

#1 Forex Trading Course

History

The purpose of this e-book is to introduce the forex market to you. As with many markets, there are many derivatives of the central market such as futures, options and forwards. For the purpose of this book we will only be discussing the main market sometimes referred to as the Spot or Cash market.

The word FOREX is derived from **Foreign Exchange** and is the largest financial market in the world. Unlike many markets, the FX market is open 24 hours per day and has an estimated \$1.5 Trillion in turnover every day. This tremendous turnover is more than the combination of all the worlds' stock markets on any given day. This tends to lead to a very liquid market and thus a desirable market to trade.

Unlike many other securities (any financial instrument that can be traded) the FX market does not have a fixed exchange. It is primarily traded through banks, brokers, dealers, financial institutions and private individuals. Trades are executed through phone and increasingly through the Internet. It is only in the last few years that the smaller investor has been able to gain access to this market. Previously, the large amounts of deposits required precluded the smaller investors. With the advent of the Internet and growing competition it is now easily in the reach of most investors.

You will often hear the term INTERBANK discussed in FX terminology. This originally, as the name implies, was simply banks and large institutions exchanging information about the current rate at which their clients or themselves were prepared to buy or sell a currency. **INTER** meaning *between* and **Bank** meaning deposit taking institutions normally made up of banks, large financial institutions, brokers or even the government. The market has progressed to such a degree that the term interbank now means anybody who is prepared to buy or sell a currency. It could be two individuals or your local travel agent offering to exchange Euros for US Dollars. You will, however, find that most of the brokers and banks use centralized feeds to insure reliability of quote. The quotes for Bid (buy) and Offer (sell) will all be from reliable sources. These quotes are normally made up of the top 300 or so large institutions. This insures that if they place an order on your behalf that the institutions they have placed the order with is capable of fulfilling the order.

Now although we have spoken about orders being fulfilled, it is estimated that anywhere from 70%-90% of the FX market is speculative. In other words, the person or institution that bought or sold the currency has no intention of actually taking delivery of the currency. Instead, they were solely speculating on the movement of that particular currency.

Source: Bank For International Settlements [HYPERLINK "http://www.bis.org/http://www.bis.org"](http://www.bis.org/http://www.bis.org). Extract From The Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity.

Currency	1989	1992	1995	1998	2001
US Dollar	90	82.0	83.3	87.3	90.4
Euro					37.6
Japanese Yen	27	23.4	24.1	20.2	22.7
Pound Sterling	15	13.6	9.4	11.0	13.2
Swiss Franc	10	8.4	7.3	7.1	6.1

As you can see from the above table over 90% of all currencies are traded against the US Dollar. The four next most traded currencies are the Euro (EUR), Japanese Yen (JPY), Pound Sterling (GBP) and Swiss Franc(CHF). As currencies are traded in pairs and exchanged one for the other when traded, the rate at which they are exchanged is called the *exchange rate*. These four currencies traded against the US Dollar make up the majority of the market and are called major currencies or the majors.

Market Mechanics

So now we know that the FX market is the largest in the world and that your broker or institution that you are trading with is collecting quotes from a centralized feed or individual quotes comprising of interbank rates. So how are these quotes made up. Well, as we previously mentioned currencies are traded in pairs and are each assigned a symbol. For the Japanese Yen it is JPY, for the Pounds Sterling it is GBP, for Euro it is EUR and for the Swiss Frank it is CHF. So, EUR/USD would be Euro-Dollar pair. GBP/USD would be pounds Sterling-Dollar pair and USD/CHF would be Dollar-Swiss Franc pair and so on. You will always see the USD quoted first with few exceptions such as Pounds Sterling, Eurodollar, Australia Dollar and New Zealand Dollar. The first currency quoted is called the base currency. Have a look below for some examples.

Currency Symbol	Currency Pair
EUR/USD	Euro / US Dollar
GBP/USD	Pounds Sterling/ US Dollar
USD/JPY	US Dollar / Japanese Yen
USD/CHF	US Dollar / Swiss Franc
USD/CAD	US Dollar / Canadian Dollar
AUD/USD	Australian Dollar / US Dollar
NZD/USD	New Zealand Dollar / US Dollar

When you see FX quotes you will actually see two numbers. The first number is called the bid and the second number is called the offer (sometimes called the ASK). If we use the EUR/USD as an example you might see 0.9950/0.9955 the first number 0.9950 is the bid price and is the price traders are prepared to buy Euros against the USD Dollar. The second number 0.9955 is the offer price and is the price traders are prepared to sell the Euro against the US Dollar. These quotes are sometimes abbreviated to the last two digits of the currency such as 50/55. Each broker has its own convention and some will quote the full number and others will show only the last two. You will also notice that there is a difference between the bid and the offer price and that is called the spread. For the four major currencies the spread is normally 5 give or take a pip (we will explain pips later). To carry on from the symbol conventions and using our previous EUR quote of 0.9950 bid, that means that 1 Euro = 0.9950 US Dollars. In another example if we used the USD/CAD 1.4500 that would mean that 1 US Dollar = 1.4500 Canadian Dollars.

The most common increment of currencies is the PIP. If the EUR/USD moves from 0.9550 to 0.9551 that is one Pip. A pip is the last decimal place of a quotation. The Pip or POINT as it is sometimes referred to depending on context is how we will measure our profit or loss.

As each currency has its own value it is necessary to calculate the value of a pip for that particular currency. We also want a constant so we will assume that we want to convert everything to US Dollars. In currencies where the US Dollar is quoted first the calculation would be as follows.

Example JPY rate of 116.73 (notice the JPY only goes to two decimal places, most of the other currencies have four decimal places)

In the case of the JPY 1 pip would be .01 therefore

USD/JPY: (.01 divided by exchange rate = pip value) so $.01/116.73=0.0000856$ it looks like a big number but later we will discuss lot (contract) size.

USD/CHF: (.0001 divided by exchange rate = pip value) so $.0001/1.4840 = 0.0000673$

USD/CAD: (.0001 divided by exchange rate = pip value) so $.0001/1.5223 = 0.0001522$

In the case where the US Dollar is not quoted first and we want to get to the US Dollar value we have to add one more step.

EUR/USD: (0.0001 divided by exchange rate = pip value) so $.0001/0.9887 = \text{EUR } 0.0001011$ but we want to get back to US Dollars so we add another little calculation which is EUR X Exchange rate so $0.0001011 \times 0.9887 = 0.0000999$ when rounded up it would be 0.0001.

GBP/USD: (0.0001 divided by exchange rate = pip value) so $0.0001/1.5506 = \text{GBP } 0.0000644$ but we want to get back to US Dollars so we add another little calculation which is $\text{GBP} \times \text{Exchange rate}$ so $0.0000644 \times 1.5506 = 0.0000998$ when rounded up it would be 0.0001.

By this time you might be rolling your eyes back and thinking do I really need to work all this out and the answer is no. Nearly all the brokers you will deal with will work all this out for you. They may have slightly different conventions but it is all done automatically. It is good however for you to know how they work it out. In the next section we will be discussing how these seemingly insignificant amounts can add up.

More On Market Mechanics

Spot Forex is traditionally traded in lots also referred to as contracts. The standard size for a lot is \$100,000. In the last few years a mini lot size has been introduced of \$10,000 and this again may change in the years to come. As we mentioned on the previous page currencies are measured in pips, which is the smallest increment of that currency. To take advantage of these tiny increments it is desirable to trade large amounts of a particular currency in order to see any significant profit or loss. We shall cover leverage later but for the time being let's assume we will be using \$100,000 lot size. We will now recalculate some examples to see how it effects the pip value.

USD/JPY at an exchange rate of 116.73

$(.01/116.73) \times \$100,000 = \8.56 per pip

USD/CHF at an exchange rate of 1.4840

$(0.0001/1.4840) \times \$100,000 = \6.73 per pip

In cases where the US Dollar is not quoted first the formula is slightly different.

EUR/USD at an exchange rate of 0.9887

$(0.0001/0.9887) \times \text{EUR } 100,000 = \text{EUR } 10.11$ to get back to US Dollars we add a further step

$\text{EUR } 10.11 \times \text{Exchange rate}$ which looks like $\text{EUR } 10.11 \times 0.9887 = \9.9957 rounded up will be \$10 per pip.

GBP/USD at an exchange rate of 1.5506

$(0.0001/1.5506) \times \text{GBP } 100,000 = \text{GBP } 6.44$ to get back to US Dollars we add a further step

GBP 6.44 X Exchange rate which looks like $\text{GBP } 6.44 \times 1.5506 = \9.9858864 rounded up will be \$10 per pip.

As we said earlier your broker may have a different convention for calculating pip value relative to lot size but however they do it they will be able to tell you what the pip value for the currency you are trading is at that particular time. Remember that as the market moves so will the pip value depending on what currency you trade.

So now we know how to calculate pip value lets have a look at how you work out your profit or loss. Let's assume you want to buy US Dollars and Sell Japanese Yen. The rate you are quoted is 116.70/116.75 because you are buying the US you will be working on the 116.75, the rate at which traders are prepared to sell. So you buy 1 lot of \$100,000 at 116.75. A few hours later the price moves to 116.95 and you decide to close your trade. You ask for a new quote and are quoted 116.95/117.00 as you are now closing your trade and you initially bought to enter the trade you now sell in order to close the trade and you take 116.95 the price traders are prepared to buy at. The difference between 116.75 and 116.95 is .20 or 20 pips. Using our formula from before, we now have $(.01/116.95) \times \$100,000 = \8.55 per pip $\times 20$ pips = \$171

In the case of the EUR/USD you decide to sell the EUR and are quoted 0.9885/0.9890 you take 0.9885. Now don't get confused here. Remember you are now selling and you need a buyer. The buyer is bidding 0.9885 and that is what you take. A few hours later the EUR moves to 0.9805 and you ask for a quote. You are quoted 0.9805/0.9810 and you take 0.9810. You originally sold EUR to open the trade and now to close the trade you must buy back your position. In order to buy back your position you take the price traders are prepared to sell at which is 0.9810. The difference between 0.9810 and 0.9885 is 0.0075 or 75 pips. Using the formula from before, we now have $(.0001/0.9810) \times \text{EUR } 100,000 = \text{EUR } 10.19$: $\text{EUR } 10.19 \times \text{Exchange rate } 0.9810 = \9.99 (\$10) so $75 \times \$10 = \750 .

To reiterate what has gone before, when you enter or exit a trade at some point your are subject to the spread in the bid/offer quote. As a rule of thumb when you buy a currency you will use the offer price and when you sell you will use the bid price. So when you buy a currency you pay the spread as you enter the trade but not as you exit and when you sell a currency you pay no spread when you enter but only when you exit.

Leverage

Leverage financed with credit, such as that purchased on a margin account is very common in Forex. A margined account is a leverageable account in which Forex can be purchased for a combination of cash or collateral depending what your brokers will accept. The loan (leverage) in the margined account is collateralized by your initial margin (deposit), if the value of the trade (position) drops sufficiently, the broker will ask you to either put in more cash, or sell a portion of your position or even close your position. Margin rules may be regulated in some countries, but margin requirements and interest vary among broker/dealers so always check with the company you are dealing with to ensure you understand their policy.

Up until this point you are probably wondering how a small investor can trade such large amounts of money (positions). The amount of leverage you use will depend on your broker and what you feel comfortable with. There was a time when it was difficult to find companies prepared to offer margined accounts but nowadays you can get leverage from as high as 1% with some brokerages. This means you could control \$100,000 with only \$1,000.

Typically the broker will have a minimum account size also known as account margin or initial margin e.g. \$2,500. Once you have deposited your money you will then be able to trade. The broker will also stipulate how much they require per position (lot) traded. In the example above for every \$1,000 you have you can take a lot of \$100,000 so if you have \$5,000 they may allow you to trade up to \$500,00 of forex.

The minimum security (Margin) for each lot will vary from broker to broker. In the example above the broker required a one percent margin. This means that for every \$100,000 traded the broker wanted \$1,000 as security on the position.

Margin call is also something that you will have to be aware of. If for any reason the broker thinks that your position is in danger e.g. you have a position of \$100,000 with a margin of one percent (\$1,000) and your losses are approaching your margin (\$1,000). He will call you and either ask you to deposit more money, or close your position to limit your risk and his risk. If you are going to trade on a margin account it is imperative that you talk with your broker first to find out what their policies are on this type of accounts.

Variation Margin is also very important. Variation margin is the amount of profit or loss your account is showing on open positions. Let's say you have just deposited \$10,000 with your broker. You take 5 lots of USD/JPY which is \$500,000. To secure this the broker needs \$5,000 (1%). The trade goes bad and your losses equal \$5001, your broker may do a margin call. The reason he may do a margin call is that even though you still have \$4,999 in your account the broker needs that as security and allowing you to use it could endanger yourself and him. Another way to look at it is this, if you have an account of \$10,000 and you have a 1 lot (\$100,000) position. That's \$1,000 assuming a (1% margin) is no longer available for you to trade. The money still belongs to you but for the time you are margined the broker needs that as security. Another point of note is that some brokers may require a higher margin at the weekends. This may take the form of 1% margin during the week and if you intend to hold the position over the weekend it may rise to 2%

or higher. Also in the example we have used a 1% margin. This is by no means standard. I have seen as high as 0.5% and many between 3%-5% margin. It all depends on your broker.

