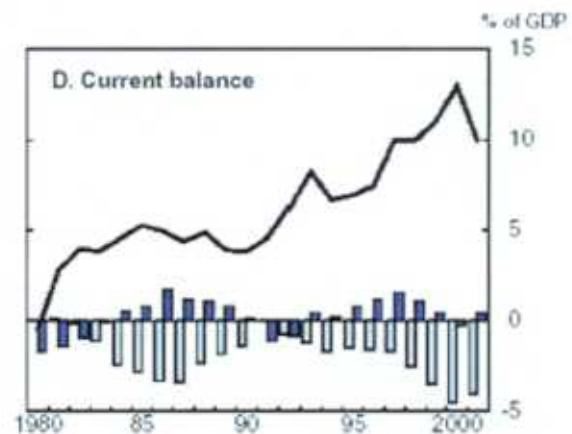
Switzerland (CHF)

Economic Overview

Switzerland is the 19th largest economy in the world, with GDP valued at over US\$240Bln in 2001. The economy is relatively small, but it is one of the wealthiest in the world on a GDP per capita basis. It is prosperous and technologically advanced with stability that rivals that of many larger economies. The country's prosperity is primarily from technological expertise in manufacturing, tourism and banking. More specifically, Switzerland is known for their chemicals and pharmaceuticals industries, machinery, precision instruments, watches and a financial system historically known for protecting the confidentiality of its investors. This coupled with the country's lengthy history of political neutrality has created a "safe haven" reputation for the country and its currency. As a result, Switzerland is the world's largest destination for offshore capital. The country holds over US\$2Trl in offshore assets and is estimated to attract over 35% of the world's private wealth management business. This has created a large and highly advanced banking and insurance industry that employs over 50% of the population and comprises over 70% of total GDP. Since Switzerland's financial industry thrives on its safe haven status and renowned confidentiality, capital flows tend to drive the economy during times of global risk aversion, while trade flows drive the economy during a risk-seeking environment. Therefore, trade flows are important, with nearly two thirds of all trade conducted with Europe. Switzerland's most important trading partners are the following: In recent years, merchandise trade flow has fluctuated

Leading Exports	% of Total
EU	61.0
Germany	22.6
US	10.6
France	9.0
Italy	8.0
UK	5.3
Leading Imports	% of Total
EU	79.9
Germany	32.2
France	11.0
Italy	10.2
Netherlands	5.9
US	5.3

between deficit and surplus. The current account on the other hand has reflected a surplus since 1966. In 2000, the current account surplus reached a high at 12.5% of GDP. This is the highest current account surplus among all of the industrialized countries (aside from Norway, Singapore and HK). Most of the surplus can be attributed to the large amount of foreign direct investment into the country, in seek of safety of capital, despite the low yields offered by Switzerland.



In recent years, merchandise trade flow has fluctuated between deficit and surplus. The current account on the other hand has reflected a surplus since 1966. In 2000, the current account surplus reached a high at 12.5% of GDP. This is the highest current account surplus among all of the industrialized countries (aside from Norway, Singapore and HK). Most of the surplus can be attributed to the large amount of foreign direct investment into the country, in seek of safety of capital, despite the low yields offered by Switzerland.

Part 4: Currency Profiles and Outlook

Switzerland (CHF)

Monetary & Fiscal Policy Makers

The Swiss National Bank (SNB) is the central bank of Switzerland. They are a completely independent central bank with a three person committee responsible for determining monetary policy. This committee consists of a Chairman, a Vice Chairman and one other (member) who constitute the Governing Board of the SNB. Due to the small size of the committee, all decisions are based on a consensus vote. The Board reviews monetary policy at least once a quarter, but decisions on monetary policy can be made and announced at any point in time. Unlike most other central banks, the SNB does not set one official interest rate target, but instead sets a target range for their three month Libor rate.

In December of 1999, the SNB shifted from focusing on monetary targets (M3) to an inflation target of less than 2% inflation per year. This measure is taken based upon the national consumer price index. Monetary targets still remain important indicators and are closely watched by the central bank, because they provide information on the long-term inflation inflation. This new inflation focus also increases the central bank's transparency. They have clearly stated that "should inflation exceed 2% in the medium term, the National Bank will tend to tighten its monetary stance." If there is a danger of deflation, the National Bank would loosen monetary policy.

The SNB also closely monitors exchange rates, as excessive strength in the Swiss franc can cause inflationary conditions. This is especially true in environments of global risk aversion, as capital flows into Switzerland increases significantly during those times. As a result, the SNB typically favors a weak franc, and is not hesitant to use intervention as liquidity tool. SNB officials intervene in the franc using a variety of methods including verbal remarks on liquidity, money supply and the currency.

The most commonly used tools by the SNB to implement monetary policy include the following:

Target Interest Rate Range:

The SNB implements monetary policy by setting a target range for their three month interest rate (Libor rate). This range typically has a 100 basis point spread, and is revised at least once every quarter. This rate is used as their target because it is the most important money market rate for Swiss franc investments. Changes to this target are accompanied with a clear explanation in regards to the changes in the economic environment.

Open Market Operations:

Repo transactions are the SNB's major monetary policy instrument. A repo transaction involves a cash taker selling securities to a cash provider, while agreeing to repurchase the securities of the same type and quantity at a later date. This structure is similar to a secured loan, whereby the cash taker must pay the cash provider interest. These repo transactions tend to have very short maturities ranging from one day to a few weeks. The SNB uses these repo transactions to manipulate undesirable moves in the three month Libor rate. To prevent increases in the three month Libor rate above the SNB's target, the bank would supply the commercial banks with additional liquidity through repo transactions at lower repo rates, and in essence create additional liquidity. Conversely, the SNB can reduce liquidity or induce increases in the three month Libor rate by increasing repo rates.

The SNB publishes a Quarterly Bulletin with a detailed assessment of the current state of the economy and a review of monetary policy. A Monthly Bulletin is also published containing a short review of economic developments. These reports are important to watch, as they may contain information on changes in the SNB's assessment of the current domestic situation.

Part 4: Currency Profiles and Outlook

Switzerland (CHF)

Important Characteristics of the Swiss Franc

Safe Haven Status

Switzerland's safe haven status is continually stressed because this and the secrecy of the banking system are the key advantages of Switzerland. The Swiss franc moves primarily on external events rather than domestic economic conditions. That is, as mentioned earlier, due to its political neutrality, the franc is considered the world's premier safe haven currency. Therefore, in times of global instability and/or uncertainty, investors tend to be more concerned with capital retention than appreciation. At such times, funds will flow into Switzerland, which would cause the Swiss franc to appreciate.

Swiss Franc is correlated with gold

Switzerland is the world's fourth largest official holder of gold. This is due to the fact that the Swiss constitution mandates that the currency must be backed 40% with gold reserves. As a result, the Swiss franc has close to an 80% positive correlation with gold. Therefore if the gold price appreciates, the Swiss franc has a high likelihood of appreciating as well. In addition, since gold is also viewed as the ultimate safe haven form of money, both gold and the Swiss franc should continue to benefit as global economic and geopolitical uncertainty continues.

Carry trades effects

The popularity of carry trades has increased in recent years, as investors are actively seeking high yielding assets. A carry trade involves buying or lending a currency with a high interest rate and selling or borrowing a currency with a low interest rate. With CHF having one of the lowest interest rates of all industrialized countries, it is one of the primary currencies sold or "borrowed" in carry trades. This results in the need to sell CHF against a higher yielding currency. Carry trades are typically done in

cross-currencies such as GBP/CHF or AUD/CHF, but these trades will impact both EUR/CHF and USD/CHF. Unwinding of carry trades will involve the need for investors to purchase CHF.

Interest rate differentials between Euro Swiss futures and foreign interest rate futures are closely followed

Interest rate differentials between three month Euro Swiss futures and Eurodollar futures are widely watched by professional Swiss traders. These differentials are good indicators of potential money flows as they indicate how much premium yield US fixed income assets are offering over Swiss fixed income assets, or vice versa. This differential provides traders with indications of potential currency movements, as investors are always looking for assets with the highest yields. This is particularly important to carry traders who enter and exit their positions based upon the positive interest rate differentials between global fixed income assets.

Potential changes in banking regulations

The EU has recently been putting significant pressure on Switzerland to relax the confidentiality of their banking system and to increase transparency of their customers' accounts. The EU is pressing this issue because of their active measures to persecute EU tax evaders. Switzerland is currently grappling with this issue because the confidentiality of their customers' accounts is the core strength of their banking system. The EU has threatened to impose severe sanctions on Switzerland if they do not comply with their proposed measures. Both countries are currently working to negotiate an equitable resolution. Any news or talk of changing banking will impact both Switzerland's economy and the Swiss franc.

M&A activity

Switzerland's primary industry is banking and finance. In this industry, merger and acquisition activities (M&A) are

PART 3: What Moves the Market

Switzerland (CHF)

very common, especially with the recent consolidation in the overall industry. As a result, these M&A activities can have significant impact on CHF spot prices. If foreign firms purchase Swiss banks or insurance companies, they will need to buy CHF and sell their local currency. If Swiss banks purchase foreign firms, they will need to sell CHF and buy the foreign currency. Either way, it is important to frequently watch for notices on M&A activity involving Swiss firms.

Cross currency characteristics

The EUR/CHF is the most commonly traded currency for traders who want to participate in CHF movements. The USD/CHF is less frequently traded because of its higher illiquidity and volatility. However, day traders may tend to favor USD/CHF over EUR/CHF because of its volatile movements. In actuality, the USD/CHF is only a synthetic currency derived from EUR/USD and EUR/CHF. Market makers or professional traders tend to use those pairs as leading indicators for trading USD/CHF or to price the current USD/CHF level when the currency pair is illiquid. Theoretically, the USD/CHF rate should be exactly equal to the cross between EUR/CHF and EUR/USD. Only during times of severe global risk aversion, like 9/11, will the USD/CHF develop a market of its own. Regardless, any small differences in these rates are quickly exploited by market participants.