There have been many discussions on the topic of margin and some argue that too much margin is dangerous. This is a point for the individual concerned. The important thing to remember as with all trading is that you thoroughly understand your brokers policies on the subject and you are comfortable with and understand your risk.

Rollovers

Even though the mighty US dominates many markets, most of Spot Forex is still traded through London in Great Britain. So for our next description we shall use London time. Most deals in Forex are done as Spot deals. Spot deals are nearly always due for settlement two business days later. This is referred to as the *value date or delivery date*. On that date the counterparties take delivery of the currency they have sold or bought.

In Spot FX the majority of the time the end of the business day is 21:59 (London time). Any positions still open at this time are automatically rolled over to the next business day, which again finishes at 21:59. This is necessary to avoid the actual delivery of the currency. As Spot FX is predominantly speculative most of the time the trades never wish to actually take delivery of the actual currency. They will instruct the brokerage to always rollover their position. Many of the brokers nowadays do this automatically and it will be in their policies and procedures. The act of rolling the currency pair over is known as *tom.next* which, stands for tomorrow and the next day. Just to go over this again, your broker will automatically rollover your position unless you instruct him that you actually want delivery of the currency. Another point noting is that most leveraged accounts are unable to actually deliver the currency as there is insufficient capital there to cover the transaction.

Remember that if you are trading on margin, you have in effect got a loan from your broker for the amount you are trading. If you had a 1 lot position your broker has advanced you the \$100,000 considering you may have only had a fraction of that amount on deposit. The broker will normally charge you the interest differential between the two currencies if you rollover your position. This normally only happens if you have rolled over the position and not if you open and close the position within the same business day.

To calculate the broker's interest he will normally close your position at the end of the business day and again reopen a new position almost simultaneously. You open a 1 lot (\$100,000) EUR/USD position on Monday 15th at 11:00 at an exchange rate of 0.9950. During the day the rate fluctuates and at 22:00 the rate is 0.9975. The broker closes your position and reopens a new position with a different value date. The new position was opened at 0.9976 a 1 pip difference. The 1 pip difference reflects the difference in interest rates between the US Dollar and the Euro.

In our example you are long Euro and short US Dollar. As the US Dollar in the example has a higher interest rate than the Euro you pay the premium of 1 pip.

Now the good news. If you had the reverse position and you were short Euros and long US Dollars you would gain the interest differential of 1 pip. If the first named currency has an overnight interest rate lower than the second currency then you will pay that interest differential if you bought that currency. If the first named currency has a higher interest rate than the second currency then you will gain the interest differential.

To simplify the above. If you are long (bought) a particular currency and that currency has a higher overnight interest rate you will gain. If you are short (sold) the currency with a higher overnight interest rate then you will lose the difference.

I would like to emphasize here that although we are going a little in-depth to explain how all this works, your broker will calculate all this for you. The purpose of this book is just to give you an overview of how the forex market works.

Accounts

Although the movement today is towards all transactions eventually finishing in a profit and loss in US Dollars it is important to realize that your profit or loss may not actually be in US Dollars. From my observation the trend is more pronounced in the US as you would expect. Most US based traders assume they will see their balance at the end of each day in US Dollars. I have even spoken with some traders who are oblivious to the fact their profit might have actually been in Japanese Yen.

Let me explain a little more. You sell (go short) USD/JPY and as such are short USD and Long (bought) JPY. You enter the trade at 116.10 and exit 116.90. You in fact made 80,000 Japanese Yen (1 lot traded) not US Dollars. If you traded all four major currencies against the US Dollar you would in fact have gained or lost in EUR, GBP, JPY and CHF. This might give you a ledger balance at the end of the day or month with four different currencies. This is common in London. They will stay in that currency until you instruct the broker to exchange the currency you have a profit or loss into your own base currency. This actually happened to me. After dealing with mainly US based brokers it had never occurred to me that my statement would be in anything other than US Dollars. This can work for you or against you depending on the rate of exchange when you change back into your home currency. Once I knew the convention I simply instructed the broker to change my profit or loss into US Dollars when I closed my position. It is worth checking how your broker approaches this and simply ask them how they handle it. A small point but worth noting.

It's a sad fact that for many years the forex market largely remained unregulated. Even today there are many countries that still don't regulate companies that trade forex. London has been regulated for many years and the US is now getting its act together and has also started regulating companies dealing forex.

It was only recently in the US you could with no more than an Internet site and a few thousand dollars set up your own forex operation and give the impression that you were larger than you are. I am all for the entrepreneurial flair and everyone needs to start somewhere, but when dealing with people's money it is imperative that the company you choose is solid.

Preferably you want a company that is regulated in the country that it operates, insured or bonded and has some kind of track record. As a rule of thumb, nearly all countries have some kind of regulatory authority who will be able to advise you. Most of the regulatory authorities will have a list of brokers that fall within their jurisdiction and will give you a list. They probably won't tell whom to use but at least if the list came from them you can have some confidence in those companies. Once you have a list give a few of them a call, see who you feel comfortable with, ask for them to send you their policies and procedures. If you live near where your broker is based, go spend the day with him. I have been to many brokerages just to check them out. It will give you a chance to see their operation and meet their team. If you choose to purchase the rest of this course, we suggest a firm that we have worked with for a long time that is reputable, regulated and financially stable.

This brings up another interesting point. When you open an account with a broker you will have to fill out some forms basically stating your acceptance of their policies. This can range from a 1 page document to something resembling a book. Take the time to read through these documents and make a list of things you don't understand or want explained. Most reputable companies will be happy to spend some time with you on this. Your involvement with your broker is largely up to you. As a forex trader you will probably spend long hours staring at the screen without talking to anyone. You may be the sort of person who likes this or you may be the sort of person who likes to chat with the dealer in the trading room. You will normally get a call once a week or once a month from someone in the brokerage asking if everything is OK.

Statements

Before we move on to account statements I just want to touch on segregation of funds. In times past there was a danger that traders who deposited money with their broker who did not segregate their clients' money from their own company's money were at some risk. The problem arose if the broker misused the deposited funds to either reinvest or otherwise manipulated these deposits to enhance their own standing. There were also instances where the broker became insolvent and many complications ensued as to what was the client's money and what was the broker's money. With the advent of regulation most brokers now segregate their clients' funds from the brokerage funds. Deposits are normally held with banks or other large financial institutions that are also regulated and bonded or insured. This protects your money should anything happen to your broker. The deposit-taking institution is normally aware that these deposits are client's funds. Depending on regulation in the particular country you live, each client may have their

own segregated account or for smaller depositors they may be pooled. The point is that segregation of funds is a safeguard. Ask your broker if your funds are segregated and who actually has your money.

Just as with a bank you should be entitled to interest on the money you have on deposit. Some brokers may stipulate that interest is only payable on accounts over a certain amount, but the trend today is that you will earn interest on any amount you have that is not being used to cover your margin. Your broker is probably not the most competitive place to earn interest but that should not be the point of having your money with him in the first place. Interest on the funds in your account and segregation of funds all go to show the reputability of the company you are dealing with.

In this section, I will discuss briefly the basic account statement. I have to keep this basic as there are as many flavors of account statements as you can imagine. Just about every broker has their own way of presenting this. The most important thing is to know where you stand at the end of each day or week. Just because your broker is internet based and has all the bells and whistles does not mean they are infallible. Many of the actions taken before information is imputed are still done by hand and if humans are involved there will be a mistake at some point. The responsibility lies with you. It is your money so make sure that all the transactions are correct.

FX Firm
New York

Statement for: Mr. Joe Bloggs
Statement Date: 16th January 2004

Account No: 123456

Summary Of All Trades From: 15/07/02-17/07/02

Ticket No	Time	Trade Date	Value Date	B/S	Symbol	Quantity	Rate	Debit	Credit	Balance
123458	09:05	15/07/2002	17/07/02	B	EUR/USD	100,000	0.9850			\$10,000
123459	13:01	15/07/2002	17/07/02	S	EUR/USD	100,000	0.9870		\$200.00	\$10,200
123460	14:05	16/07/2002	18/07/02	S	USD/JPY	100,000	116.85			\$10,200

Total Equity	\$10,200
Margin Available	\$9,200
Margin Requirements	\$1,000
Current Position	Short USD/JPY

Normally, there is a ticket or docket number to help identify the trade. You will nearly always find the time and date of the trade. The value date if the currency were to be delivered. You should always see the direction of the trade, buy or sell (Long or Short). The amount and rate you bought or sold. Balance to let you know if you made a profit or a loss. You should also see any open positions you may have and the margin requirements for that position. A lot of the more modern systems will show your open position as though it has been closed just to give you an up to the minute balance.

The Main Players

Central Banks And Governments

Policies that are implemented by governments and central banks can play a major role in the FX market. Central banks can play an important part in controlling the country's money supply to insure financial stability.

Banks

A large part of FX turnover is from banks. Large banks can literally trade billions of dollars daily. This can take the form of a service to their customers or they themselves speculate on the FX market.

Hedge Funds

As we know, the FX market can be extremely liquid which is why it can be desirable to trade. Hedge Funds have increasingly allocated portions of their portfolios to speculate on the FX market. Another advantage Hedge Funds can utilize is a much higher degree of leverage than would typically be found in the equity markets.

Corporate Businesses

The FX market mainstay is that of international trade. Many companies have to import or exports goods to different countries all around the world. Payment for these goods and services may be made and received in different currencies. Many billions of dollars are exchanged daily to facilitate trade. The timing of those transactions can dramatically affect a company's balance sheet.

The Man In The Street

The man in the street also plays a part in toady's FX world. Every time he goes on holiday overseas he normally need to purchase that country's currency and again change it back into his own currency once he returns. Unwittingly, he is in fact trading currencies. He may also purchase goods and services while overseas and his credit card company has to convert those sales back into his base currency in order to charge him.

Speculators And Investors

We shall differentiate speculator from investors here with the definition that an investor has a much longer time horizon in which he expects his investment to yield a profit. Regardless of the difference both speculators and investors will approach the FX market.

What Next

Well now we have a basic understanding of how the FX market works and who the main players are, what next? You are now going to have to decide the best way to trade the market. The two most common approaches are that of fundamental analysis and technical analysis.

Fundamental analysis concentrates on the forces of supply and demand for a given security. This approach examines all the factors that determine the price of a security and the real value of that security. This is referred to as the intrinsic value. If the intrinsic value is below the market price then there is an opportunity to buy and if the market is above the intrinsic price then there is an opportunity to sell.

Technical analysis is the study of market action, mainly through the use of charts and indicators to forecast the future price of a security. There are three main points that a technical analyst applies:

- A. Market action discounts everything. Regardless of what the fundamentals are saying, the price you see is the price you get.
- B. The price of a given security moves in trends.
- C. The historical trend of a security will tend to repeat.

Of all of the above things the most important of them is point A. The tools of the technical analyst are indicators, patterns and systems. These tools are applied to charts. Moving averages, support and resistance lines, envelopes, Bollinger bands and momentum are all examples of indicators.

There are many ways to skin a cat as the saying goes but fundamental and technical analysis are the two most popular ways of trading FX.

Fundamental Analysis

Our trading system is designed around technical analysis, however, there are some fundamentals every trader should be aware of.

Fundamentals Every Trader Should Know

Currency prices reflect the balance of supply and demand for currencies. Two primary factors affecting supply and demand are interest rates and the overall strength of the economy. Economic indicators such as GDP, foreign investment, and the trade balance reflect the general health of an economy and are, therefore, responsible for the underlying shifts in supply and demand for that currency. There is a tremendous amount of data released at regular intervals, some of which is more important than others. Data related to interest rates and international trade is looked at the closest.

Interest Rates

If the market has uncertainty regarding interest rates, then any bit of news regarding interest rates can directly affect the currency markets. Traditionally, if a country raises its interest rates, the currency of that country will strengthen in relation to other countries, as investors shift assets to that country to gain a higher return. Hikes in interest rates, however, are generally bad news for stock markets. Some investors will transfer money out of a country's stock market when interest rates are hiked, believing that higher borrowing costs will affect balance sheets negatively and result in devalued stock, causing the country's currency to weaken. Which effect dominates can be tricky, but generally there is a consensus beforehand as to what the interest rate move will do. Indicators that have the biggest impact on interest rates are PPI, CPI, and GDP. Generally the timing of interest rate moves are known in advance. They take place after regularly scheduled meetings by the BOE, FED, ECB, BOJ, and other central banks.

International Trade

The trade balance shows the net difference over a period of time between a nation's exports and imports. When a country imports more than it exports, the trade balance will show a deficit, which is generally considered unfavorable. For example, if US consumers wanted Japanese products, major automobile dealers might sell US dollars to pay for the import of Japanese vehicles with yen. The flow of dollars outside the US would then lead to a depreciation in the value of the US dollar. Similarly if trade figures show an increase in exports, dollars will flow into the United States due to increased confidence in the economy and then the value of the US dollar would increase. From the standpoint of a national economy, a deficit in and of itself is not necessarily a bad thing. However, if the deficit is greater than market expectations then it will trigger a negative price movement.

Psychology of Trading

Trade with a DISCIPLINED Plan:

The problem with many traders is that they take shopping more seriously than trading. The average shopper would not spend \$400 without serious research and examination of the product he is about to purchase, yet the average trader would make a trade that could easily cost him \$400 based on little more than a “feeling” or “hunch.” Be sure that you have a plan in place BEFORE you start to trade. The plan must include stop and limit levels for the trade, as your analysis should encompass the expected downside as well as the expected upside.

Cut your losses early and Let your Profits Run:

This simple concept is one of the most difficult to implement and is the cause of most traders demise. Most traders violate their predetermined plan and take their profits before reaching their profit target because they feel uncomfortable sitting on a profitable position. These same people will easily sit on losing positions, allowing the market to move against them for hundreds of points in hopes that the market will come back. In addition, traders who have had their stops hit a few times only to see the market go back in their favor once they are out, are quick to remove stops from their trading on the belief that this will always be the case. Stops are there to be hit, and to stop you from losing more than a predetermined amount! The mistaken belief is that every trade should be profitable. If you can get 3 out of 6 trades to be profitable then you are doing well. How then do you make money with only half of your trades being winners? You simply allow your profits on the winners to run and make sure that your losses are minimal.

Do not marry your trades:

The reason trading with a plan is the #1 tip is because most objective analysis is done before the trade is executed. Once a trader is in a position he/she tends to analyze the market differently in the “hopes” that the market will move in a favorable direction rather than objectively looking at the changing factors that may have turned against your original analysis. This is especially true of losses. Traders with a losing position tend to marry their position, which causes them to disregard the fact that all signs point towards continued losses.

Do not bet the farm:

Do not over trade. One of the most common mistakes that traders make is leveraging their account too high by trading much larger sizes than their account should prudently trade. Leverage is a double-edged sword. Just because one lot (100,000 units) of currency only requires \$1000 as a minimum margin deposit, it does not mean that a trader with \$5000 in his account should be able to trade 5 lots. One lot is \$100,000 and should be treated as a \$100,000 investment and not the \$1000 put up as margin. Most traders analyze the charts correctly and place sensible trades, yet they tend to over leverage themselves. As a consequence of this, they are often forced to exit a position at the wrong time. A good rule of thumb is to never use more than 10% of your account at any given time.

Forex Basics

The advantages to trading the Forex, especially for short term or day traders is the liquidity. This means that you can trade any amount of currency and someone will always be ready to buy or sell that currency.

Another advantage is the flexible trading hours. The Forex market is available for trading 24 hours a day.

Spot Rate-Current market price or cash rate for a currency pair.

Settlement-All currencies trade in 2 business days with the exception of the Canadian Dollar, which settles next business day.

Bid-Price at which you can sell a certain currency

Ask (offer)-Price at which you can buy a certain currency

All currency is traded in pairs. The base currency compared to the counter currency. The exchange rate provides the price of the base currency relative to the counter currency.

Ex: How much is one US Dollar (base currency) worth in Japanese Yen (counter currency). So, if the quote for USD/JPY was 118.54/57, this would mean a currency trader would pay 118.57 Yen for 1 USD and would receive 118.54 Yen for each USD when selling.

When the exchange rate rises, it means the base currency is getting stronger against the counter currency. When the exchange rate falls, the opposite is true.

Please note: When placing a currency order, if you are expecting a downtrend, you would simply sell the pair and if you are expecting an uptrend, you would buy the currency pair. The opposite order will close the position, so if you sold to open the position, expecting the currency to drop, you would buy back the currency to close the position. If you bought to open the position, expecting the currency to rise, you would sell the currency to close that position.

PIPS-We briefly went over Pips in the introduction, but let's look at them in more detail. Pip stands for "price interest point" and it represents the smallest fluctuation in price for a given currency pair. For most currencies, the exchange rate is carried out to the fourth decimal place. In this case, a pip is $1/10,000^{\text{th}}$ of the counter currency or .0001.

Ex: If the ask price in the EUR/USD is 1.1315 and it goes up 1 Pip, the resulting rate will be 1.1316. Some exchange rates like the USD/JPY are only carried out to two decimal points. For these currency pairs, a pip is worth $1/100^{\text{th}}$ of the counter currency.

Currency	1 Pip	Contract Size	Exchange Rate (Example)
EUR/USD	0.0001	100000	1.1292
GBP/USD	0.0001	100000	1.6319
USD/JPY	0.01	100000	117.82
USD/CHF	0.0001	100000	1.3736
AUD/USD	0.0001	100000	0.6580
USD/CAD	0.0001	100000	1.3793

When the USD is the counter currency (EUR/USD), it is easier to calculate the value of one pip and the pip value is static.

EUR/USD 1 Pip=100,000 EUR x .0001 USD/EUR = US \$10.00

When the USD is the base currency, an extra step must be performed to convert the pip value into dollars. This is done by dividing by the current foreign exchange rate.

USD/JPY 1 Pip= 100,000 USD x .01 JPY/USD= 1,000 JPY/117.82 JPY/USD= US\$8.49

Again, your broker will usually calculate all this for you, but it's good to know.

Types of Orders

Market Orders

An order to buy or sell a currency at the current market price. When placing a market order, the currency trader specifies the currency pair he wants to buy or sell. (EUR/USD, USD/JPY, etc) and the number of lots he is interested in buying or selling.

Limit Orders

An order to buy or sell currency at a specified price or better. Trader specifies currency and price.

Stop Orders

Order that is activated when a specified price is reached. A stop order becomes a regular market order when the exchange rate reaches a specified level. Stop orders can be used to enter the market on momentum or to limit the potential loss of a position.

Protect a Position

A trader buys 100,000 (1 lot) of EUR/USD at 1.1305 in anticipation of an expected 80 pip rally in the Euro. In order to protect himself from an unmanageable loss, the trader places a stop loss order at 1.1285 (20 pips below the current price). This way, if the Euro drops instead of rises against the dollar, the trader's loss is limited to 20 pips or \$200 in this example.

Buy on Momentum

Trader expects the USD to rally vs the Japanese Yen, but is hesitant to enter a buy order because the USD/JPY is getting close to short term resistance at 118. The trader instead places a buy stop order 10 pips above the resistance level. His stop is thus placed at 118.10. Unless the USD/JPY goes to 118.10, the order won't be activated. By doing this, the trader is waiting for the USD/JPY resistance level to be broken before entering the position.

Trailing Stop Orders

Trailing stop orders can be placed below the current market value to allow profits to run. This is a great technique to use so that a trader does not sell too early into a rally, but at the same time protects himself from losing profits already gained.

EX: A trader buys the USD/JPY at 118.10 and it rises to 119. The trader does not want to sell too early, but also does not want to lose the profit he has already gained. So, a trailing stop loss can be set at say 118.70. If the market continues to move up, the order will not be activated and the trader participates in the future gain. Trailing stop orders would then move up to lock in more gains. For example, if the market moved to 119.20, the trader can now move the stop to 119, protecting more gains and still not selling in case the position continues to climb. If the market moves down through the stop, the trade will be activated and the trader will keep the gain and exit the position.

OCO (once cancels other)

An OCO order is the simultaneous placement of two linked orders above and below the current market price. If either one of the orders is executed in the specified time period, the remaining order will automatically be canceled.

EX: Price of the EUR/USD is at 1.1340. A trader wants to buy 200,000 (2 lots) if the rate breaks the resistance at 1.1395 or wants to sell short if the price breaks the support at 1.1300. The trader can then enter an OCO order made up of a buy stop order at 1.1405 (10 pips above the resistance) and a sell stop order at 1.1290 (10 pips below the support) if the EUR/USD breaks support and gets to 1.1290, the sell stop order will be executed and the buy stop order at 1.1405 will be canceled. If instead, the EUR/USD breaks resistance and reaches 1.1405, the opposite will take place.

Example of a currency trade

The current bid/ask for EUR/USD is 1.0120/1.0126, meaning you can buy the 1 EURO for 1.0126. Suppose you feel that the EUR will appreciate in value against the dollar. To execute this strategy, you would buy Euros with dollars and then wait for the exchange rate to rise. So, you make the trade: Purchasing 100,000 EUR (1 lot) at 1.0126 (101,260) At 1% margin, your initial deposit would be \$1,102.60 (100,000 contract size x 1.0126 exchange rate x 1% margin rate). Now, you must sell Euros for dollars to realize any profit. Let's say you were right and the exchange rate rises to 1.0236. You can now sell 1 Euro for 1.0236. When you sell the 100,000 Euros at the current EUR/USD rate of 1.0236, you will receive \$102,360 USD. Since you originally sold (paid) \$101,260 USD, your profit is \$1,100 USD. You can really see the power of leverage with this example, profiting \$1,100 on \$101,260 worth of currency by only depositing \$1,102.60.

Risk Management

Once we have determined which currency pair to trade based on our analysis, we will use a market order when initially buying or selling that pair. Once the position has been initiated, we will set a stop loss order immediately. This order will be below the current market price and will limit our loss if the currency does not move in our favor. We suggest that the stop loss order be placed at whatever level of loss you personally feel comfortable with. A good rule of thumb is no more than 25% of your initial deposit.

EX: The current bid/ask for EUR/USD is 1.0120/1.0126 and we feel the Euro is going to rise against the USD. We enter a market order to buy EUR/USD. Unless the market is moving extremely fast, we should get filled around 1.0126. To figure out where to place the stop loss, let's figure your initial deposit.

$100,000 \text{ EURO} \times 1.0126 \times 1\% \text{ margin} = \$1,102.60$

So, if you want to limit your loss to 25% of your initial deposit or \$253.15 ($\$1,102.60 \times 25\%$), then you need to set a stop loss at about 25 pips below the current market value. Each pip in this example is worth \$10, so $\$253.15 / \$10 = \text{approx. } 25$. So, we would immediately set a stop loss at 1.0101. If we sold at 1.0101 our proceeds would be \$101,010 and we originally bought for 101,260, so our net loss would be \$250 or 25% of our initial deposit.

Trailing Stop Orders

If the market moves in our favor, we will begin setting trailing stop orders to protect our profit. Let's use the previous example. If the market moves to 1.0135, then we could set a trailing stop order at 1.0130, protecting a 4 pip move from 1.0126 to 1.0130 while at the same time not selling too early if the market continues to rise. If the market moves back down and through our stop loss at 1.0130, then we would sell for \$101,300 after buying for \$101,260 or a net profit of \$40. If the market continues to rise, we would keep adjusting our trailing stop loss upward. So, if the market went to 1.0145, we could set another stop loss at 1.0140. Let's say it rises one more time to 1.0150 and we set a

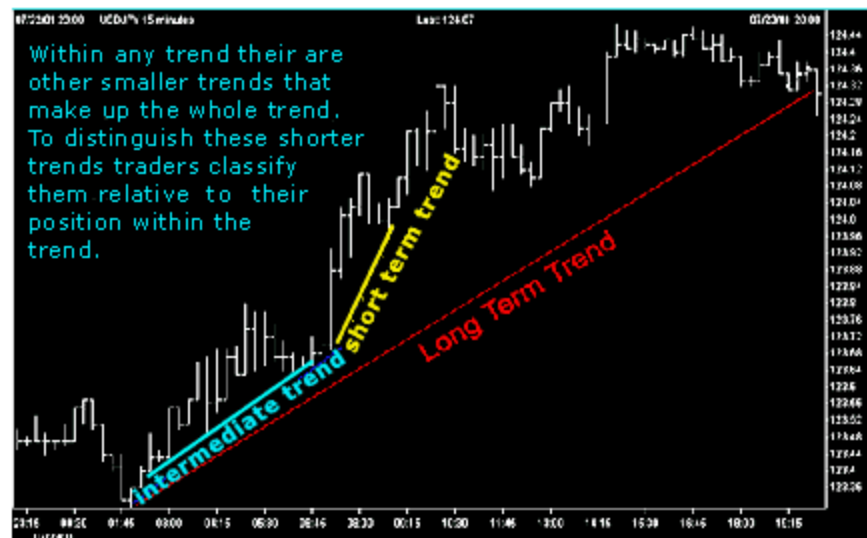
trailing stop loss at 1.0145 and then the trend reverses and trades through our stop, selling the currency at 1.0145. Now, we sold for \$101,450 and bought for \$101,260 for a net profit of \$190 per contract. This way, we didn't get out at the very top of the move, but we didn't sell early either. If we would have sold outright when it rose to 1.0130, then we would have only profited \$40 and left \$150 on the table.

Trading Strategy

TRENDS



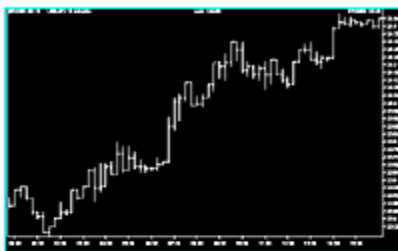
Trend is simply the overall direction prices are moving -- UP, DOWN, OR FLAT.



The direction of the trend is absolutely essential to trading and analyzing the market.

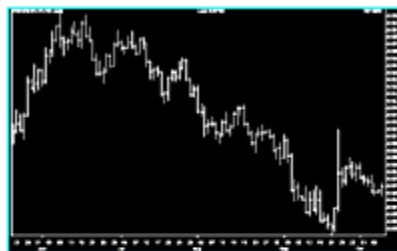
In the Foreign Exchange (FX) Market, it is possible to profit from UP and Down movements, because of the buying and selling of one currency and against the other currency e.g. Buy US Dollar Sell Japanese Yen ex. Up Trend chart.