Important Economic Indicators for Switzerland

CPI

The Consumer Price index is calculated monthly, on the basis of retail prices paid in Switzerland. In accordance with prevalent international practice, the commodities covered are distinguished according to the consumption concept, which includes in the calculation of the Index of those goods and services that are part of the private consumption aggregate according to the National Accounts. The

basket of goods does not include "transfer expenditure" such as direct taxation, social insurance contributions and health insurance premiums. The index is a key measure of inflation.

GDP

GDP is a measure of the total production and consumption of goods and services in the Switzerland. GDP is measured by adding expenditures by households, businesses, government and net foreign purchases. The GDP price deflator is used to convert output measured at current prices into constant-dollar GDP. This data is used to gauge where in the business cycle Switzerland finds itself. Fast growth often is perceived inflationary while low (or negative) growth indicates a recessionary or weak growth period.

Balance of Payments

Balance of Payments is the collective term for the accounts of Swiss transactions with the rest of the world. The current account is the balance of trade plus services portion. BoP is an important indicator for Swiss traders as Switzerland has always kept a strong current account balance. Any changes to the current account, positive or negative, could see substantial flows.

M3

Broad measure of liquidity composed of currency, savings accounts available at sight, time deposits w/maturities under 4 yrs and savings deposits at statutory notice. The Swiss National Bank closely watches the indicator as it is a good means of monitoring the growth of the monetary base. Large growth is typically viewed poorly as it is a sign of inflation.

Unemployment

The unemployment rate is released monthly. It is present

Part 4: Currency Profiles and Outlook

Switzerland (CHF)

ed as the ratio of unemployed jobseekers (defined as actively seeking full- or part-time employment) to the total population.

Production Index (Industrial Production)

The production index is a quarterly measure of the change in the volume of industrial production (or physical output by producers).

Part 4: Currency Profiles and Outlook

Australia (AUD)

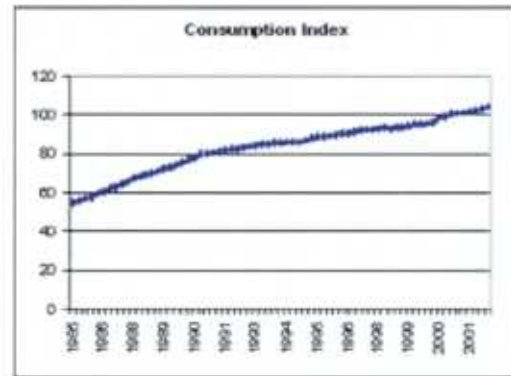
Economic Overview

Australia's GDP for 2002 is close to US\$400Bln. Their economy is relatively small, but on a per capita basis is comparable to many industrialized Western European countries. Australia has a service-oriented economy with close to 79% of GDP coming from industries such as finance, property and business services. However, the country has a trade deficit, with manufacturing dominating the country's exporting activities. Rural and mineral exports account for over 60% of all manufacturing exports. As a result, the economy is highly sensitive to changes in commodity prices. The breakdowns of Australia's most important trading partners are the following:

Leading Exports	% of Total	Leading Imports	% of Total
Japan	19.3	EU	22.0
ASEAN	14.0	US	19.1
EU	12.0	Japan	13.5
US	9.7	ASEAN	13.0
South Korea	6.2	China	9.1

Japan and the ASEAN are the leading importers of Australian goods. The ASEAN represents the Association of Southeast Asian Nations, which includes Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. Therefore, it may be logical to assume that the Australian economy is highly sensitive to the performance of the countries in the Asian Pacific region. However, during the Asian Crisis, Australia grew at an average rate of 4.7% per year (between 1997-1999), despite the fact that Asia is the central destination for the bulk of Australian exports. This strength is primarily from Australia's sound foundation of strong domestic consumer consumption. As a result, the economy has been able to withstand past crises. As you can see in chart below, consumption has been on a steady

rise since the 1980s. Therefore consumer consumption is an important indicator to watch during times of global economic slowdowns for signals of the slowdown's spillover effects onto Australia's domestic consumption.



Monetary & Fiscal Policy

The Reserve Bank of Australia (RBA) is the central bank of Australia. The monetary policy committee within the central bank consists of the Governor (Chairman), the Deputy Governor (Vice Chairman), Secretary to the Treasurer and six independent members appointed by the government. Changes on monetary policy are based upon consensus within the committee.

The RBA's charter states that the mandate of the Reserve Bank Board is to focus monetary and banking policy on ensuring:

- (a) the stability of the currency of Australia;
- (b) the maintenance of full employment in Australia; and
- (c) the economic prosperity and welfare of the people of Australia

In order to achieve these objectives, the government has set an informal consumer price inflation target of 2-3 per year. The RBA believes that the key to long-term sustainable growth in the economy is to control inflation, which would preserve the value of money. In addition, an inflation target provides a discipline for monetary policy making and guidelines for private sector inflation expectations.

Part 4: Currency Profiles and Outlook

Australia (AUD)

Important Characteristic of the Australian dollar

Commodity linked currency

The AUD\$ is highly correlated (80% correlation) with commodities and more specifically, gold prices. The reason is that Australia is the world's 3rd largest gold producer and gold represents approximately \$5 billion in exports for the nation each year. As a result, the AUD\$ benefits when commodity prices increase. Of course, it also decreases when commodity prices decline. If commodity prices are strong, inflationary fears start to appear and the RBA would be inclined to increase rates to curb inflation. However, this is a sensitive topic, as gold prices tend to increase in times of global economic or political uncertainty. If the RBA increases rates during those conditions, it leaves Australia more vulnerable to spillover effects.

Carry trade effects

Australia has one of highest interest rates among the developed countries. With a fairly liquid currency, the AUD\$ is one of the most popular currencies to use for carry trades. A carry trade involves buying or lending a currency with a high interest rate and selling or borrowing a currency with a low interest rate. The popularity of the carry trade has contributed to the rise of the AUD\$, as many foreign investors are looking for high yield. If global central banks increase their interest rates, the positive interest rate differential between Australia and other countries would narrow. In such situations, pressure would be put on the AUD\$ when carry traders start to close their positions.

Interest rate differentials

Interest rate differentials between the cash rates of Australia and the short term interest rate yields of other industrialized countries are closely watched by professional AUD\$ traders. These differentials can be good indicators of potential money flows as they indicate how much premium yield AUD\$ short term fixed income assets are offering over foreign short term fixed income assets, or vice versa. This differential provides traders with indications of poten-

tial currency movements, as investors are always looking for assets with the highest yields. This is particularly important to carry traders who enter and exit their positions based upon the positive interest rate differentials between global fixed income assets.



Source: RBA Nov 2002 Monthly Bulletin

Drought effects

Since the bulk of Australia's exports are commodities, the country's GDP is highly sensitive to severe weather conditions that may damage the country's farming activities. For example, 2002 was a particularly difficult year for Australia, because the country was experiencing a severe drought. The drought had taken an extreme toll on Australia's farming activities. This is especially important because agriculture accounts for 3% of the country's GDP. The RBA estimates that the "decline in farm production could directly reduce GDP growth by around 1 percentage point." Aside from exporting activities, a drought also has indirect effects on other aspects of Australia's economy. Industries that supply and service agriculture, such as the wholesale and transport sectors, as well as retail operations in rural farming areas may also be negatively affected by a drought. However, it is also important to note that the Australian economy has a history of recovering strongly after a

Part 4: Currency Profiles and Outlook

Australia (AUD)

This also increases the transparency of the banks' activities.

Monetary policy decisions involve setting the interest rate on overnight loans in the money market. Other interest rates in the economy are influenced by this interest rate to varying degrees, so that the behavior of borrowers and lenders in the financial markets is affected by monetary policy (though not only by monetary policy). Through these channels, monetary policy affects the economy in pursuit of the goals outlined above.

Cash Rate:

This is the RBA's target rate for open market operations. The cash rate is the rate charged on overnight loans between financial intermediaries. As a result, the cash rate should have a close relationship with the prevailing money market interest rates. The chart below shows their relationship. Changes in monetary policy, directly impacts the interest rate structure of the financial system.



Open Market Operations

The focus of daily open market operations is to keep the cash rate close to the target, by managing money market liquidity provided to commercial banks. If the Reserve

Bank wishes to decrease the cash rate, they would increase supply of short dated repurchase agreements at a lower interest rate than the prevailing cash rate, which would in essence decrease the cash rate. If the Reserve Bank wishes to increase the cash rate, they would decrease supply of short dated repurchase agreements, which would in essence increase the cash rate. A repurchase agreement involves a cash taker (commercial bank) selling securities to a cash provider (RBA), while agreeing to repurchase the securities of the same type and quantity at a later date. This structure is similar to a secured loan, whereby the cash taker must pay the cash provider interest. These repo transactions tend to have very short maturities ranging from one day to a few weeks.

Since 1983, Australia has had a floating exchange rate. The Reserve Bank of Australia may undertake foreign exchange market operations when the market threatens to become excessively volatile or when the exchange rate is clearly inconsistent with underlying economic fundamentals. The RBA monitors a trade-weighted index (TWI) as well as the cross-rate with the US dollar. Intervention operations are invariably aimed at stabilizing market conditions rather than meeting exchange rate targets.

The RBA meets every month (except for January), on the first Tuesday of each month to discuss potential changes in monetary policy. Following each meeting, the RBA issues a press release outlining justifications for their monetary policy changes. They also publish a monthly Reserve Bank Bulletin. The May and November issues of the Reserve Bank Bulletin include the Semi-Annual statement on the Conduct of Monetary Policy. The February, May, August, and November issues contain a Quarterly Report on the Economy and Financial Markets. It is important to read these bulletins for signals on potential monetary policy changes.