THERE ARE THREE TYPES OF TREND;



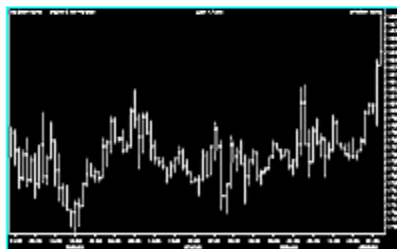
UP TREND

As the trend moves upward the US Dollar is appreciating in value



DOWN TREND

As the trend moves downward the US Dollar is depreciating in value



SIDEWAYS TREND

Prices are moving within a narrow range (The currencies are neither appreciating nor depreciating)

DRAWING TRENDLINES

The basic trendline is one of the simplest technical tools employed by the trader, and is also one of the most valuable in any type of technical trading.

For an up trendline to be drawn, there must be at least two low points in the graph where the 2nd low point is higher than the first.

A price low is the lowest price reached during a counter trend move.

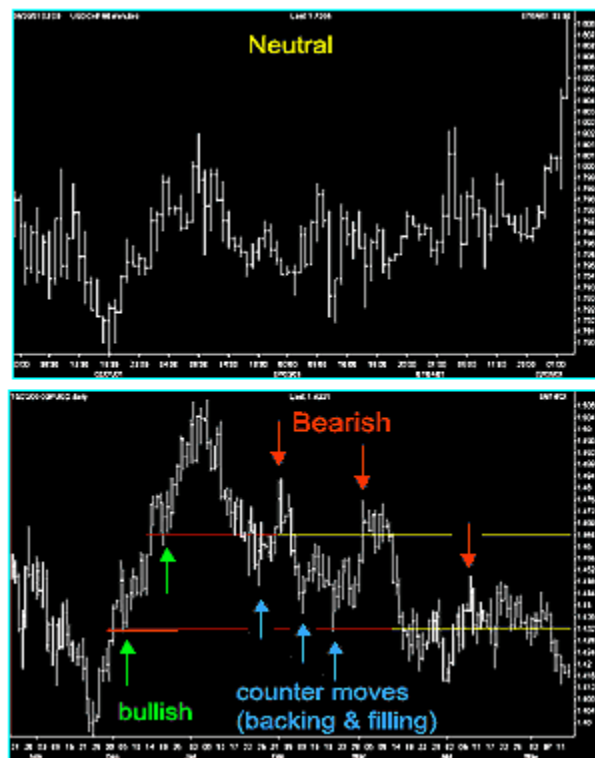
Drawing Bullish Trendlines



Remember, it takes 2 points to draw any straight line.

TREND ANALYSIS AND TIMING

Markets don't move straight up and down. The direction of any market at any time is either Bullish (Up), Bearish (Down), or Neutral (Sideways). Within those trends, markets have countertrend (backing & filling) movements. In a general sense "Markets move in waves", and in order to make money, a trader must catch the wave at the right time.



DRAWING TRENDLINES

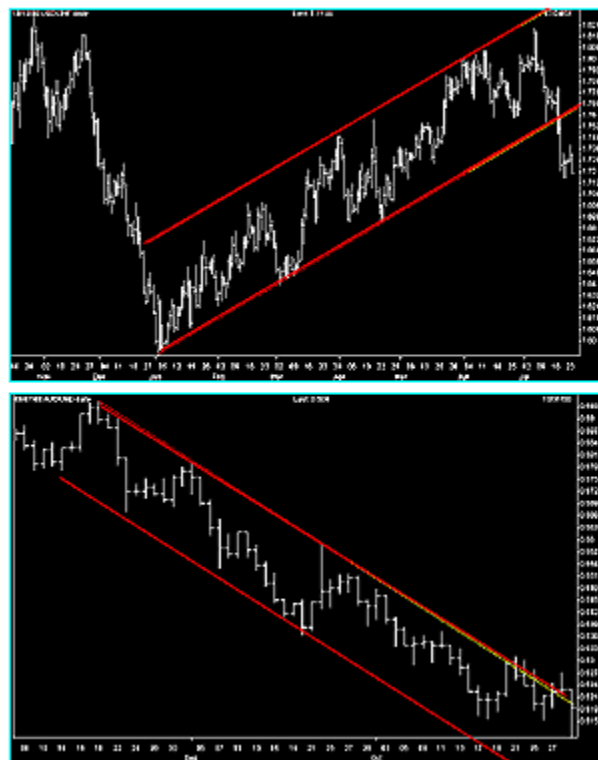




CHANNELS

When prices trend between two parallel trendlines they form a Channel.
When prices hit the bottom trendline this may be used as a buying area and when prices hit the upper trendline this may be used as a selling.

Drawing Channel Lines



SUPPORT

Price supports are price areas where traders find that it is difficult for market prices to penetrate lower. Buying interest in the dollar is strong enough to overcome Selling interest in the dollar keeping prices at a sustained level.



RESISTANCE

Resistance is the opposite of support and represents a price level where Selling Interest overcomes Buying interest and advancing prices are turning back.



RETRACEMENTS

50% Retracement.



There are also 33% and 66% Retracements.

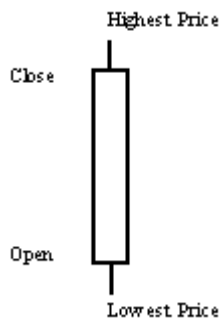


Applying Technical Analysis

Currency charts can be used on an intraday basis (5-minute, 15 minute), hourly, weekly, or monthly basis. The chart you study depends on how long you plan on holding a position. If you are trading with a few hours in mind you may want to look at 5-minute or 15-minute charts. If you plan on holding a position for a couple of days, you may want to look at an hourly, 4-hour or daily chart. Weekly charts and monthly charts compress price movements to allow for much longer-range trend analysis. Therefore, these currency charts give the technical trader a longer-term context in which to conduct trade.

Our Strategy

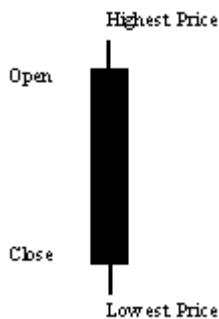
Although it is very important to learn the basics of technical analysis to know when a general trend is occurring, we base our trading strategy on candlestick charting. We are looking for very short term trends within a trading day and often only lasting minutes. The patterns on the following pages should be indicators used in day or very short term trading.



Introduction

Japanese rice traders developed candlesticks centuries ago to visually display price activity over a defined trading period. Each candlestick represents the trading activity for one period. The lines of a candlestick represent the opening, high, low and closing values for the period.

The main body (the wide part) of the candlestick represents the range between the opening and closing prices. If the closing price is higher than the opening price, the main body is white. If the closing price is lower than the opening price, the main body is black.



The lines protruding from either end are called wicks or shadows.



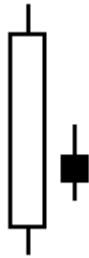
Bearish 3

Pattern

A long black body followed by several small bodys and ending in another long black body. The small bodys are usually contained within the first black body's range.

Interpretation

A bearish continuation pattern.



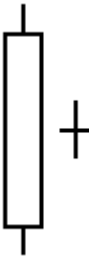
Bearish Harami

Pattern

A very large white body followed by a small black body that is contained within the previous bar.

Interpretation

A bearish pattern when preceded by an uptrend.



Bearish Harami Cross

Pattern

A Doji contained within a large white body.

Interpretation

A top reversal signal.



Big Black Candle

Pattern

An unusually long black body with a wide range. Prices open near the high and close near the low.

Interpretation

A bearish pattern.



Big White Candle

Pattern A very long white body with a wide range between high and low. Prices open near the low and close near the high.

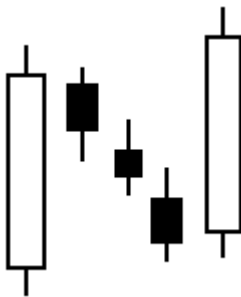
Interpretation A bullish pattern.



Black Body

Pattern This candlestick is formed when the closing price is lower than the opening price.

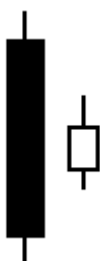
Interpretation A bearish signal. More important when part of a pattern.



Bullish 3

Pattern A long white body followed by three small bodies, ending in another long white body. The three small bodies are contained within the first white body.

Interpretation A bullish continuation pattern



Bullish Harami

Pattern

A very large black body is followed by a small white body and is contained within the black body.

Interpretation

A bullish pattern when preceded by a downtrend.



Bullish Harami Cross

Pattern

A Doji contained within a large black body.

Interpretation

A bottom reversal pattern.



Dark Cloud Cover

Pattern

A long white body followed by a black body. The following black candlestick opens higher than the white candlestick's high and closes at least 50% into the white candlestick's body.

Interpretation

A bearish reversal signal during an uptrend.



Doji

Pattern

The open and close are the same.

Interpretation

Dojis are usually components of many candlestick patterns. This candlestick assumes more importance the longer the vertical line.



Doji Star

Pattern

A Doji which gaps above or below a white or black candlestick.

Interpretation

A reversal signal confirmed by the next candlestick (eg. a long white candlestick would confirm a reversal up).



Engulfing Bearish Line

Pattern

A small white body followed by and contained within a large black body.

Interpretation

A top reversal signal.



Engulfing Bullish Line

Pattern

A small black body followed by and contained within a large white body.

Interpretation

A bottom reversal signal.



Evening Doji Star

Pattern

A large white body followed by a Doji that gaps above the white body. The third candlestick is a black body that closes 50% or more into the white body.

Interpretation

A top reversal signal, more bearish than the regular evening star pattern.

Evening Star

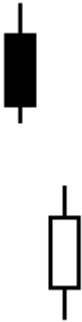
**Pattern**

A large white body followed by a small body that gaps above the white body. The third candlestick is a black body that closes 50% or more into the white body.

Interpretation

A top reversal signal.

Falling Window

**Pattern**

A gap or "window" between the low of the first candlestick and the high of the second candlestick.

Interpretation

A rally to the gap is highly probable. The gap should provide resistance.

Gravestone Doji

**Pattern**

The open and close are at the low of the bar.

Interpretation

A top reversal signal. The longer the upper wick, the more bearish the signal.

Hammer

**Pattern**

A small body near the high with a long lower wick with little or no upper wick.

Interpretation

A bullish pattern during a downtrend.

Hanging Man



Pattern A small body near the high with a long lower wick with little or no upper wick. The lower wick should be several times the height of the body.

Interpretation A bearish pattern during an uptrend.

Inverted Black Hammer



Pattern An upside-down hammer with a black body.

Interpretation A bottom reversal signal with confirmation the next trading bar.

Inverted Hammer



Pattern An upside-down hammer with a white or black body.

Interpretation A bottom reversal signal with confirmation the next trading bar.

Long Legged Doji



Pattern A Doji pattern with long upper and lower wicks.

Interpretation A top reversal signal.



Long Lower Shadow

Pattern

A candlestick with a long lower wick with a length equal to or longer than the range of the candlestick.

Interpretation

A bullish signal.



Long Upper Shadow

Pattern

A candlestick with an upper wick that has a length equal to or greater than the range of the candlestick.

Interpretation

A bearish signal.



Morning Doji Star

Pattern

A large black body followed by a Doji that gaps below the black body. The next candlestick is a white body that closes 50% or more into the black body.

Interpretation

A bottom reversal signal.



Morning Star

Pattern

A large black body followed by a small body that gaps below the black body. The following candlestick is a white body that closes 50% or more into the black body.

Interpretation

A bottom reversal signal.



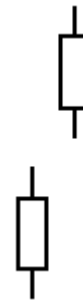
On Neck-Line

Pattern	In a downtrend, a black candlestick is followed by a small white candlestick with its close near the low of the black candlestick.
Interpretation	A bearish pattern where the market should move lower when the white candlestick's low is penetrated by the next bar.



Piercing Line

Pattern	A black candlestick followed by a white candlestick that opens lower than the black candlestick's low, but closes 50% or more into the black body.
Interpretation	A bottom reversal signal.



Rising Window

Pattern	A gap or "window" between the high of the first candlestick and the low of the second candlestick.
Interpretation	A selloff to the gap is highly likely. The gap should provide support.

Separating Lines



Uptrend

Pattern

In an **uptrend**, a black candlestick is followed by a white candlestick with the same opening price.

In a **downtrend**, a white candlestick is followed by a black candlestick with the same opening price.

Downtrend

Interpretation

A continuation pattern. The prior trend should resume.



Shaven Bottom



Pattern

A candlestick with no lower wick.

Interpretation

A bottom reversal signal with confirmation the next trading bar.

Shaven Head



Pattern

A candlestick with no upper wick.

Interpretation

A bullish pattern during a downtrend and a bearish pattern during an uptrend.

Shooting Star



Pattern

A candlestick with a small body, long upper wick, and little or no lower wick.

Interpretation

A bearish pattern during an uptrend.

Spinning Top



Pattern

A candlestick with a small body. The size of the wicks is not critical.

Interpretation

A neutral pattern usually associated with other formations.



Pattern

Three Black Crows

Three long black candlesticks with consecutively lower closes that close near their lows.

Interpretation

A top reversal signal.



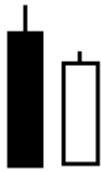
Pattern

Three White Soldiers

Three white candlesticks with consecutively higher closes that close near their highs.

Interpretation

A bottom reversal signal.



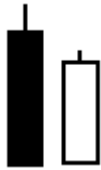
Pattern

Tweezer Bottoms

Two or more candlesticks with matching bottoms. The size or color of the candlestick does not matter.

Interpretation

Minor reversal signal.



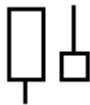
Pattern

Tweezer Tops

Two or more candlesticks with similar tops.

Interpretation

A reversal signal.



Pattern

White Body

A candlestick formed when the closing price is higher than the opening price.