Part 4: Currency Profiles and Outlook

New Zealand (NZD)

Economic Overview

New Zealand is a very small economy with GDP valued at approximately US\$50bn in 2001. The country's population is actually equivalent to less than half of the population of New York City. It was once one of the most regulated countries within the OECD (Organization for Economic Co-operation and Development), but over the past two decades has been moving towards an open, modern and stable economy. With the passing of the Fiscal Responsibility Act of 1994, the country is moving away from an agricultural farming community to one that seeks to become a leading knowledge-based economy with high skills, high employment and high value-added production. This Act sets legal standards that hold the government formally responsible to the public for its fiscal performance. It is also sets the framework for the country's macroeconomic policies. The following are the principles outlined under the Fiscal Responsibility Act:

The Fiscal Responsibility Act 1994 establishes five principles of responsible financial management

- Debt must be reduced to "prudent" levels; and the government must ensure that expenditure is lower than revenue
- Sufficient levels of Crown net worth must be achieved and maintained to guard against adverse future events
- Reasonable taxation policies must be followed
- Fiscal risks facing the government must be prudently managed

New Zealand also has highly developed manufacturing and services sectors, with the agricultural industry driving the bulk of the country's exports. The economy is strongly-trade oriented, with exports of goods and services representing approximately one third of GDP. Due to the small

size of the economy, and its significant trade activities, New Zealand is highly sensitive to global performance, especially that of its key Asian trading partners, Australia and Japan. Together, Australia and Japan represent 30% of New Zealand's trading activity. During the Asian Crisis, New Zealand's GDP contracted by 1.3% as a result of reduced demand for exports, and two consecutive droughts, from reduced agricultural and related production. The following are a breakdown of the New Zealand's most important trading partners:

Leading Exports	% of Total	Leading Imports	% of Total
Australia	18.8	Australia	21.9
US	14.4	US	15.9
Japan	12.4	Japan	11.0

Monetary & Fiscal Policy Makers

The Reserve Bank of New Zealand (RBNZ) is the central bank of New Zealand. The Monetary Policy Committee, is an internal committee of bank executives who review monetary policy on a weekly basis. Meetings to decide on changes to monetary policy occur eight times a year or approximately every six weeks. Unlike most other central banks, the decision for rate changes rests ultimately on the bank's governor. The current Policy Target Agreements set by the Minister and the Governor focus on maintaining policy stability and avoiding unnecessary instability in output, interest rates and the exchange rate. Price stability refers to maintaining the annual CPI inflation at 1.5%. If the RBNZ does not meet this target, the government has the ability to dismiss the Governor of the RBNZ, though this is rarely done. This serves as a strong incentive for the RBNZ to meet its inflation target. The most common tools used by the RBNZ to implement monetary policy changes are the following:

Part 4: Currency Profiles and Outlook

Australia (AUD)

drought. The 1982-1983 drought first subtracted then subsequently added around 1-1 ½ percentage points to GDP growth. The 1991-1995 drought reduced GDP by around ½ - ¾ percentage points in 1991-1992 and 1994-1995, but boosted GDP by ¾ percentage points.

Important Economic Indicators for Australia

GDP

GDP is a measure of the total production and consumption of goods and services in Australia. GDP is measured by adding expenditures by households, businesses, government and net foreign purchases. The GDP price deflator is used to convert output measured at current prices into constant-dollar GDP. This data is used to gauge where in the business cycle Australia finds itself. Fast growth often is perceived inflationary while low (or negative) growth indicates a recessionary or weak growth period.

CPI

The Consumer Price Index (CPI) measures quarterly changes in the price of a 'basket' of goods and services, which account for a high proportion of expenditure by the CPI population group (i.e. metropolitan households). This 'basket' covers a wide range of goods and services including food, housing, education, transportation and health. This is the key indicator to watch as monetary policy changes are made based on this index, which is a measure of inflation.

Balance of Goods and Services

This number is a monthly measure of Australia's international trade in goods and services on a balance of payments basis. General merchandise imports and exports are derived mainly from international trade statistics, which are based on Australian Customs Service records. The current account is the balance of trade plus services.

Private Consumption

This is a national accounts measure that reflects current expenditure by households, and producers of private non-profit services to households. It includes purchases of durable as well as non-durable goods. However, it excludes expenditure by persons on the purchase of dwellings and expenditure of a capital nature by unincorporated enterprises. This number is important to watch, as private consumption or consumer consumption is the foundation for resilience in the Australian economy.

Producer Price Index

The Producer Price Index (PPI) is a family of indexes that measures average changes in selling prices received by domestic producers for their output. The PPI tracks changes in prices for nearly every goods producing industry in the domestic economy, including agriculture, electricity and natural gas, forestry, fisheries, manufacturing, and mining. Foreign exchange markets tend to focus on seasonally adjusted finished goods PPI and how the index has reacted on a m/m, q/q, h/h and y/y basis. Australia's PPI data is released on a quarterly basis.

Part 4: Currency Profiles and Outlook

New Zealand (NZD)

Official Cash Rate (OCR):

This is the rate set by the RBNZ to implement monetary policy. The Bank lends overnight cash at 25 basis points above the OCR rate and receives deposits or pays interest at 25 basis points below this rate. By controlling the cost of liquidity for commercial banks, the RBNZ can influence the interest rates offered to individuals and corporations. This effectively creates a 50 basis point corridor that bounds the inter-bank overnight rate. Banks offering funds above the upper bound will attract few takers, because funds can be borrowed for a lower cost from the RBNZ. Also, banks offering rates below the lower bound will also attract few takers, because they are offering lower yields than the RBNZ. The official cash rate is reviewed and manipulated to maintain economic stability.

Open Market Operations:

This is used to meet the cash target. The cash target is the targeted amount of reserves held by registered banks. The current target is NZ\$20 billion. The RBNZ prepares forecasts of daily fluctuations on the cash target and then will use these forecasts to determine the amount of funds to inject or withdraw in order to meet the cash target.

The following objectives provide a guideline for fiscal policy measures:

-Expenses: Expenses will average around 35% of GDP over the horizon used to calculate contributions toward future New Zealand Superannuation (NZS) costs. During the build-up of assets to meet future NZS costs, expenses plus contributions will be around 35% of GDP. In the longer term, expenses less withdrawals to meet NZS costs will be around 35% of GDP.

-Revenue: Raise sufficient revenue to meet the operating balance objective. A robust, broad-based tax system that raises revenue in a fair and efficient way.

-Operating Balance: Operating surplus on average over the economic cycle sufficient to meet the requirements for contributions toward future NZS costs and ensure consistency with the debt objective.

-Debt: Gross debt below 30% of GDP on average over the economic cycle. Net debt, which excludes the assets to meet future NZS costs, below 20% of GDP on average over the economic cycle.

-Net Worth: Increase net worth consistent with the operating balance objective. This will be achieved through a build-up of assets to meet future NZS costs.

Part 4: Currency Profiles and Outlook

Important Characteristics of the New Zealand Dollar

Source: New Zealand Treasury

Important Characteristics of the New Zealand Dollar

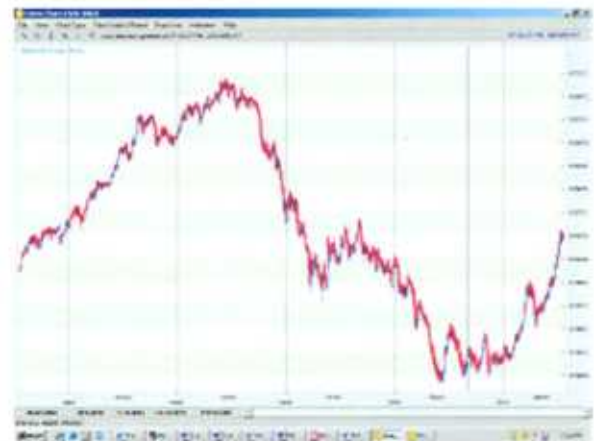
Strong correlation with AUD - competition with Australia
Australia is New Zealand's largest trading partner. This coupled with the proximity of the countries and the fact that New Zealand is highly trade oriented, creates strong ties between the two countries. When the Australian economy does well and Australian corporations increase their import-

ing activities, New Zealand is one of the first to benefit. In fact, since 1999, the Australian economy has done very well, with for example, a booming housing market that created a need to increase imports of building products. As a result, this strength translated into Australia importing 10% more goods from New Zealand between 1999-2002. From the charts below, it is apparent that there is a fairly close correlation between the two currency pairs.

AUD/USD Daily 10YR Chart



NZD/USD Daily 10YR Chart



Commodity Linked Currency

New Zealand is an export driven economy with commodities representing over 40% of the country's exports. As a result, the currency has a 50% positive correlation with commodity prices. As commodity prices increase, the NZD will also appreciate. The correlation between AUD and NZD also contributes to the NZD's status as a "commodity linked" currency. AUD economic performance is also highly correlated with commodity prices. Therefore, as commodity prices increase, the Australian economy benefits, translating into increase activity in all aspects of the country's operations, including trade with New Zealand.

Carry trades

With the highest interest rate of the industrialized countries, the NZD has been one of the most popular currencies to use for carry trades. A carry trade involves buying or lending a currency with a high interest rate and selling or borrowing a currency with a low interest rate. The popularity of the carry trade has contributed to the rise of the NZD, as many global investors are looking for high yield. If global central banks increase their interest rates, the positive interest rate differential between New Zealand and other countries would narrow. In such situations, pressure would be put on the NZD when carry traders start to close their positions.

Part 4: Currency Profiles and Outlook

Important Characteristics of the New Zealand Dollar

Balance of Goods and Services

New Zealand's Balance of Payments statements are records of the value of New Zealand's transactions in goods, services, income and transfers with the rest of the world, and the changes in New Zealand's financial claims on (assets and liabilities to) the rest of the world. New Zealand's International Investment Position statement shows, at a particular point in time, the stock of a country's international financial assets and international financial liabilities.

Private Consumption

This is a national accounts measure that reflects current expenditure by households, and producers of private non-profit services to households. It includes purchases of durable as well as non-durable goods. However, it excludes expenditure by persons on the purchase of dwellings and expenditure of a capital nature by unincorporated enterprises.