Interpretation

A bullish signal.

In addition to candlestick charting, we also look at another technical indicator called the MACD. The MACD is the most used and probably the most reliable technical indicator around. The reason we like it is because it gives early signals which is good for fast moving markets and short term trading.

In our lesson regarding the MACD, we will use stock charts, however, the indicator is read the same way for any instrument.

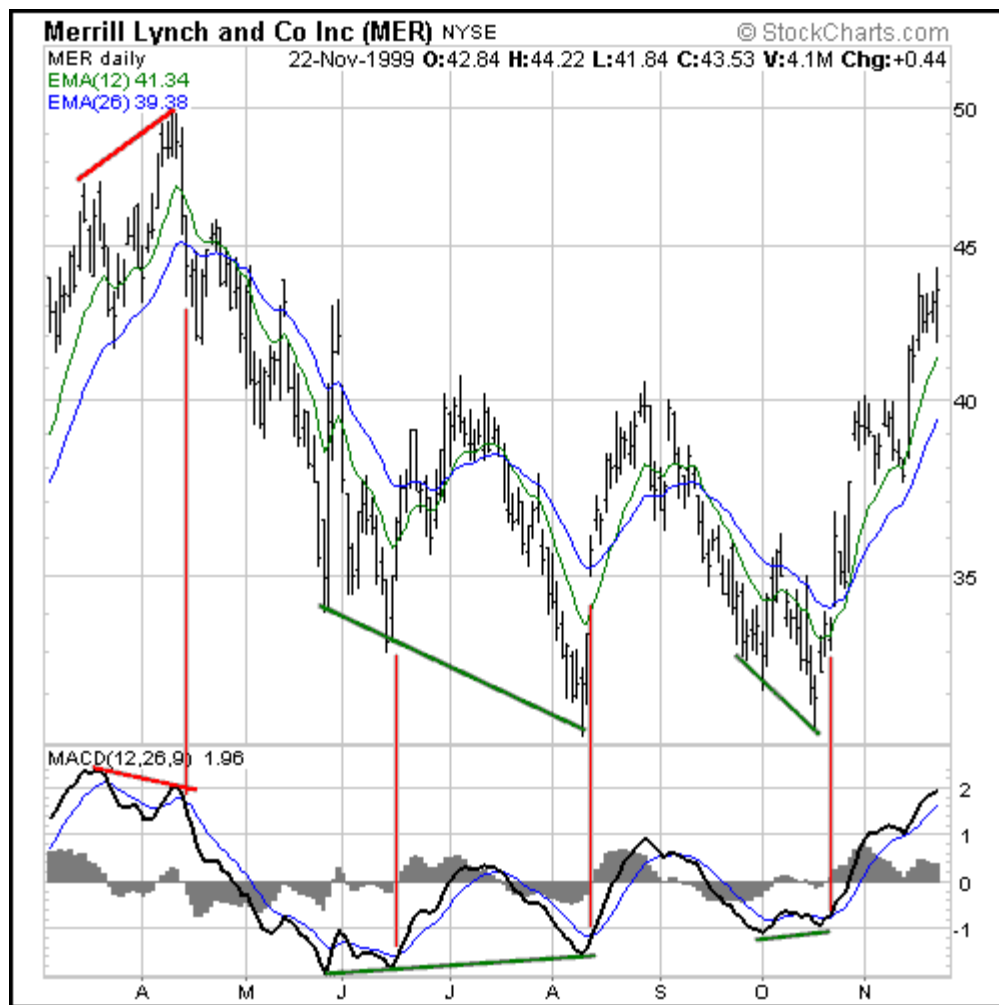
Developed by Gerald Appel, Moving Average Convergence Divergence (MACD) is one of the simplest and most reliable indicators available. MACD uses moving averages, which are lagging indicators, to include some trend-following characteristics. These lagging indicators are turned into a momentum oscillator by subtracting the longer moving average from the shorter moving average. The resulting plot forms a line that oscillates above and below zero, without any upper or lower limits.

The most popular formula for the "standard" MACD is the difference between a security's 26-day and 12-day exponential moving averages. This is the formula that is used in many popular technical analysis programs and quoted in most technical analysis books on the

subject. Appel and others have since tinkered with these original settings to come up with a MACD that is better suited for faster or slower securities. Using shorter moving averages will produce a quicker, more responsive indicator, while using longer moving averages will produce a slower indicator, less prone to whipsaws. For our purposes in this article, the traditional 12/26 MACD will be used for explanations. Later in the indicator series, we will address the use of different moving averages in calculating MACD. Of the two moving averages that make up MACD, the 12-day EMA is the faster and the 26-day EMA is the slower. Closing prices are used to form the moving averages. Usually, a 9-day EMA of MACD is plotted along side to act as a trigger line. A bullish crossover occurs when MACD moves above its 9-day EMA and a bearish crossover occurs when MACD moves below its 9-day EMA. The Merrill Lynch chart below shows the 12-day EMA (thin green line) with the 26-day EMA (thin blue line) overlaid the price plot. MACD appears in the box below as the thick black line and its 9-day EMA is the thin blue line. The histogram represents the difference between MACD and its 9-day EMA. The histogram is positive when MACD is above its 9-day EMA and negative when MACD is below its 9-day EMA.



MACD measures the difference between two moving averages. A positive MACD indicates that the 12-day EMA is trading above the 26-day EMA. A negative MACD indicates that the 12-day EMA is trading below the 26-day EMA. If MACD is positive and rising, then the gap between the 12-day EMA and the 26-day EMA is widening. This indicates that the rate-of-change of the faster moving average is higher than the rate-of-change for the slower moving average. Positive momentum is increasing and this would be considered bullish. If MACD is negative and declining further, then the negative gap between the faster moving average (green) and the slower moving average (blue) is expanding. Downward momentum is accelerating and this would be considered bearish. MACD centerline crossovers occur when the faster moving average crosses the slower moving average.



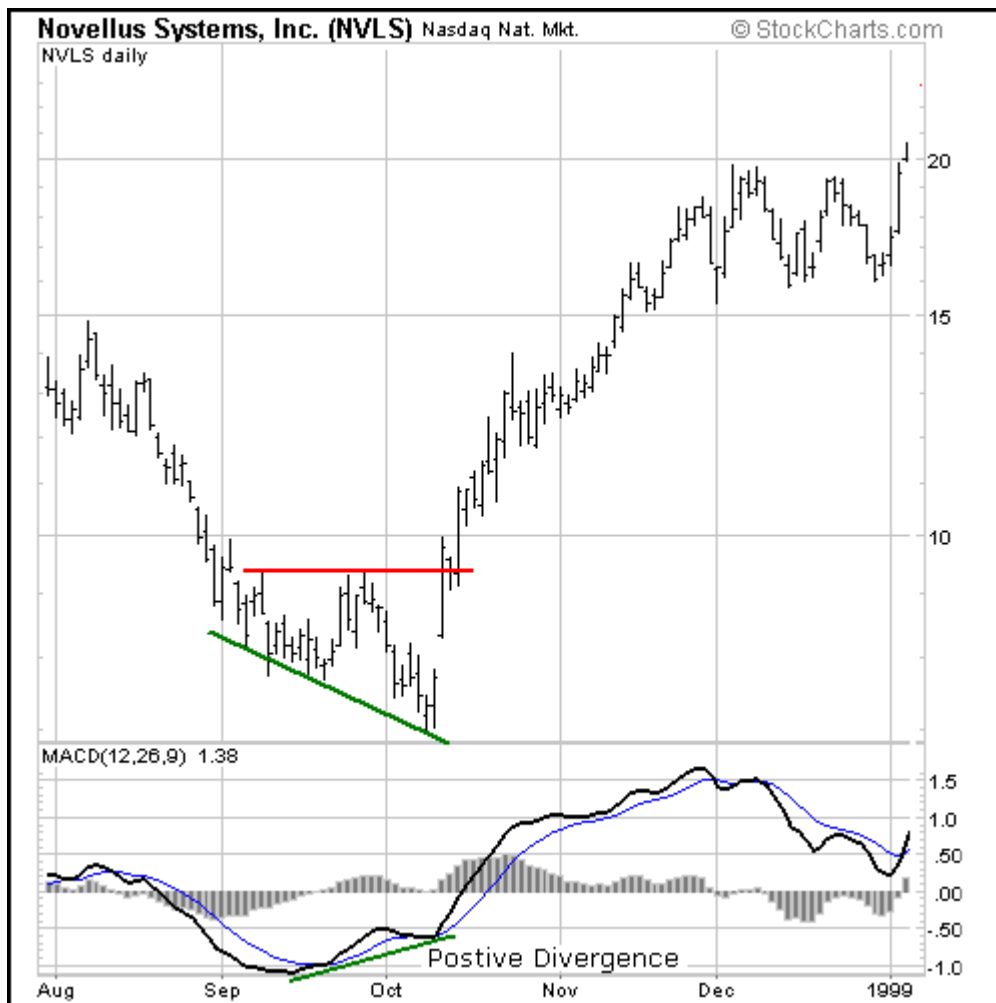
This Merrill Lynch chart shows MACD as a solid black line and its 9-day EMA as the thin blue line. Even though moving averages are lagging indicators, notice that MACD moves faster than the moving averages. In this example with Merrill Lynch, MACD also provided a few good trading signals as well.

1. In March and April, MACD turned down ahead of both moving averages and formed a negative divergence ahead of the price peak.
2. In May and June, MACD began to strengthen and make higher lows while both moving averages continued to make lower lows.

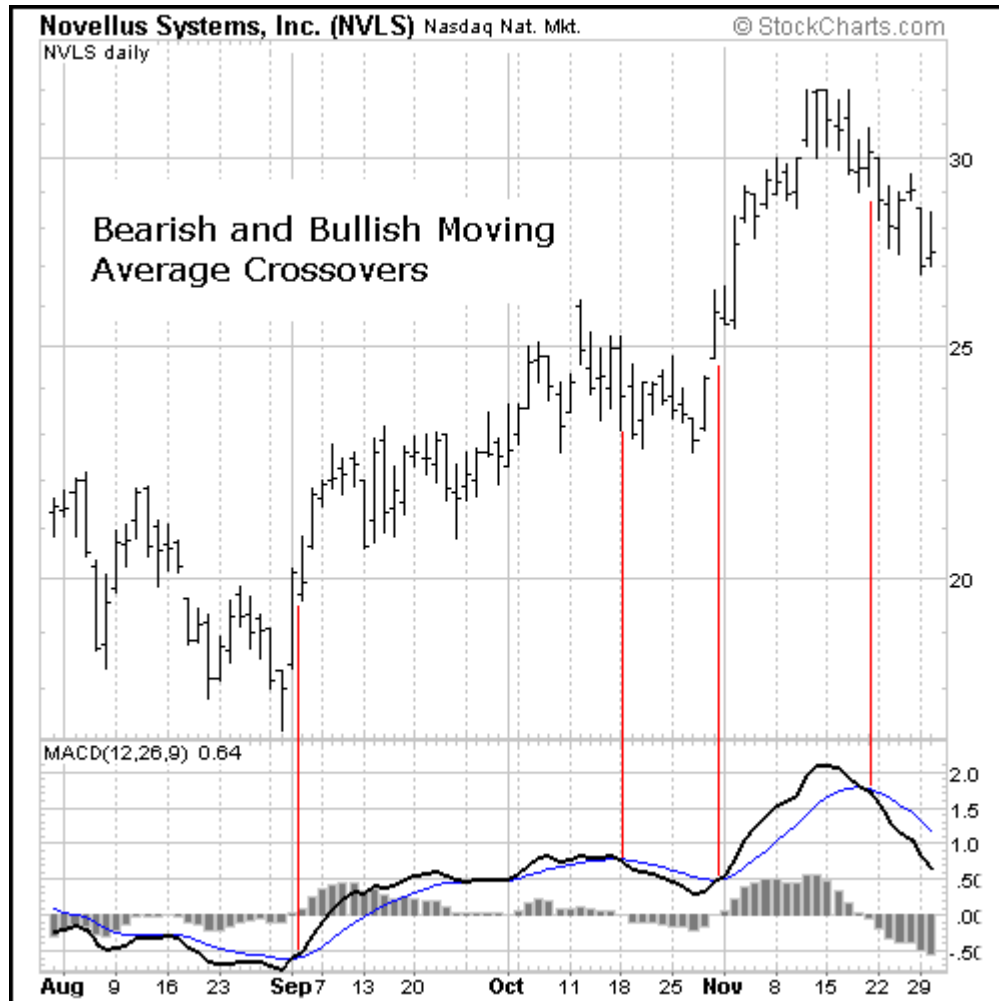
And finally, MACD formed a positive divergence in October while both moving averages recorded new lows.