Producer Price Index

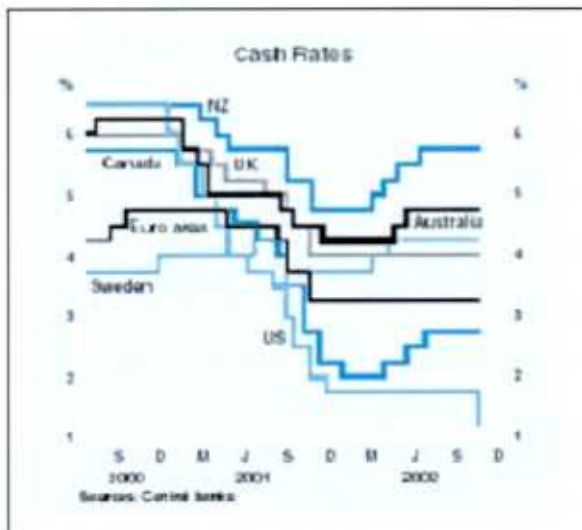
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Part 4: Currency Profiles and Outlook

Important Characteristics of the New Zealand Dollar

Interest Rate Differentials

Interest rate differentials between the cash rates of New Zealand and the short term interest rate yields of other industrialized countries are closely watched by professional NZD traders. These differentials can be good indicators of potential money flows as they indicate how much premium yield NZD short term fixed income assets are offering over foreign short term fixed income assets, or vice versa. This differential provides traders with indications of potential currency movements, as investors are always looking for assets with the highest yields. This is particularly important to carry traders who enter and exit their positions based upon the positive interest rate differentials between global fixed income assets:



Source: RBA Nov 2002 Monthly Bulletin

Population Migration

New Zealand has a very small population. Therefore increases in migration into the country can have significant effects on the economy. Between 2002-2003, the population of New Zealand increased by 37,500 people versus an increase of 1,700 between 2001-2002. This strong population migration into New Zealand has contributed significantly to the performance of the economy, because as the

population increases, the demand for household goods increases, leading to an increase in overall consumer consumption.

Drought Effects

Since the bulk of New Zealand's exports are commodities, the country's GDP is highly sensitive to severe weather conditions that may damage the country's farming activities. In 1998, droughts cost the country over \$50MM. In addition, droughts are also very frequent in Australia, New Zealand's largest trading partner. These droughts have cost Australia up to 1% in GDP, which also translated into a negative impact on the New Zealand economy.

Important Economic Indicators for New Zealand

GDP

GDP is a quarterly measure of the total production and consumption of goods and services in New Zealand. GDP is measured by adding expenditures by households, businesses, government and net foreign purchases. The GDP price deflator is used to convert output measured at current prices into constant-dollar GDP. This data is used to gauge where in the business cycle New Zealand finds itself. Fast growth often is perceived inflationary while low (or negative) growth indicates a recessionary or weak growth period.

CPI

The Consumer Price Index (CPI) measures quarterly changes in the price of a 'basket' of goods and services, which account for a high proportion of expenditure by the CPI population group (i.e. metropolitan households). This 'basket' covers a wide range of goods and services including food, housing, education, transportation and health. This is the key indicator to watch as monetary policy changes are made based on this index, which is a measure of inflation.

Part 5: Trading Rules to Live By

Money Management and Psychology

As important as it is to understand what moves the markets and how to analyze the markets, the most important part of trading is understanding and implementing proper risk management. Contrary to popular belief, more traders fail not because they lack the knowledge of the latest technical indicators or do not understand fundamental factors, but rather because traders do not comprehend the most basic fundamental money management principals. Money management is the most overlooked, yet also the most important part of trading. Therefore it is imperative for traders to read and thoroughly understand the money management techniques described in this manual. The trading rules detailed below may seem basic, but the key to successful trading is not simply knowing what the rules are, but to recognize their importance and actually implementing them into every trade.

What is Money Management?

Money management encompasses a very broad range of concepts from placing stops to controlling trade psychology. Stops can be changed dynamically to control risks and profits. For each trade placed, traders should employ proper money management by analyzing and understanding its potential risk and reward. Traders should not place trades prior to calculating how much they are willing to lose either in dollar amounts or in percentage amounts. Below, we list and explain 14 trading rules, which we believe will help traders build a blueprint for trading success.

Rule 1: Limit Your Losses

Often stated but rarely followed. Limiting losses is essential to becoming a successful trader. Too often traders say they will exit a trade if it moves 200 pips against them. However, when they are down 200 pips, they then say they will exit once they are down 300 pips. Before he realizes it, the trader is down 1000 pips or under worse scenarios, gets margined out. This scenario is most common among novice traders, and especially so in the FX market due to

the high amount of leverage that is characteristic of this industry. In order to keep these nightmares from occurring, a trader has to develop and implement strict disciplinary measures that make certain that they exit losing trades before they turn into disasters. Letting losses get out of hand is probably the biggest reason traders fail.

What should traders do? - Stick to your strategy!

For example, if you are long 1 lot of EUR/USD at 1.0250 and prior to placing the trade, know that you cannot lose more than \$1000 on this trade, then you should place a stop at 1.0150 and stick to it! If the EUR/USD trades to 1.0150, your stop will be triggered and your losses will be capped. This way, if EUR/USD moves to 1.0100, you will not be at risk of losing more money.

Rule 2: Let Your Profits Run

This is another one of the often touted but seldom followed rules of trading. Many traders have no problems cutting losses, but insist on exiting trades at the first sign of profits. However, a little time passes and they see that their small profit could have been substantially larger had they held the position for longer. Early exits can be a big problem. Especially since one of the biggest weaknesses of traders is letting losses run and taking profits too early. The primary cause of quick exits is usually due to emotions gaining control over the trader and prompting him/her to make poor decision. The more objective and unemotional you make your trading, the better your results.

What should traders do? - Don't take profits too early!

Too often, traders will enter positions originally expecting a 50-60 pip rise (or \$500-\$600 gain) in the spot price. However, when their profits begin showing \$100, \$150...traders will start considering taking their profits early in fear of a dip back into negative territory. As a result, they

Part 5: Trading Rules to Live By

Money Management and Psychology

would close their positions early, only to watch the currency climb in frustration. Ultimately, the trader may be happy that he/she made money instead of lose money; this type of trading style is what distinguishes successful traders from mediocre traders.

Rule 3: Keep Position Sizes Within Reason

If you ask the average person what their idea of a successful trader is, they will usually describe a maverick figure who is willing to risk everything on any given trade. In reality, a successful trader is one who does not swing for the fences for every trade. They understand that trading is a game of probabilities and that over the long-run, as long as they implement sound strategies and stay consistent, success will come. To be successful, a trader should never take a position that puts substantial capital in jeopardy. In actuality, you will rarely find successful traders who risk more than 10% of their account on any given trade. We recommend that all traders implement a similar discipline, as losses on large positions can be devastating and knock a trader out of the game before they ever really get started.

What should traders do? - Don't bet the bank on one trade!

For example, if you have \$2000 in your account, you should probably look to risk no more than 10% of that or \$200 on one trade. Any more, such as \$500 will eat significantly into your capital and would not be prudent money management. If you risked any more than this, you would not have enough funds to comfortably place additional trades.

Rule 4: Know Your Risk vs. Reward Ratio

Risk and Reward analysis is essential to trading. One of the major problems for novice traders is that they do not even think about risk versus reward when placing trades. Generally, the minimum ratio should be around 2:1, mean-

ing that for every dollar you risk in a trade, you are expecting to make two in return. Poor traders will often take 1:3 risk reward ratios or worse, and then wondering why they are not making money. With such a low risk/reward ratio, traders may be able to generate many successful trades, but the first string of losses will cut deeply into their capital.

What should traders do? - Make sure your strategy is to make more than you lose!

For example, if you are long USD/JPY and want to make 30 pips, do not risk more than 15 pips. You should never risk 30 pips to make 10 pips. Although you may profit in this scenario, you are risking more than you are planning to make. A continuation of this strategy will only lead to a scenario where you make 10 pips on three trades, but then lose it all on one trade.

Rule 5: Be Adequately Capitalized

All accounts should be opened with adequate funds. This is a fundamental, yet often overlooked precursor to trading success. Losses are part of the game for all traders, but even more so for new traders as they tend to experience higher percentages of losing trades. As a result of this, novice traders who open accounts with insufficient funds often find themselves knocked out of the game before they get started. A good rule of thumb for deciding how much to start trading with is the 6 ½ Test. This test poses a simple question, if you experience a 50% draw down after 6 months of trading will you have enough left to continue trading? If the answer is yes, you probably have enough to begin trading. If the answer is no, you should probably wait. Another key point is to make sure you are trading with money that you can afford to lose. Trading is hard enough, but it will become that much harder if you are trading with funds earmarked for paying tuition or rent.

Part 5: Trading Rules to Live By

Money Management and Psychology

What should traders do? - Make sure that you have enough money in your account!

For example, if you open an account with \$2000, and have a 50% drawdown and lose \$1000, all you will have left in your account is \$1000, which is not sufficient to place additional trades. Therefore it is important to have enough money to ensure that you will not have to send in additional funds to prevent margin calls.

Rule 6: Don't Fight the Tape

You have probably heard the term over a thousand times, "The trend is your friend," but do you actually follow it? You would be amazed by how many new traders get blown up because they insist on trading against the trend. When you think about it, short-term trading is really a simple game. If

there are more buyers than sellers, you buy, if there are more sellers than buyers, you sell. Trending markets are essentially telling you who is in control and going against them is almost always a loser's game.

What should traders do? - Don't fight the trend!

From the end of Nov 2002 to January 2003, the Euro rallied nearly 1000 pips. From the chart below, you can see that the trend during that time, was pretty much straight up. Therefore, traders who were trying to fight the trend, did so unsuccessfully. Those who consistently tried to find the top in EUR/USD, did nothing but lose money during the 3 months. Traders who were smart enough to go with the trend would have been able to take advantage of at least a part of the 1000 pip move.