MACD generates bullish signals from three main sources:

1. Positive divergence
2. Bullish moving average crossover
3. Bullish centerline crossover

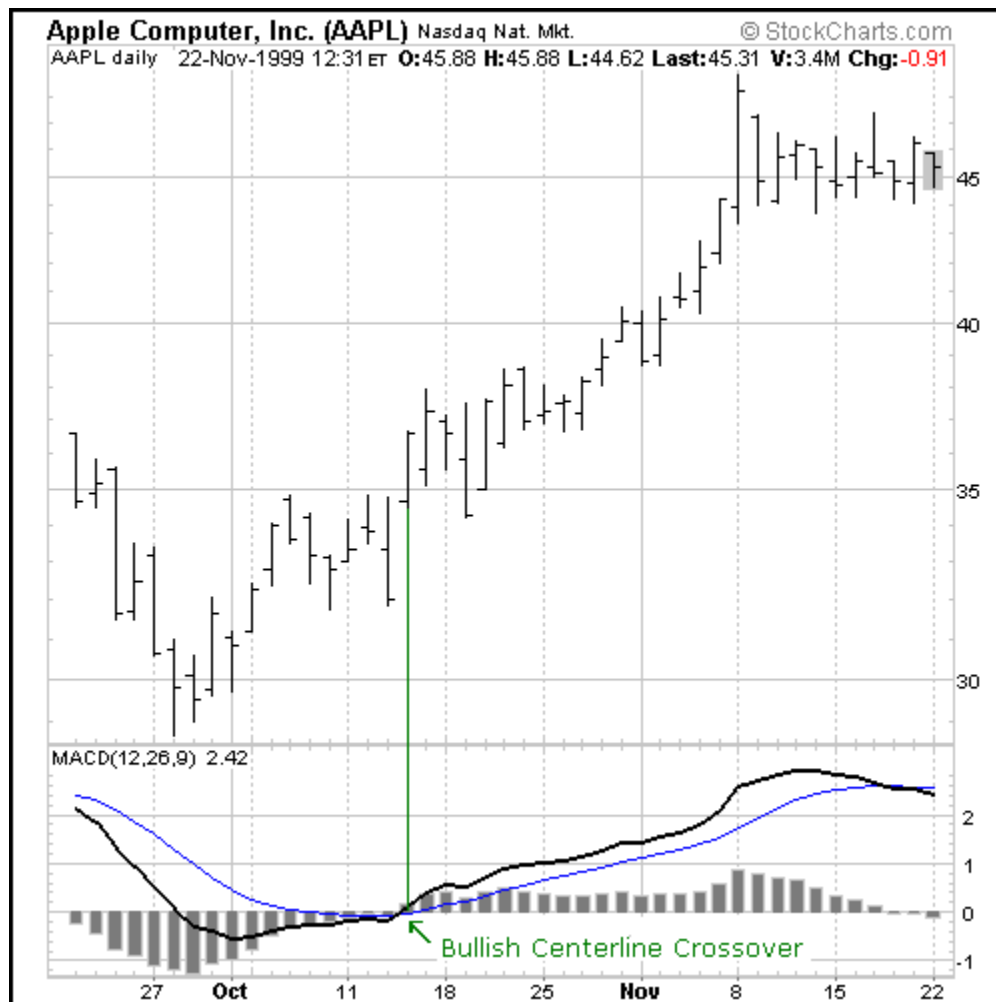


A positive divergence occurs when MACD begins to advance and the security is still in a downtrend and makes a lower reaction low. MACD can either form as a series of higher lows or a second low that is higher than the previous low. Positive divergence's are probably the least common of the three signals, but are usually the most reliable and lead to the biggest moves.

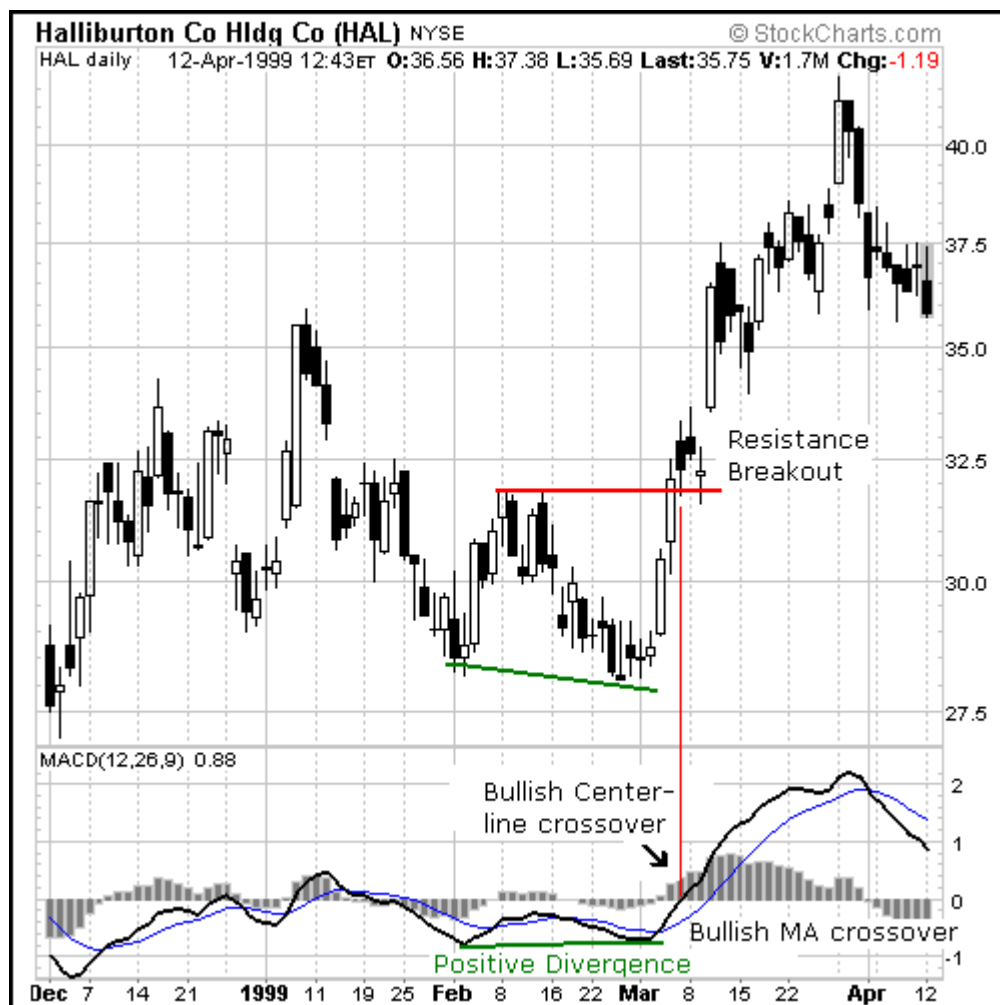


A bullish moving average crossover occurs when MACD moves above its 9-day EMA or trigger line. Bullish moving average crossovers are probably the most common signals and as such are the least reliable. If not used in conjunction with other technical analysis tools, these crossovers can lead to many false signals. Moving average crossovers are sometimes used to confirm a positive divergence. The second low or higher low of a positive divergence can be considered valid when it is followed by a bullish moving average crossover.

Sometimes it is prudent to apply a price filter to the moving average crossover in order to ensure that it will hold. An example of a price filter would be to buy if MACD breaks above the 9-day EMA and remains above for three days. The buy signal would then commence at the end of the third day.



A bullish centerline crossover occurs when MACD moves above the zero line and into positive territory. This is a clear indication that momentum has changed from negative to positive, or from bearish to bullish. After a positive divergence and bullish moving average crossover, the centerline crossover can act as a confirmation signal. Of the three signals, moving average crossover are probably the second most common signals.



Even though some traders may use only one of the above signals to form a buy or a sell signal, using a combination can generate more robust signals. In the Halliburton example, all three bullish signals were present and the stock still advanced another 20%. The stock formed a lower low at the end of February, but MACD formed a higher low, thus creating a potential positive divergence.

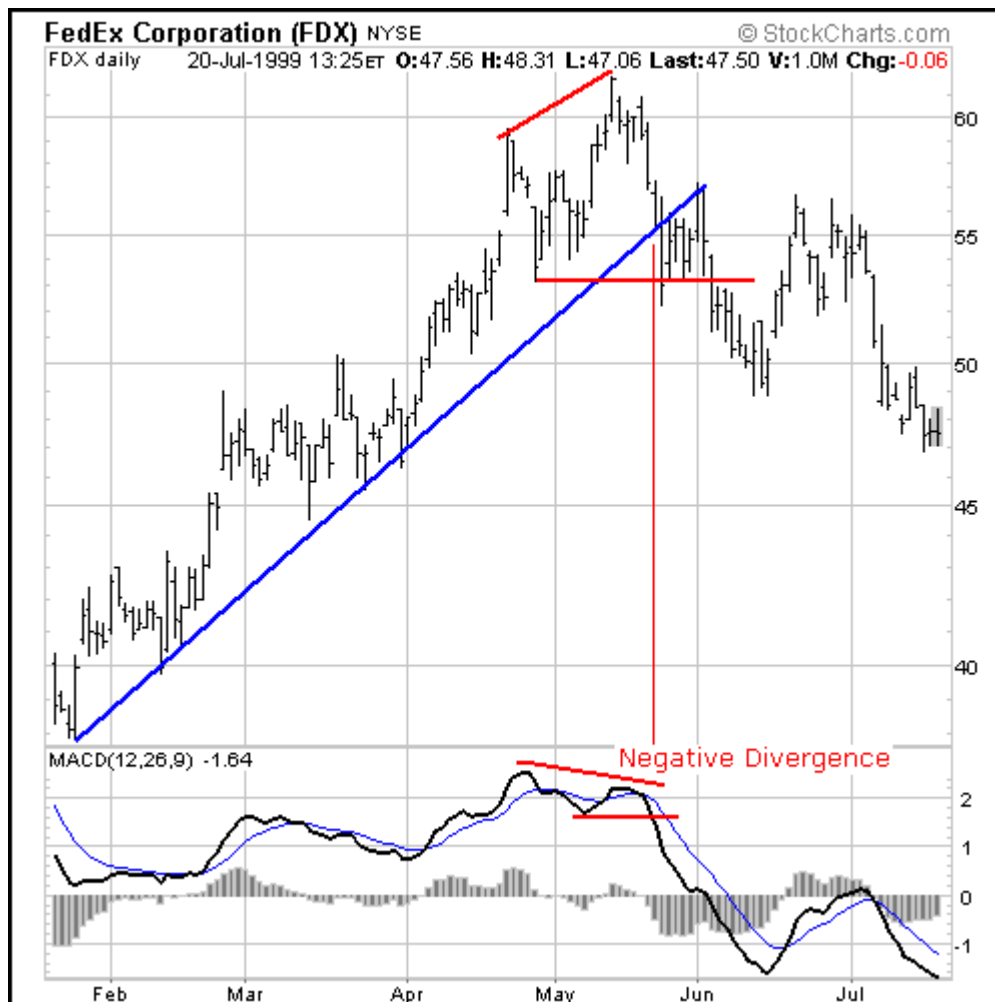
MACD then formed a bullish crossover by moving above its 9-day EMA. And finally, MACD traded above zero to form a bullish centerline crossover. At the time of the bullish centerline crossover, the stock was trading at 32 1/4 and went above 40 immediately after that. In August, the stock traded above 50.

MACD generates bearish signals from three main sources. These signals are mirror reflections of the bullish signals.

1. Negative divergence
2. Bearish moving average crossover
3. Bearish centerline crossover

Negative Divergence

A negative divergence forms when the security advances or moves sideways and MACD declines. The negative divergence in MACD can take the form of either a lower high or a straight decline. Negative divergence's are probably the least common of the three signals, but are usually the most reliable and can warn of an impending peak.

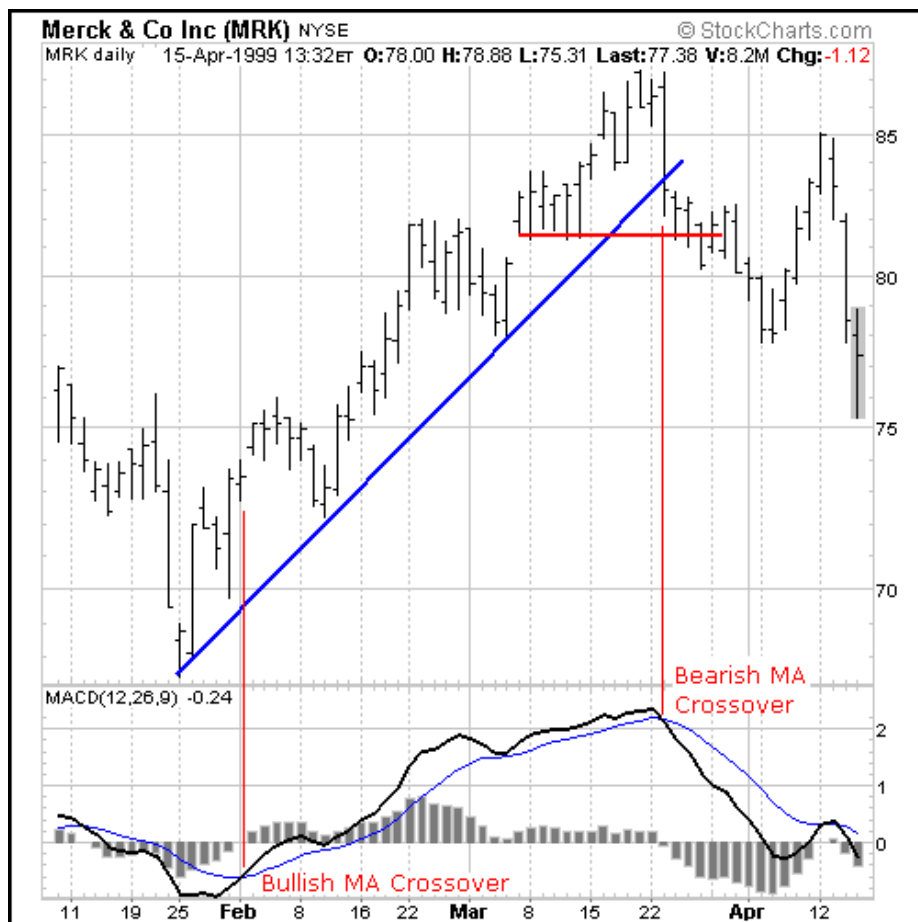


The FDX chart shows a negative divergence when MACD formed a lower high in May and the stock formed a higher high at the same time. This was a rather blatant negative divergence and signaled that momentum was slowing. A few days later, the stock broke the uptrend line and MACD formed a lower low.