Part 5: Trading Rules to Live By

Money Management and Psychology

Rule 7: Understand the Market Discount Mechanism

A key concept that novice traders have a hard time grasping is the fact that markets are forward looking and have a discount mechanism in place. Traders who do not understand this concept, often become disgusted with the market and quit because "the market doesn't make any sense". How many times have you seen market participants expecting some sort of good economic number that comes in as expected, and the market sells off? New traders get burned trading these situations because they don't understand that the market already knew it was coming. Understanding that all markets are forward looking is crucial to trading success and will help you "demystify" the markets and their movements.

What should traders do? - Know market expectations!

For example, you think that the US consumer spending number will be coming out weak this month, and placed a short USD position based upon this view. Now the number came out and is the weakest in the past 6 months, but yet the USD rallies. You are frustrated, confused and want to know what happened. Most likely, despite the fact that the consumer spending data is very weak, the market probably expected an even weaker number. So in anticipation of the number, the market discounted the USD rates and when the data was released, rewarded the USD for a weak, but yet still higher than expected number. Therefore it is important to keep abreast of market expectations and know what the general consensus is for each data that will be released. Prior to the release of any significant data, the major financial news services will publish information on what the market and/or analysts are expecting.

Rule 8: Hubris Will Kill You

One of the worst mistakes traders make is the continual buying of a losing position. They will typically justify it by

saying they are just "averaging" in to get a more favorable price, but in reality they are dooming themselves to further failure. As short-term traders, capital preservation is the most important, and putting too much at risk jeopardizes success. In short term trading, if a strategy is right, the market should move in the correct within a reasonable short amount of time. If the strategy is wrong, then short term traders should suck it up and move on. There is no room for too much pride in short-term trading.

What should traders do? - Never add to a losing position!

For example, consider that you are short EUR/USD at 1.0100 and the market rallies to 1.0150. You decide that the EUR/USD is still weak and will correct, so you sell another lot at 1.0150. The market rallies to 1.0200, you figure that if you sell again, your average will be 1.0150, and you'll make money because this rally is due for a correction. The market then rallies to 1.0250 and you get margined out. If you are a short-term trader, you should have closed your position much earlier than 1.0250. The decision to add to your losing position, or averaging down has killed you rather than given you the opportunity to gain back all of your losses as soon as the market rallies more than 50 pips.

Rule 9: Trading Is A Game Of Probabilities

As a trader, you cannot be correct 100% of the time. Especially as a new trader, there are many times where you are going to be wrong. It is how you deal with failed trades that will determine your overall success. If you can't deal with being wrong and react poorly to setbacks, then trading may not be for you. Good experienced traders roll with the punches and don't whine when they are wrong. They understand trading is a game of probabilities and if you do the right things in the long run, you will come out ahead. Make this your mantra and trading success will follow.

Part 5: Trading Rules to Live By

Money Management and Psychology

What should traders do? - Learn From Your Mistakes!

Treat each failed trade as a learning opportunity and figure out what you did wrong. You can't possibly make money on every trade you place, especially if you are a new trader. The correct mentality to have is you win some, you lose some. Hopefully, with proper money management, the ones that you win will cover the losses that you have incurred on the other trades.

Rule 10: Chasing.....A Bad Idea

It is 1:00am and you see a nice trade setting up on your charts. You mark it down in your notebook and decide to trade it tomorrow if it sets up. When you wake up the next morning, you see the trade did exactly what you thought it would, the pair is now 150 pips past your entry. What do you do? Poor traders can't stand the fact that they missed the trade and will enter the market regardless of the fact that it has gone many points past their entry point. The result is typical. They end up getting in just as momentum changes and incur large losses. Markets are always moving, especially in foreign exchange. Missing trades is a part of trading, accepting it and having the discipline not to chase will save you grief and your P&L money.

What should traders do? - Move on!

Has this happened to you? You wanted to buy EUR/USD when it breaks above 1.0500. You wake up the next morning and find that it indeed did break and is now trading at 1.0550. You decide to buy, the EUR/USD hovers around 1.0550 after you've bought it and then starts to head back towards 1.0500. It's unfortunate that you missed such a great trading opportunity. However, good trading opportunities are available all the time, especially in the FX market. Most clients who chase a losing trade will do so at the wrong time, just when the market is turning. Simply remember, that there will ALWAYS be other attractive trading opportunities.

Rule 11: Know Why You Are In The Trade

It's amazing how many traders put positions on, but have no idea why they did it. Impulse trading can be a big problem for traders and causes them to take unnecessary risk. Impulse trading can stem from many things but usually is due to poor planning or a compulsion to always be in the market. Knowing first why you placed a trade is the backbone of your success. In other words, if you don't know why you are in a trade, you have no business being in the trade. Religiously keeping a trading log will prevent this problem from festering.

What should traders do? - Keep a Trading Log!

You want to have a rationale for every trade you place, including the risk and reward you plan on attaining per trade. This will supply you with a solid retaliation strategy when a trade goes for or against you. In other words, as soon as you place the trade, you should mark it down in your trading log, with the reason why you placed the trade and where your stop is. This way, you can keep track of which strategies work for you and which do not. For example, if you find that trading breakouts work successfully for you based on historical trades, then in the future, you may want to look actively for these opportunities.

Rule 12: If The Logic Goes....You Go

If the reason you entered a trade disappears, there is no reason to stay in the trade. Many young traders will see their reason evaporate but still stay in the position until they are stopped out. Poor traders don't like to admit they are wrong. Continually doing this is obviously detrimental to you and your P&L. Good traders condition themselves to get out. If their reason reappears they can always reenter the trade at a more opportune time but without having to be exposed why they wait for this opportunity to reappear.

Part 5: Trading Rules to Live By

Money Management and Psychology

What should traders do? - Admit Your Mistake And Close The Trade!

For example, you buy AUD/USD at 0.5575 because it broke out of a trading range. The break out level is 0.5560. After the breakout, the AUD/USD heads back towards 0.5560. You think it is simply testing the previous breakout level and will find support there, so you stay in the trade. Then AUD/USD declines to 0.5545, you now think that its just short term market noise and will rally back above 0.5560 in no time. The AUD/USD then moves to 0.5525, the break-out failed, yet you are still in the trade. In actuality, the breakout truly failed when AUD/USD broke back below 0.5560. Fear of losing money and irrational hope that it will rally back to where you bought it kept you in the trade. What you need to do is keep rational, know your exit levels on each trade, and stick to them! If the logic goes, you go!

Rule 13: Have A Maximum Drawdown

Bad days are a part of trading. Good traders learn to live with them, bad traders don't. Good traders implement strategies that keep them from losing too much. Poor traders insist on "trading their way out of it" and then occasionally turn bad days into catastrophic ones. The lesson here is simple, if you experience 4-5 losing trades in a row, something is not working and you should take a break. If you are a day trader, go outside for a few minutes. If you come back and things start to work out, great. If not take the day off. If you swing trade, and you have a few days of nothing but losing trades, take a day off. Poor trades affect us no matter how unemotional we are and many traders do let it get to them. Time away from trading will clear your mind, heal the wounds and get your emotions and strategy back on track.

What should traders do? - Don't Be Afraid to Take A Break!

Consider this: Every trade you placed for the past 3 days has been losing trades. You are frustrated and feel as if

you can't get back on the winning streak you experienced earlier. You are confused, lost and don't know what to do. Then, take a break from trading! You do not need to trade every day, especially if you have a lack of confidence in your trades. There is nothing wrong with stopping for a few days to clear your mind and rethink your strategies. Most likely, after this break, you will be able to assess what you did wrong and return to trading with renewed confidence and more solid strategies.

Rule 14: Study, Study, Study

Trading is a business and should not be taken lightly. Like any other business, understanding it will take a lot of time and effort. Most people however, do not want to hear this and focus their time and energy looking for an easy shortcut. Successful traders think and know different. They realize there is no holy grail and spend hours studying history, the markets and new trading techniques. Constantly reading about the markets will increase your market comprehension and rapidly advance you up the trading learning curve.

What should traders do? - Research and Analysis!

This is the only true key to trading. Don't trade based upon "other people's" ideas. Take trading seriously and make sure you know why you are placing each and every trade. To do this, you need to dedicate time and research to coming up with solid trading strategies. This may include basic research such as reading the Financial Times every day to more detailed research such as thoroughly assessing charts. Either way, successful traders are on top of the market and know what factors will move the market so that when market condition changes, they will know exactly how to react.

Glossary of Foreign Exchange Terms

Account: A record of transactions of goods and services owed to one person by another.

ADX (Average Directional Index): Unlike most oscillators, ADX does not attempt to gauge the direction of the trend; instead, it works to gauge the strength of the trend. ADX operates on a scale of 0 to 100; the higher the oscillator, the stronger the trend.

Agent: An intermediary or person hired to carry out transactions on behalf of another person.

Aggregate Demand: Total demand in an economy, consisting of government spending, private/consumer and business investment.

All or None: Refers to requests for a broker to fill an order completely at a predetermined price or not at all. Refers to both buy and sell orders.

American Option: An option that can be exercised anytime during its life. The majority of exchange-traded options are American.

Anonymous trading: Visible bids and offers on the market without the identity of the bidder and seller being revealed. Anonymous trades allow the high profile investors to execute transactions without the scrutiny and speculation of the market.

Appreciation: An increase in the value of a currency in response to market demand.

Arbitrage: When a price differential arises, creating an opportunity to profit through buying and selling. Arbitrage is a "riskless" opportunity to profit, as there is no uncertainty involved. In regards to the foreign exchange market, arbitrage arises when a profit can be made through differentials in exchange rates. Arbitrage opportunities in the foreign exchange market are rare.

Ascending Triangles: A bullish continuation pattern that is shaped like a right triangle consisting of two or more equal highs forming a horizontal line at the top.

Asian Option: An option whose payoff depends on the average price of the underlying asset over a certain period of time. These types of option contracts are attractive because they tend to cost less than regular American options.

Ask Rate: The lowest price that shares will be offered for sale, such as the bid/ask spread in the foreign exchange market.

Ask Size: The number of shares a seller is willing to sell at his/her ask rate.

Asset Allocation: The diversification of one's assets into different sectors, such as real estate, stocks, bonds, and

Glossary of Foreign Exchange Terms

forex, to optimize growth potential and minimize risk.

Asset Swap: An interest rate swap used to alter the cash flow characteristics of an institution's assets in order to provide a better match with its liabilities.

Attorney in Fact: A person given the right or authority to act on behalf of another to carry out business transactions and implement documents.

Authorized Dealer: A financial institution or bank authorized to deal in foreign exchange.

Automatic Exercise: A procedure implemented to protect an option holder where the Option Clearing Corporation will automatically exercise an "in the money" option for the holder.

Away From the Market: When the bid on an order is lower (or the ask price is higher) than the current market price for the security.

Back Testing: The process of designing a trading strategy based on historical data. It is then applied to fresh data to see if and how well the strategy works. Most technical analysis is tested with this approach.

Balance/Account Balance: The net value of an account.

Balance of Payments: A record of all transactions made by one particular country with others during a certain time period. It compares the amount of economic transactions between a country and all other countries. This includes trade balance, foreign investments, and investments by foreigners.

Balance of Trade: Net flow of goods (exports minus its imports) between two countries.

Bank for International Settlements: The BIS is an international organization fostering the cooperation of central banks and international financial institutions. Essentially, the BIS, located in Basel, Switzerland, is a central bank for central banks. It monitors and collects data on international banking activity and promulgates rules concerning international bank regulation.

Back Office: Refers to the administrative arm of financial service companies, who carry out and confirm financial transactions. Duties include, accounting, settlements, clearances, regulatory compliance and record maintenance.

Balance of Payments: Record of all transactions, such as trade balances and capital flows, carried out by a country with the rest of the world within a certain period.

Bar Chart: On a daily bar chart each bar represents one day's activity. The vertical bar is drawn from the day's highest price to the day's lowest price. Closing price and opening price are represented by ticks on the bar.

Base Currency: In general terms, the base currency is the currency in which an investor or issuer maintains its book

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of accounts. In the FX markets, the US Dollar is normally considered the 'base' currency for quotes, meaning that quotes are expressed as a unit of \$1 USD per the other currency quoted in the pair. The primary exceptions to this rule are the British Pound, the Euro and the Australian Dollar.

Basis: The difference between the cash price and the futures price.

Basis Point: Measure of a bond's yield equal to 1/100th. A 1% change in yield is equal to 100 basis points and 0.01% is equal to one basis point.

Bear: Investor acting on the belief that prices or the market will decline.

Bear Market: Any market that exhibits a declining trend. In the long run they have a down turn of 20% or more.

Bear trap: A bear trap occurs when prices break below a significant level and generate a sell signal, but then reverses direction and hence invalidate the sell signal. Bear traps serve as opportunities for reversal traders, whereas trend/momentum traders will suffer losses due to the change in direction.

Bid: The price an investor is willing to pay for an asset.

Bid/Ask Spread: The difference between the bid and the ask price.

Big Figure: Refers to the first number to the left of the decimal point in an exchange rate quote, which changes so infrequently that dealers often omit them in quotes.

Bollinger Bands: An indicator that allows users to compare volatility and relative price levels over a period time. This indicator consists of three bands designed to encompass the majority of a security's price action: a simple moving average in the middle; an upper band 2 standard deviations away from the simple moving average (usually set to a time frame of 20); and a corresponding lower band that is also 2 standard deviations away from the moving average. Since the band width is a function of standard deviation, assets with greater volatility will have wider bands.

Bonds: Bonds are debt instruments used to raise capital, which are issued for periods greater than one year. Bondholders are loaning money (investing in debt) to companies and governments, at the end of which they will be paid a specified interest rate. Bond prices are inversely related to interest rates, as interest rates rise, bond prices fall. There are numerous types of bonds, including treasury bonds, notes, and bills; municipal bonds and corporate bonds.

Book: Recording of the total positions held by a trader or desk.

Bretton Woods Accord (1944): This accord established a fixed exchange rate regime, whose aim was to provide stability in the world economy after the Great Depression and the WWII. This accord fixed the exchange rates of major currencies to the US dollar and set the price of gold to \$35. The accord required central bank intervention to

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maintain the fixed exchange rates. The US Central Bank was required to exchange dollars for gold, which eventually led to the demise of this system, when the demand for the dollar declined, as well as the gold reserves, forcing Nixon to stop the exchange of dollars for gold, effectively ending the system in 1971.

Broker: Individual or firm acting as an intermediary to bring together buyers and sellers typically for a commission or fee.

Bull: Investor who expects markets or prices to rise.

Bull Market: A market where prices are rising or are expected to rise.

Bull Trap: The opposite of a bear trend; occurs when indicators suggest for an uptrend, but the market reverses its momentum and begins to fall again.

Bundesbank: Germany's Central Bank.

Buy a bounce: A recommendation to instigate a long trade if the price bounces from a certain level.

Buy break: A recommendation to buy the currency pair if it breaks the current level specified.

Buy stops above: A recommendation to enter the market when the exchange rate breaks through a specific level. The client placing a stop entry order believes that when the market's momentum breaks through a specified level, the rate will continue in that direction.

Cable: Term used to describe the exchange rate between the US dollar and the British Pound.

Candlestick Charts: Identical to a bar chart in the information conveyed, but presented in an entirely different visual context. The candlestick encapsulates the open, high, low and close of the trading period in a single candle.

- If the close is above the open, the actual candle is either hollow or blue in color.
- If the close is below the open, the actual candle is filled in or red in color.

Capital Markets: Markets in which capital (stocks, bonds, etc.) are traded. Usually for medium or long term investing.

Carry Trade: An investment position of buying a higher yielding currency with the capital of a lower yielding currency to gain an interest rate differential.

Central Bank: A banking organization, usually independent of government, responsible for implementing a country's monetary policy and for printing money.

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Channel: An upwards or downwards trend whose boundaries are marked by two straight lines. A break above/below the channel lines signals a potential change in the trend.

Chartist: Refers to a technical analyst or one who analyses charts/graphs and data to uncover potential trends.

Clearing: Refers to the settlements/confirmations of trades.

Close a Position (Position Squaring): Refers to getting rid of a position, either by buying back a short position or selling a long position.

Commission: A fee charged by broker or agent for carrying out transactions/orders.

Confirmation: A written document verifying the completion of a trade/transaction to include such things as date, fees or commissions, settlement terms and the price.

Confirmation on a chart: A subsequent indicator or chart pattern, following an initial alert to a trade opportunity, which serves to legitimize the initial alert. Confirmation of a trade is believed to reduce the risk associated with that trade.

Contagion: Term used to describe the spread of economic crises from one country's market to other countries within close geographic proximity. This term was first used following the Asian Financial Crisis in 1997, which began in Thailand and soon spread to other East Asian economies. It now is used to refer to the recent crisis in Argentina and its effects on other Latin American countries.

Continuation: Represents an extension of the trend. The trend continues to have momentum, and hence it moves onwards without reversal.

Contract (unit or lot): The standard trading unit on certain exchanges. A standard lot in the forex market is \$100,000.

Convertible Currency: Currencies that can be exchanged for other currencies or gold.

Correction: The term used for the rationale that a directional movement would have a partial reversal due to the fact that momentum tends to "overshoot" itself; hence there will be a "correction" of the trend to bring the asset back to a fairer market valuation.

Cost of Carry: When an investor borrows money to sustain a position. There is a cost for borrowing derived from the interest parity condition, which is used to determine the forward price.

Counterparty: A participant, either a person or an institution, involved in one side of a financial transaction. With such transaction there is an associated risk (counterparty risk) involved that the counterparty will not be able to meet the terms outlined in the contract. This risk is usually default risk.

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Country Risk: The risk that a government might default on its financial commitments/contracts, which typically causes harms to other areas of the financial sector, as well as those in other countries.

Cover on a bounce: A recommendation to exit trades on a bounce out of a support level.

Cover on approach: A recommendation to exit trades for profit on approach to a support level.

Credit Checking: Before making a large financial transaction, it imperative to check whether the counterparty has enough available credit to carryout/honor the transaction. Credit checking refers to the process of verifying that counterparty has enough credit. The check is initiated after the price has been determined.

Credit Netting: Agreements that are made to avoid having to continually recheck credit, usually established between large banks and trading institutions.


Cross Rate: Refers to the exchange rate between two countries' currencies. Cross rates usually refer to pairs quoted that do not include the domestic currency. For example, in the US, the EUR/JPY rate would be called a cross rate.

Cup with Handle: Named after the resemblance the formation on the chart bears to a cup and handle, this pattern offers insight into where a bullish trend can begin. Once the pattern begins to curve upward and reaches the cup line, the asset is believed to be bullish and set for a rise.


Currency: Notes and coins issued by the central bank or government, serving as legal tender for trade.

Currency (Exchange Rate) Risk: Risk associated with drastic changes/fluctuations in exchange rates in which one could incur a major loss.

Daily Charts: Charts that encapsulate the daily price movement for the currency pair traded. Since the currency market operates 24 hours a day, the daily chart typically runs from 5 PM New York time to the same time on the following day.



Cup Line/Potential Entry Point



Cup Line/Potential Entry Point

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Daily Charts: Charts that encapsulate the daily price movement for the currency pair traded. Since the currency market operates 24 hours a day, the daily chart typically runs from 5 PM New York time to the same time on the following day.

Day Trading: Refers to the process of entering and closing out trades within the same day or trading session.

Dealer: One who places the order to buy or sell. A dealer differs from an agent in that it takes ownership of the asset, and thereby is exposed to some risk.

Deficit: An excess of liabilities over assets, of losses over profits, or of expenditure over income.

Delivery: Term used to describe the exchange by both parties (buyer and seller) of the traded currency.

Deposit: Refers to the process of borrowing and lending money. The deposit rate is the rate at which money can be borrowed or lent.

Depreciation: The decline in the value of an asset or currency.

Derivative: A security derived from another and whose value is dependent on the underlying security from which it is derived. Examples of derivatives are future contracts, forward contracts and options. Underlying securities can include stocks, bonds or currencies. Derivatives can be traded and are usually used to hedge portfolio risk.