There are two possible means of confirming a negative divergence. First, the indicator can form a lower low. This is traditional peak-and-trough analysis applied to an indicator. With the lower high and subsequent lower low, the up trend for MACD has changed from bullish to bearish. Second, a bearish moving average crossover, which is explained below, can act to confirm a negative divergence. As long as MACD is trading above its 9-day EMA or trigger line, it has not turned down and the lower high is difficult to confirm. When MACD breaks below its 9-day EMA, it signals that the short-term trend for the indicator is weakening, and a possible interim peak has formed.

Bearish moving average crossover

The most common signal for MACD is the moving average crossover. A bearish moving average crossover occurs when MACD declines below its 9-day EMA. Not only are these signals the most common, but they also produce the most false signals. As such, moving average crossovers should be confirmed with other signals to avoid whipsaws and false readings.



Sometimes a security can be in a strong uptrend and MACD will remain above its trigger line for a sustained period of time. In this case, it is unlikely that a negative divergence will develop. A different signal is needed to identify a potential change in momentum. This was the case with MRK in February and March. The stock advanced in a strong uptrend and MACD remained above its 9-day EMA for 7 weeks. When a bearish moving average crossover occurred, it signaled that upside momentum was slowing. This slowing momentum should have served as an alert to monitor the technical situation for further clues of weakness. Weakness was soon confirmed when the stock broke its uptrend line and MACD continued its decline and moved below zero.

Bearish centerline crossover

A bearish centerline crossover occurs when MACD moves below zero and into negative territory. This is a clear indication that momentum has changed from positive to negative, or from bullish to bearish. The centerline crossover can act as an independent signal, or confirm a prior signal such as a moving average crossover or negative divergence. Once MACD crosses into negative territory, momentum, at least for the short term, has turned bearish.



The significance of the centerline crossover will depend on the previous movements of MACD as well. If MACD is positive for many weeks, begins to trend down and then crosses into negative territory, it would be considered bearish. However, if MACD has been negative for a few months, breaks above zero and then back below, it may be seen as more of a correction. In order to judge the significance of a centerline crossover, traditional technical analysis can be applied to see if there has been a change in trend, higher high or lower low.

The UIS chart depicts a bearish centerline crossover that preceded a 25% drop in the stock that occurs just off the right edge of the chart. Although there was little time to act once this signal appeared, there were other warnings signs just prior to the dramatic drop.

1. After the drop to trendline support , a bearish moving average crossover formed.
2. When the stock rebounded from the drop, MACD did not even break above the trigger line, indicating weak upside momentum.
3. The peak of the reaction rally was marked by a shooting star candlestick (blue arrow) and a gap down on increased volume (red arrows).
4. After the gap down, the blue trendline extending up from Apr-99 was broken.

In addition to the signal mentioned above, the bearish centerline crossover occurred after MACD had been above zero for almost two months. Since 20-Sept, MACD had been weakening and momentum was slowing. The break below zero acted as the final straw of a long weakening process.

As with bullish MACD signals, bearish signals can be combined to create more robust signals. In most cases, securities fall faster than they rise. This was definitely the case with UIS and only two bearish MACD signals were present. Using momentum indicators like MACD, technical analysis can sometimes provide clues to impending weakness. While it may be impossible to predict the length and duration of the decline, being able to spot weakness can enable traders to take a more defensive position.

After issuing a profit warning in late Feb-00, CPQ dropped from above 40 to below 25 in a few months. Without inside information, predicting the profit warning would be pretty much impossible. However, it would seem that smart money began distributing the stock before the actual warnings. Looking at the technical picture, we can spot evidence of this distribution and a serious loss of momentum.



1. In January, a negative divergence formed in MACD.
2. Chaikin Money Flow turned negative on January 21.
3. Also in January, a bearish moving average crossover occurred in MACD (black arrow).
4. The trendline extending up from October was broken on 4-Feb.
5. A bearish centerline crossover occurred in MACD on 10-Feb (green arrow).
6. On 16, 17 and 18-Feb, support at 41 1/2 was violated (red arrow).

A full 10 days passed in which MACD was below zero and continued to decline (thin red lines). The day before the gap down, MACD was at levels not seen since October. For those waiting for a recovery in the stock, the continued decline of momentum suggested that selling pressure was increasing, and not about to decrease. Hindsight is 20/20, but with careful study of past situations, we can learn how to better read the present and prepare for the future.

One of the primary benefits of MACD is that it incorporates aspects of both momentum and trend in one indicator. As a trend-following indicator, it will not be wrong for very long. The use of moving averages ensures that the indicator will eventually follow the movements of the underlying security. By using exponential moving averages, as opposed to simple moving averages, some of the lag has been taken out.

As a momentum indicator, MACD has the ability to foreshadow moves in the underlying security. MACD divergence's can be key factors in predicting a trend change. A negative divergence signals that bullish momentum is waning and there could be a potential change in trend from bullish to bearish. This can serve as an alert for traders to take some profits in long positions, or for aggressive traders to consider initiating a short position.

MACD can be applied to daily, weekly or monthly charts. MACD represents the convergence and divergence of two moving averages. The standard setting for MACD is the difference between the 12 and 26-period EMA. However, any combination of moving averages can be used. The set of moving averages used in MACD can be tailored for each individual security. For weekly charts, a faster set of moving averages may be appropriate. For volatile securities, slower moving averages may be needed to help smooth the data. No matter what the characteristics of the underlying security, each individual can set MACD to suit his or her own trading style, objectives and risk tolerance.

One of the beneficial aspects of MACD may also be a drawback. Moving averages, be they simple, exponential or weighted, are lagging indicators. Even though MACD represents the difference between two moving averages, there can still be some lag in the indicator itself. This is more likely to be the case with weekly charts than daily charts.

One solution to this problem is the use of the MACD-Histogram.

MACD is not particularly good for identifying overbought and oversold levels. Even though it is possible to identify levels that historically represent overbought and oversold levels, MACD does not have any upper or lower limits to bind its movement. MACD can continue to overextend beyond historical extremes.

MACD calculates the absolute difference between two moving averages and not the percentage difference. MACD is calculated by subtracting one moving average from the other. As a security increases in price, the difference (both positive and negative) between the two moving averages is destined to grow. This makes it difficult to compare MACD levels over a long period of time.



The AMZN chart demonstrates the difficulty in comparing MACD levels over a long period of time. Before 1999, AMZN's MACD is barely recognizable and appears to trade close to the zero line. MACD was indeed quite volatile at the time, but this volatility has been dwarfed since the stock rose from below 20 to almost 100. An alternative is to use the Price Oscillator, which find the percentage difference between two moving averages:

$$(12 \text{ day EMA} - 26 \text{ day EMA}) / (12 \text{ day EMA})$$

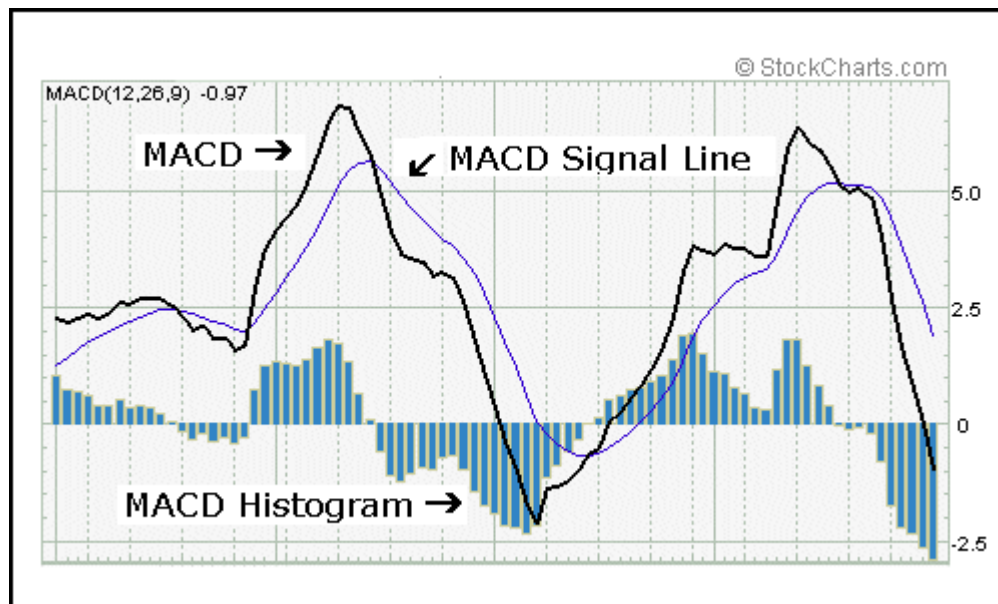
$$(20 - 18) / 20 = .10 \text{ or } +10\%$$

The resulting percentage difference can be compared over a longer period of time. On the AMZN chart, we can see that the Price Oscillator provides a better means for a long-term comparison. For the short term, MACD and the Price Oscillator are basically the same. The shape of the lines, the divergence's, moving average crossovers and centerline

crossovers for MACD and the Price Oscillator are virtually identical.

Since Gerald Appel developed MACD, there have been hundreds of new indicators introduced to technical analysis. While many indicators have come and gone, MACD is an oscillator that has stood the test of time. The concept behind its use is straightforward and its construction simple, yet it remains one of the most reliable indicators around. The effectiveness of MACD will vary for different securities and markets. The lengths of the moving averages can be adapted for a better fit to a particular security or market. As with all indicators, MACD is not infallible and should be used in conjunction with other technical analysis tools.

In 1986, Thomas Aspray developed the MACD-Histogram. Some of his findings were presented in a series of articles for *Technical Analysis of Stocks and Commodities*. Aspray noted that MACD would sometimes lag important moves in a security, especially when applied to weekly charts. He first experimented by changing the moving averages and found that shorter moving averages did indeed speed up the signals. However, he was looking for a means to anticipate MACD crossovers. One of the answers he came up with was the MACD-Histogram.



The MACD-Histogram represents the difference between MACD and the 9-day EMA of MACD, which can also be referred to as the signal or trigger line. The plot of this difference is presented as a histogram, making centerline crossovers and divergence's are easily identifiable. A centerline crossover for the MACD-Histogram is the same as a moving average crossover for MACD. If you will recall, a moving average crossover occurs when MACD moves above or below the signal line.

If the value of MACD is larger than the value of its 9-day EMA, then the value on the MACD-Histogram will be positive. Conversely, if the value of MACD is less than its 9-day EMA, then the value on the MACD-Histogram will be negative.

Further increases or decreases in the gap between MACD and its 9-day EMA will be reflected in the MACD-Histogram. Sharp increases in the MACD-Histogram indicate that MACD is rising faster than its 9-day EMA and bullish momentum is strengthening. Sharp declines in the MACD-Histogram indicate that MACD is falling faster than its 9-day EMA and bearish momentum is increasing.



On the chart above, we can see that MACD-Histogram movements are relatively independent of the actual MACD. Sometimes MACD is rising while the MACD-Histogram is falling. At other times, MACD is falling while MACD-Histogram is rising. MACD-Histogram does not reflect the absolute value of MACD, but rather the value of MACD relative to its 9-day EMA. Usually, but not always, a move in MACD is preceded by a corresponding divergence in MACD-Histogram.

1. The first point shows a sharp positive divergence in MACD-Histogram that preceded a bullish moving average crossover.
2. On the second point, MACD continued to new highs, but MACD-Histogram formed two equal highs. Although not a textbook positive divergence, the equal high failed to confirm the strength seen in MACD.
3. A positive divergence formed when MACD-Histogram formed a higher low and MACD continued lower.
4. A negative divergence formed when MACD-Histogram formed a lower high and

MACD continued higher

Thomas Aspray designed the MACD-Histogram as a tool to anticipate a moving average crossover in MACD. Divergence's between MACD and the MACD-Histogram are the main tool used to anticipate moving average crossovers. A positive divergence in the MACD-Histogram indicates that MACD is strengthening and could be on the verge of a bullish moving average crossover. A negative divergence in the MACD-Histogram indicates that MACD is weakening and can act to foreshadow a bearish moving average crossover in MACD.

The main signal generated by the MACD-Histogram is a divergence followed by a moving average crossover. A bullish signal is generated when a positive divergence forms and there is a bullish centerline crossover. A bearish signal is generated when there is a negative divergence and a bearish centerline crossover. Keep in mind that a **centerline crossover** for the MACD-Histogram represents a **moving average crossover** for MACD.