Descending Triangles: A bearish continuation pattern indicating distribution consisting of two or more comparable lows forming a horizontal line at the bottom. Descending triangles are bearish patterns that indicate distribution. The definitive bearish signal of a descending triangle is when support on the lower rung of the triangle is broken.

Devaluation: When the value of a currency is lowered against the other, i.e. it takes more units of the domestic currency to purchase a foreign currency. This differs from depreciation in that depreciation occurs through changes in demand in the foreign exchange market, whereas devaluation typically arises from government policy. A currency is usually devalued to improve the balance of trade, as exports become cheaper for the rest of the world and imports more expensive to domestic consumers.

Dirty Float (Managed Float): An exchange rate system in which the currency is not pegged, but is "managed" by the central bank to prevent extreme fluctuations in the exchange rate. The exchange rate is managed through changes in the interest rate to attract/detract capital flows or through the buying and selling of the currency. This system is contrasted with a Pure Float in which there is no central bank intervention and the exchange rate is entirely determined by the market and speculation.

Double Top and Bottom: A double top and bottom implies an upper limit - the top - and a lower limit - the bottom - which the currency pair has touched twice but has failed to penetrate. Accordingly, the asset can be expected to

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trade within this range, or, if there is a breakout, the movement is expected to be substantial.

Dow Theory: One of the first ideas that formed the beginnings of technical analysis, the Dow Theory holds that all major trends can be sub-divided into three phases: entrance, whereby savvy market participants enter the market; acceleration, whereby a slew of additional participants see the trend and enter the market, thereby accelerating the trend; and consolidation, a period characterized by the initial participants exiting their trade.

Economic Indicator: An economic statistic used to indicate the overall health of an economy, such as GDP, unemployment rates, and trade balances. Used in fundamental analysis of foreign exchange markets to speculate against the direction of an exchange rate.

Economic Exposure: When the cash flow of a country is vulnerable to changes in the exchange rate.

Efficient Markets: Markets where assets are traded in which the price is indicative of all current and relevant information and thus it is impossible to have undervalued assets.

The Efficient Market Theory: The theory that the current market price reflects all information and expectations regarding the currency pair in question. The theory also assumes that the market cannot overprice or underprice an asset, and hence the current price is the correct valuation at the time.

Elliot Wave Theory: A theory based on the notion that the market moves in waves, which consist of trends followed by partial corrections. The Elliot Wave Theory stated that there are 5 waves within an overall trend.

Envelopes: While Bollinger Bands place boundary lines based on standard deviation, envelopes place lines at fixed percentage points above and below a moving average line. The upper and lower limits specify entry and exit points for traders.

End of the Day (Mark to Market): Accounting measure, referring to the way traders record their positions. There are two ways that a trader can record his positions: the accrual system in which only cash flows are recorded and the mark to market method, in which the value of an asset is recorded at the end of each trading day at the closing rate or value.

Equilibrium: A price region that suggests a balance between demand and supply for an currency pair in the marketplace.

Estimated Annual Income: The expected yearly earnings.

Euro: The new monetary unit of the European Monetary Union used by twelve countries in the European Union. It is now the legal tender of those countries as of January 2002. Those countries include Germany, France, Belgium,

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The Netherlands, Luxembourg, Spain, Portugal, Italy, Austria, Ireland, Finland and Greece.

European Central Bank: The central bank of the EMU, responsible for the monetary policy of all member countries.

European Monetary Union: An institution of the EU, whose primary goal is to establish a single currency (the euro) for the entire EU.

Exponentially Weighted Moving Average (EMA): While the simple moving average distributes weight equally across the data series, exponentially weighted moving averages place greater weight to more recent data. As a result, they are more recent asset movement, as opposed to assuming an unbiased view.

Federal Deposit Insurance Corporation: A regulatory agency of the US created to oversee that bank deposits are insured against bank failures. It was created in 1933 to restore confidence in the banking system. It insures up to US \$100,000 per banking institution.

Federal Reserve/Fed: The central bank of the United States, responsible for monetary policy.

Fibonacci Numbers: Derived from a sequence of numbers in which each successive number is the sum of the two previous numbers, Fibonacci numbers are used frequently in hypothesizing which rates assets will gravitate towards. Namely, there are four popular Fibonacci studies: arcs, fans, retracements, and time zones.

GTC (Good-till-Cancelled): Refers to an order given by an investor to a dealer to buy or sell a security at a fixed price that is considered "good" until the investor cancels it.

Head and Shoulders Pattern: A pattern resembling two peaks (the shoulders) with a higher peak between the two shoulders (the head). The neckline, or the bottom boundary that both shoulders reach, is regarded as a key point traders can use to enter/exit positions.

Hedge/Hedging: Strategy to reduce the risk of adverse price movements on one's portfolio and to protect against the volatility of the market. Hedging typically involves selling or buying at the forward price or taking a position in a related security. Hedging becomes more prevalent with increased uncertainty about current market conditions.

High/Low: Refers to the daily traded high and low price.

Historical Volatility: A measure of the change in price over a specified time frame. Higher volatility suggests that the asset is more likely to trade within a wider range, while reduced volatility suggests the asset will trade in a tighter range.

Inflation: Refers to the increase in prices (price level) and wages over time that decrease purchasing power. It is calculated from changes in the price index, usually a consumer price index or a GDP deflator.

Initial Margin: The percentage of the price of a security that is required for the initial deposit to enter into a position.

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The Federal Reserve Board requires a minimum of 50% initial margin. For futures contracts, the market determines the initial margin.

Interbank Rate: The rate at which the major banks (Deutsche, Citibank, Bank of Tokyo) trade in foreign exchange.

Interest Parity: Theory that says that the difference in interest rates across countries should be equal to the difference between the forward and spot rate.

Interest-Rate Swaps: The process of changing the form of debts held by banks or companies, in which they trade debts/loans fixed rates for floating rates (or vice versa) in another country.

Interest-Rate Swap Points: The interest rate can be determined through the difference in the bid and offer price of an exchange rate. If you are looking at the EUR/USD exchange rate and the offer price is higher than the bid price, then Europe's interest rates are higher than US interest rates.

Intermarket Analysis: An analysis of an underlying asset that incorporates examinations of various markets. Namely, four markets are examined: currencies, commodities, stocks, and bonds. Intermarket analysis is centered on the idea that the four markets are correlated.

ISDA (International Swaps and Derivatives Association): Organization defining the terms and conditions for trade in derivatives.

Leading Indicators: Such statistics as unemployment rates, CPI, Federal Funds Rate, retail sales, personal income, discount rate and the prime rate that are used to predict economic activity.

LIBO: Stands for the London Interbank Offer Rate, and is the rate at which major international banks lend to one another. It is widely used as the benchmark for short-term interest rates.

LIFFE: London International Financial Futures Exchange, made up of the three largest future exchanges in the UK.

Limit order: An order with restrictions on the maximum price to be paid or the minimum price to be received. As an example, if the current price of USD/YEN is 102.00/05, then a limit order to buy USD would be at a price below 102. (i.e. 101.50)

Liquid and Illiquid Markets: A liquid market is one in which changes in supply and demand have little impact on the asset's price. It is characterized by many bids, offers and players/traders, low volatility and tight spreads. Illiquid markets have less players and larger spreads.

Liquidation: The process of closing out long or short positions by offsetting transactions. Also refers to the process of selling all assets of a bankrupt company to pay off first creditors and then shareholders.

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Liquid Assets: Those assets, usually short dated assets like Treasury Bills that can easily be turned into money.

Liquidity: The ability of a market to accept large transaction with minimal to no impact on price stability

Long (Position): Refers to the ownership of securities, commodities or currencies, in which there is no intent to sell due to speculation that the price will rise.

Margin: A percentage of the total value of a transaction that a trader is required to deposit as collateral. Buying on margin refers to investing with borrowed funds, and the margin requirement insures against heavy losses.

Margin Call: This is a call by a broker or dealer to raise the margin requirement of an account. The call is typically made after the value of a security (securities) has significantly declined in value.

Market Maker: A broker-dealer firm that owns shares of a security and is willing to buy and sell at the quoted bid and ask prices. The firm lists buy and sell prices to attract customers.

Market Order: An order to buy or sell a stock at the best available price.

Market Risk: The risk associated with investing in the market and cannot be hedged or avoided.

Maturity: The date that the security is due to be redeemed or repaid.

Mine and Yours: Terms used to signal when a trader wants to buy (mine) and sell (yours).

Momentum: The term has two meanings: (1) a trading style by which traders go with the direction of the current trend; and (2) a technical indicator which measures the rate of change of an asset over a given time frame. The formula for the momentum indicator is as follows:

Money Market: Highly liquid markets for short-term investing in monetary instruments and debts, typically maturing in less than one year. Because of large transaction cost relative to potential interest, transactions occur in large amounts and thus participants are mainly banks and other large financial institutions.

Negative or bearish divergence: Occurs when two or more indicators or chart patterns do not yield the same analysis.

Net Worth: The difference between the values of assets and liabilities. For public companies this is referred to as shareholder equity.

Off-Balance Sheet: Financing or the raising of money by a company that does not appear on the company's balance sheet, such as Interest Rate Swaps and Forward Rate Agreements.

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Offer: The price (or rate) at which a seller is willing to sell at.

Offsetting Transaction: When a trader enters an equivalent but opposite position to an already existing position, thereby balancing his positions. An offsetting transaction to an initial purchase would be a sale.

One Cancels Other Order (O.C.O. Order): An order that through its execution cancels the other part of the same order.

Open/Open Position: An order that has yet to be executed and is still valid. An open position puts a trader at risk if the market prices rise or fall, i.e. the trader is vulnerable to movements in the exchange rate.

Open Order: An order to buy or sell that remains valid until it is executed or canceled by the customer. An order that is executed when the price of a share or currency reaches a predetermined price.

Options: These are tradable contracts giving the right, but not obligation, to buy or sell commodities, securities or currencies at a future date and at a prearranged price. Options are used to hedge against adverse price movements or to speculate against price rises or falls. Holding options is riskier than holding shares, but offer potentially higher returns.

Order: An instruction by a customer to a broker/trader to buy or sell at certain price or market price. The order remains valid until executed or cancelled by the customer.

Overbought: A term used to characterize a market in which asset prices have risen at a pace that is above typical market acceleration, and hence is due for a retracement. The EUR/USD chart above is a good example of an overbought condition.

Overnight: A position that remains open until the start of the next business day.

Oversold: The opposite of oversold; exists when the price of a market decelerates at an abnormally fast rate, and hence is due for an upwards reversal.

Over-the-counter Market: A market not regulated by a stock exchange, such as the United States' NASDAQ. Over-the-counter refers to a stock not traded on an exchange, typically resulting from the company's inability to meet the requirements. Over-the-counter security transactions are made directly between brokers.

Parabolic SAR (Stop and Reversal): Functioning best in trending markets, Parabolic SAR specifies where traders should place their stops. If Parabolic SAR is above the market rate, the recommendation is to short; if it is below, the recommendation is to go long. The specific point on the chart where the Parabolic SAR lies is an indication of where the stop should be.

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Pegging: When a country fixes the exchange rate to another country's currency, usually to achieve price stability. Most countries that peg their currencies do so against the US dollar or the Euro.

Pip (Points): The smallest amount an exchange rate can move, typically .0001.

Point & Figure ("P&F"): Unlike conventional bar, candlestick, and line charts, Point & Figure charts completely disregard the passage of time, opting only to display changes in prices. The chart instead emphasizes on illustrating (1) reversals in trends and (2) solid support and resistance lines.

Put/Call Ratio: Calculated by dividing the number of put options traded by the number of call options traded for a particular asset, the put/call ratio offers insight into expectations of the options market. For currency put/call ratio look at the IMM data which comes out every week at the CME website. http://www.cme.com/prices/monthly_volume_action.cfm

Political Business Cycle: A theory that explains changes in the economy as a result of political tactics before and after elections. To gain voter support politicians will often expand the economy prior to elections and implement reforms just after the elections to avoid punishment by the polity.

Political Risk: Risk that changes in government policies will negatively impact an investor. Political Risk is especially prevalent in third world countries.

Position: The amount of currency or security owned or owed by an investor.

Premium: The amount added to the spot price of a currency to get the forward or future price.

Price Transparency: Refers to the degree of access to information regarding bids and offers and respective prices. Ideally, every investor/trader would have equal access to all information.

Quote: The offer price of a security.

Rate: The price of one currency in terms of another (exchange rate).

Realized and Unrealized Profit: Unrealized profit is a gain from an increase in the price of an asset that has not been cashed in. Realized profits are made from the cashing in of the unrealized gain.

Rectangle: Similar to the consolidation portion of a flag pattern, a rectangle is a continuation pattern denoting a trading range characterized by strong support and resistance lines. Unsurprisingly, rectangles are often known as trading ranges; consolidation zones; or congestion areas.

Repurchase (REPO): Repos are short-term money market instruments. The trader sells a security (government

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security) and buys it back only after a short period of time, typically only overnight. Repos are primarily used raise short-term capital.

Resistance: A price level at which a currency pair has had trouble breaking, and hence consolidation is expected. If the resistance line holds and the currency pair retraces, the sellers have outnumbered the buyers; on the other hand, buyers have outnumbered sellers if the resistance level is broken, and momentum may allow for a strong continuation of the trend.

Retracements: Synonymous with the term correction; used to denote a temporary reversal in the overall trend of the market to accommodate for excessive acceleration or deceleration of asset price movement.

Retracement of an Up Trend

Revaluation: An increase in the exchange rate for a currency as a result of central bank intervention. Opposite of Devaluation

Revaluation Rates: The market rates that are used by traders in the evaluation of the gains and losses in their accounts each day.

Reversal: A pattern that suggests a potential shift or deceleration of the current trend. A reversal of an up move will be reflected in a downward price movement.

Risks: Uncertainty in the possible outcomes of an action, i.e. possible returns on an investment. Risk is most commonly measured from the variance of possible outcomes. Higher risks are associated with higher rates of returns, typically in order to induce investment in riskier ventures.

Risk Capital: The capital that an investor does not need to maintain his/her living standard.

Risk Management: Term to describe when a trader will use analysis and other trading techniques to avoid substantial risks to his portfolio.

Rollover: Refers to a process of reinvesting in which at the expiry the settlement is postponed until a later date. The cost of the process is measured by the interest rate differential between the two currencies.

Rounding Top and Bottom: Similar to a Cup and Handle pattern, a rounding top signifies a rounded resistance line and a bearish overall trend. Alternatively, a rounding bottom is a bullish for which the bottom curve can serve as a support line. Both patterns are best-suited to longer-term analyses.

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Rounding Top Pattern

RSI (Relative Strength Index): An oscillator that measures the size of recent upward trends against the size of downward trends within the specified time frame. High RSI scores - above 70 or perhaps 80 - indicate that the currency is oversold, and hence due for a reversal. Alternatively, low RSI scores indicate that the currency is overbought, and hence due for a fall in price.

Settlement: The actual finalization of a contract in which the goods, securities or currencies are paid for or delivered and the transaction is entered in the books.

Short: The selling of a borrowed security, commodity or currency. Traders sell when prices are expected to fall.

Short Position: A contract to sell securities, commodities or currencies at a future date and at a prearranged price. At the expiry date, if the spot price is below the contract price, the holder of the contract will make a profit and if the spot price is above the contract price, then there is the potential to make a huge loss.

Spike (high or low): A significantly lower low or higher high within a data series. Points where an currency spikes often signify a potential reversal in the direction of the trend, and hence can be valuable tools in analyzing a chart.

Spot Market: A market in which commodities, securities or currencies are immediately delivered.

Spot Price: The current market price.

Spread: The difference between the bid and offer price that is offered by a market maker.

Sterling: Refers to the UK currency, the Pound.

Stochastics: Like RSI, stochastics is a momentum indicator that indicates overbought/oversold levels. High levels (above 70 or 80) are indications to enter short orders; low levels (below 30 or 20) are indications to buy. Like all oscillators, stochastics work best.

A momentum indicator that measures the price of a security relative to its high/low range over a set period of time. The indicator fluctuates between 0 and 100, with readings below 20 considered oversold (bullish) and readings above 80 considered overbought (bearish).

Stop Order (Stop-Loss Order): An order used to hedge against excessive loss in which a position is liquidated at a specific, prearranged price.

Support: The opposite of support; a point in a chart where a currency pair has repeatedly had trouble falling beneath. When a currency pair "tests" support but does not break it, buyers have outnumbered sellers; alternatively, sellers have gained control of momentum if support is broken and the currency pair continues to plunge downward.

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Swap: When a trader exchanges one currency for another, holding it for only a short period. Swaps are typically used to speculate on interest rate movements. It is calculated using the interest differentials between the two currencies.

Swap Spread: The difference between the negotiated and fixed price of the swap. The size of the spread depends on market supply and participating parties' credit.

Symmetrical triangle: Also referred to as a coil, usually forms during a trend as a continuation pattern. It contains at least two lower highs and two higher lows. At the time these points are conjoined, the lines converge as they are extended and the symmetrical triangle takes shape. One can also think of it as a contracting wedge, wide at the beginning and narrowing over time.

Technical Analysis: A technique used to try and predict future movements of a security, commodity or currency, based solely on past price movements and volume levels. It examines charts and historical performance.

Tick: A minimum price movement.

Ticker: Depicts current or recent history of a currency, usually in the form of a graph or chart.

Tomorrow Next (Tom/Next): When a trade buys and sells a currency today for delivery tomorrow.

Trade Price Response: This term advises that price reaction to a certain level is critical. If this level breaks then the recommendation would be to run with the market direction (i.e. Buy a break above resistance level; sell a break below a support level). However, if a price stalls at this level and is rejected then the recommendation is to go with this also (i.e. Sell at a resistance level that is tested and holds, buy at a support level).

Transaction Costs: The costs that are incurred by a trader when buying or selling currencies, commodities, or currencies. These cost include broker commissions or spreads.

Transaction Date: The date a trade occurs.

Trend Lines: A straight line drawn across a chart that indicates the overall trend for the currency pair. In an upward trend, the line is drawn below, and acts as a support line; the opposite holds true for a downward trend. Once the currency breaks the trend line, the trend is considered to be invalid.

Turnover: The number or volume of shares traded over a specific time period. The larger the turnover, the more commissions a broker will be making.

Two Way Price: A price that includes both the bid and offer price. The NASD requires that market makers have both bid and ask prices for any security, currency or commodity in which they make a market. This is called a two-sided market.

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Uptick: A price quote that is higher than the preceding quote for the same currency.

Uptick Rule: A regulation requiring that if a security is to be traded short, the price in the trade prior to the short trade has to be lower than the price of the present short trade.

U.S. Prime Rate: The interest rate that the major US banks lend to major clients.

Value Date: The date that payment is exchanged between two parties.

Variation Margin: A call by a broker to increase the margin requirement of an account during a period of extreme market volatility.

Variance: Measures the volatility of a data set/data points from the mean. It is calculated by adding the squares of the standard deviations from the mean and dividing by the number of data points, i.e. taking the average of the standard deviations.

V Formation: See Spike

Volatility: Refers to the tendency of prices/variables to fluctuate over time. It is most commonly measured using the coefficient of variation (the standard deviation divided by the mean). The higher the volatility, the higher the risk involved.

Volume: The number of shares or contracts traded for a certain security or an exchange during a period.

Warrant: It is a right but not obligation to buy shares in a company at a future date and at a prearranged price. Warrants are tradable options.

Weekly charts: Charts for which each candlestick or bar encapsulates data for the currency pair for the past week.

Whipsaw: Term used to describe sharp price movements and reversals in the market. A whipsaw would be if shortly after you bought a stock the price plummeted.

Yard: Term for a billion JPY.

Part 3: What Moves the Market

Purchasing Power Parity :

IMAGE URL: http://www.fxpowercourse.com/manual/purchasing_power_parity.gif