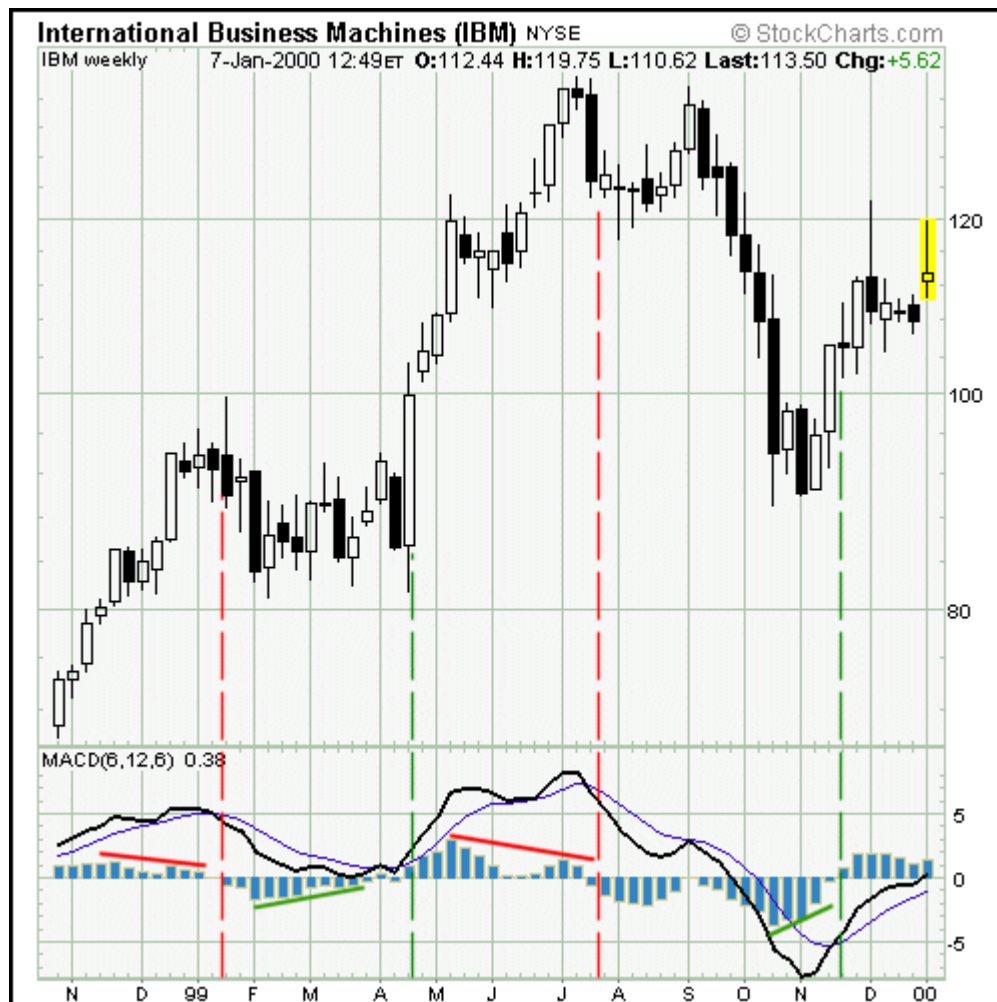
Divergence's can take many forms and varying degrees. Generally speaking, two types of divergence's have been identified: the slant divergence and the peak-trough divergence



A peak-trough divergence occurs when at least two peaks or two troughs develop in one direction to form the divergence. A series of two or more rising troughs (higher lows) can form a positive divergence and a series of two or more declining peaks (lower highs) can form a negative divergence. Peak-trough divergence's usually cover a longer timeframe than slant divergence's. On a daily chart, a peak-trough divergence can cover a timeframe as short as two weeks or as long as several months.

Usually, the longer and sharper the divergence is, the better any ensuing signal will be. Short and shallow divergence's can lead to false signals and whipsaws. In addition, it would appear that peak-trough divergence's are a bit more reliable than slant divergence's. Peak-trough divergence's tend to be sharper and cover a longer time frame than slant divergence's

The main benefit of the MACD-Histogram is its ability to anticipate MACD signals. Divergence's usually appear in the MACD-Histogram before MACD moving average crossovers. Armed with this knowledge, traders and investors can better prepare for potential trend changes.



MACD-Histogram can be applied to daily, weekly or monthly charts. (Note: This may require some tinkering with the number of periods used to form the original MACD; shorter or faster

moving averages may be required for weekly and monthly charts.) Using weekly charts, the broad underlying trend of a stock can be determined. Once the broad trend has been determined, daily charts can be used to time entry and exit strategies.

On the IBM weekly chart, the MACD-Histogram generated four signals. Before each moving average crossover in MACD, a corresponding divergence formed in the MACD-Histogram. To make adjustments for the weekly chart, the moving averages have been shortened to 6 and 12. This MACD is formed by subtracting the 6-week EMA from the 12-week EMA. A 6-week EMA has been used as the trigger. The MACD-Histogram is calculated by taking the difference between MACD (6/12) and the 6-day EMA of MACD (6/12).

1. The first signal was a bearish moving average crossover in Jan-99. From its peak in late Nov-98, the MACD-Histogram formed a negative divergence that preceded the bearish moving average crossover in MACD.
2. The second signal was a bullish moving average crossover in April. From its low in mid-February, the MACD-Histogram formed a positive divergence that preceded the bullish moving average crossover in MACD.
3. The third signal was a bearish moving average crossover in late July. From its May peak, the MACD-Histogram formed a negative divergence that preceded a bearish moving average crossover in MACD.
4. The final signal was a bullish moving average crossover, which was preceded by a slight positive divergence in MACD-Histogram.

The third signal was based on a peak-trough divergence. Two readily identifiable and consecutive lower peaks formed to create the divergence. The peaks and troughs on the previous divergence's, although identifiable, do not stand out as much.

The MACD-Histogram is an indicator of an indicator or a derivative of a derivative. MACD is the first derivative of the price action of a security and the MACD-Histogram is the second derivative of the price action of a security. As the second derivative, the MACD-Histogram is further removed from the actual price action of the underlying security. The further removed an indicator is from the underlying price action, the greater the chances of false signals. Keep in mind that this is an indicator of an indicator. MACD-Histogram should not be compared directly with the price action of the underlying security.

Because MACD-Histogram was designed to anticipate MACD signals, there may be a temptation to jump the gun. The MACD-Histogram should be used in conjunction with other aspects of technical analysis. This will help to alleviate the temptation for early entry. Another means to guard against early entry is to combine weekly signals with daily signals. There will of course be more daily signals than weekly signals. However, by using only the daily signals that agree with the weekly signals, there will be fewer daily signals to act on. By acting only on those daily signals that are in agreement with the weekly signals, you are also assured of trading with the longer trend and not against it.

Be careful of small and shallow divergence's. While these may sometimes lead to good signals, they are also more apt to create false signals. One method to avoid small divergence's is to look for larger divergence's with two or more readily identifiable peaks or troughs. Compare the peaks and troughs from past action to determine significance. Only peaks and troughs that appear to be significant should warrant attention.

Using Technical Analysis in a Strategy

The first lesson is to learn how to recognize these candle patterns on a chart and know their interpretation as well as MACD signals.

When you are looking to enter a trade to buy currency to open a position (bullish), follow the bullish patterns or follow the bearish bottom reversal indicators, which could be a signal that the current bearish trend is reversing. Please note that just because a trend is ending does not mean it will totally reverse, it may trade sideways. The best method is to follow a bearish bottom indicator with a bullish signal to confirm it.

When looking to sell a currency to open a position (bearish), follow the bearish signals or bullish top reversal indicators, which could be a signal that the current bullish trend is reversing.

It is good practice to look at past charts for each major currency pair and start identifying some of the signals and see what trend occurred after each signal. This is also a good idea to identify MACD signals. You will quickly see how powerful the MACD can be in determining future trends.

Note: you do not need multiple signals to enter or exit a trade, however, the more signals you can identify the more likely of the outcome. In other words, if you find a good bullish candlestick pattern and the MACD has crossed over center, that would be a great signal.

Once you have a good feel for the signals and have practiced on past charts, you are ready to trade. When you enter a position, remember to use the risk management techniques discussed earlier. Set a stop loss order immediately at a maximum loss amount you feel comfortable with. If you get a reversing signal during a particular trade and the currency has not moved through your stop loss, you may want to set a tighter stop loss knowing there is a good chance of a trend reversal. The same is true if the market moves in your favor and you begin setting a trailing stop loss. If you see a trend reversing signal on the chart, you may want to protect more profits by setting a tighter stop order.

Order Ticket

Once you have completed your chart analysis and are ready to trade, you must fill out an order ticket with the brokerage firm that you have an account. Here are the main components of the trading ticket:

1. Make sure the account number is correct. Normally, the brokerage firm will have a drop down menu on the online order ticket with your account numbers. If you have multiple accounts, make sure you check that it is the correct account.
2. Order Type-Again, usually a drop down menu with the choices listed. (market, limit, stop, OCO, etc.)
3. Symbol-Make sure you have the correct currency pair that you want to trade.
4. Lot Size: Enter how many lots you would like to trade (1 lot=100,000)
5. Good Until-You can set if you want the order to be good until canceled or good until the close of a particular exchange (IE: Hong Kong)
6. Always double check the current quote. The bid and ask should be displayed on the order ticket.
7. Once everything is entered correctly, click submit.
8. Once you submit the order, you will usually get a confirmation page. Double check all of the information again. If it's all correct, click submit and the order will be placed.

Brokerage

There are not as many choices for opening an account to trade currency as there are for stocks and until recently, many of these firms were not regulated. Unfortunately, it was very easy for a small firm to put up a website and look like they were larger than they really were. Due to the risk of currency trading and the large amount of capital traded each day, you want to make sure that your brokerage firm is financially stable.

We use only one brokerage firm to trade our own account and it's the only one we recommend to our clients.

An established forex firm you can trust

There is no way to eliminate market risk in forex transactions. However, forex customers should not have to worry about the stability and financial integrity of their forex dealer. Our firm offers its customers the reliability and financial strength that most other forex firms cannot rival. With over \$20 billion in assets, customer equity of approximately \$4 billion, over 180,000 customer accounts and over 400 million in individual customer transactions handled during the most recent fiscal year, our firm offers a unique combination of service, reliability and strength.

Peace of mind knowing you will never be liable for a debit balance

Our firm offers forex traders something rarely seen in the aggressive world of international currency trading: strictly limited risk! With most forex firms, you are always at risk of facing a negative equity balance. If the market moves against you, you can end up owing your forex dealer more money than is actually in your account. But with our firm, that can NEVER happen! In the event that funds in your account fall below margin requirements, the Trading Desk will simply close all open positions. That means that, even if you are dead wrong and there is a catastrophic market move against you, you can never lose more than the amount of money you have in your account. That provides you with tremendous peace of mind

Tight spreads, instantaneous execution and guaranteed fills on market orders, stops and limit orders

We provide instantaneous execution from real-time, two-way quotes. All quotes shown on our system are the prices where we are willing to buy/sell the quoted currency, rather than vague indications of where the market is trading, which are not honored. Orders are executed and confirmed within seconds. Our trading station never requests the size of a trader's potential order, or which side of the market he is trading, before giving him a bid/offer quote. And customers can execute directly off our quotes for all orders up to \$1 million. Dealers from some other firms may first determine whether the investor is a buyer or a seller, and then vary the price to increase their own profit on the transaction. Our price transparency assures that traders receive a fair price. Trading from real-time streaming quotes significantly reduces slippage and enhances trading performance. Finally, unlike most other forex firms, we guarantee a fill at the specified price on all stop and other limit orders up to \$1 million in size. By using the guaranteed stops offered, you can limit your risk on a trade to the amount you choose.

A fast, stable, easy-to-use, online trading station

In the online currency trading industry, the online trading platform used by our firm is virtually unrivaled in reliability and technical efficiency. The platform has a proven track record of reliability and stability, even during the most turbulent market conditions. The Trading Station is a Windows-based program rather than a server-based system. This creates a safer, faster and more reliable platform for trading. PCs today are very powerful and we choose to harness that power for the sake of reliability and scalability. Our clients can trade without undue worry about slow execution, freezing and server crashes that are linked to Java-based systems during heavy trading times.

Our Trading Station is not only robust, but also intuitive and user-friendly. All relevant trading information is displayed on one concise dealing screen. We feed real-time executable prices to clients and updated P/L on all open and closed positions, account balances, risk management and other information, in real-time with each price change. Traders are able to customize the Trading Station's user interface by changing fonts,

colors, and window size and location. The Trading Station also provides full, real-time snapshots of account statements including detailed information regarding every open position, open order, margin position and generated profit/loss per trade. There is an integrated margin call feature, which minimizes risk by automatically closing positions if the account balance falls below the margin requirement as a result of trading losses.

Live customer support 24 hours per day

We offer clients a 24-hour support network that includes dealing, technical and customer support. We are committed to providing full support to their entire client base throughout the world. There is always a dedicated, well-trained staff member available to address clients' needs regardless of their time zone. Our staff can be reached via email, phone or the live 24-hour chat button on the website. Foreign clients will find that the staff is comprised of individuals from various countries who speak a multitude of languages including Mandarin, Cantonese and Japanese.

In addition to these great benefits, we also offer:

- Commission Free Trading
- Free News and Analysis
- Free Advanced Charting
- Minimum Deposit of \$2,000 USD for full contracts (100K) and \$300 for Mini contracts, which is a great alternative for novice traders who do not have the capital or experience to trade the full contracts. Everything works the same except the contract size is 1/10th of the normal lot.
- Margin as low as 1% (100:1)

We also offer a demo account, where you can trade with play dollars to gain experience. If you are interested in opening an account or for more information, click **TRADE** below:

TRADE