

Investment, Trading, and Portfolio Management

An Interactive Qualifying Project Report

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Abstract

The goal of this project was to get a solid understanding of the forex market in order to launch a money management company. In order to be successful in terms of trading, many methods regarding forex trading were considered and were systematically tested to determine the best strategies. This included using different fundamental and technical indicators, and programming. To launch a money management company, the legal structure, location, money management, risk management, government regulation, licensing, and marketing strategies were examined.

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1.0 – Introduction

The first step anyone must take before trying to invest in the forex market is to develop a complete understanding of the structure of the stock market and forex markets. There are a lot of important concepts and terminology to learn before one can proceed further in their pursuit of managing money within the forex market. This is a breakdown of the basic terms involved in investment and trading. It will cover everything from the basics to different types of analysis and trading techniques.

1.1 – History of Finance/Markets

Today the stock market has millions of investors and billions of dollars in circulation, but this was not always the case. The first evidence of an exchange system dates back over two hundred years ago in Manhattan, where people would trade silver for slips of paper that said they owned shares of cargo on ships that came into the harbor on a daily basis. Trade flourished with this new system.

Another practice that led to the institution of the stock exchange was the issuance of bonds, particularly war bonds. This dates back to the American Colonial War, where the government was selling war bonds to raise funds for the war. The bonds would mature in value over time and could be exchanged for a profit in a certain number of years. The first banks would also sell shares of their company to raise money. This is very similar to how new companies will sell shares of their companies to investors to raise money in today's market.

At the time, Wall Street was the place where most transactions of this nature would take place. As a result, in 1792 a group of twenty-four men signed an agreement, known as the “Button Agreement,” that officially started the New York Stock Exchange (NYSE). They set up

a system where they would trade shares amongst themselves and charge others fees to trade for them.

There were many stocks that were, in one way or another, not good enough to be traded within the NYSE, and were thus traded on the curb outside. This became known as “curb trading,” and would eventually develop into what is known today as the American Stock Exchange (AMEX). These have been joined today by NASDAQ and countless other international stock exchanges. Regardless, trading in the stock market was a new way to make and manage money, and it was the beginning of a new global economy.

The Industrial Revolution in the twentieth century brought with it a surge of activity in the stock market. As more and more money was flowing through Wall Street, more investors flocked to the stock market to get their piece of the action. This completely changed the dynamic of the American lifestyle and created many successful entrepreneurs virtually overnight.

With the huge surge in activity in the stock market and following the stock market crash of 1929, the government realized it needed to take a more active role in regulating exchange to protect small investors. For this reason, in 1934 Congress passed the Securities and Exchange Act, which resulted in the Securities and Exchange Commission (SEC). The SEC is responsible for overseeing and regulating all trading within the market.

1.2 – Project Overview

In the past seven months, teams of three to five set out to establish the guidelines for launching a successful money management company through investment in the forex market. The research and progress through the duration of the project was split into three major steps that would build upon one another and lead to a more complete understanding of the material. The first necessary step was to familiarize ourselves with both the stock market and the forex market

through research. This research would cover a wide range of topics, from a simple review of basic terms and concepts to a complex breakdown of different analysis and trading techniques. The next step would be hands on experience in the forex market, through a real-time simulated account. First, there was a focus on trading individually, familiarizing ourselves with different trading platforms, and building a rigid trading and money management plan. The focus then shifted into trading as a group and developing our trading plans further, both individually and as a group. This would transition quite nicely into the third and final step, which would be conducting research in the necessary attributes of a money management company investing in the forex market.

This paper will cover in depth the necessary background information to legally and comfortably invest both your own and others' funds in the forex market. It will be organized to mimic the path through which we progressed our own understanding of the material – concentrating on each individual step in order and developing chronologically. The results of our research reflect our own personal interests and may serve as recommendations. There are the various choices and pathways one can take in creating a company of this nature and show what the ideal steps were. Ultimately it will be up to the reader to decide what suits them best.

2.0 – Background

2.1 – Overview of the Stock Market and Basic Terms

Stock is “a type of security that signifies ownership in a corporation and represents a claim on part of the corporation's assets and earnings.” (Investopedia). A person who owns stock in a company, or a shareholder, technically owns a certain percent of that company’s assets, depending on how many shares they hold. Instead of taking out massive loans, company’s sell stock to raise money to cover start-up costs. Stock exchanges are places where people can trade stocks and bonds. The stock market’s hours of operation are 9:30 a.m. to 4:00 p.m. Eastern Standard Time, Monday through Friday. Short sessions, which end at 1:00 p.m., are held on New Year’s Day, Martin Luther King, Jr. Day, Washington’s Birthday, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas.

An average person would normally trade stocks by hiring a professional trader, or a stock broker. Stock brokers employ a lot of different methodologies to make decisions on how to trade stock. Many professionals are highly educated in economics, finance, mathematics, and computer science. They use knowledge of current events and trends in recent trading, among other things, to make predictions about the market and make smart investments. Traders use “stock screens” to keep constant track of what is going on, so they can make their move when they see something that is desirable to them.

Stock traders use either fundamental analysis, technical analysis, or a combination of the two to make decisions in the stock market. These two methods are based on different types of indicators. Fundamental analysis is based off knowledge of economics while technical analysis is based off trends in the stock market. Someone who uses fundamental analysis would focus more on current events and economic factors that would cause the price of a stock to fluctuate. They look at balance sheets, cash flow statements, and income statements to try to evaluate the true

value of a company. Someone using technical analysis would base their judgments off recent price changes and use these to predict where the stock would likely go next. Technical traders do not think the value of a company is useful in trading. They study charts to get all their information.

2.2 - The Forex Market

Another type of trading is foreign currency exchange, more commonly known as forex trading. Forex traders work off the relative value of different currencies around the world. Forex trading is usually done through a broker or a market maker. It is mainly done over the internet and with just a few clicks a trader can place an order. The broker will then pass the order to a partner in the Interbank Market, and when the trade is closed the loss or gain will be credited to the trader's account. This can quite often be a very quick process. The forex market is open from Sunday at 5:15 p.m. at Sydney until Friday at 4:00 p.m. Eastern Standard Time. It operates 24 hours a day, because of time differences all around the world, and likewise it has been said that the forex market never sleeps.

Fundamental and technical analysis can also be used in forex trading. Like trading in the stock market, fundamental analysis in forex depends on economic factors. It would require a good eye for what events within a country would cause a rise or drop in the relative value of their currency. For example, a country struck by a natural disaster would need foreign aid, and the value of their currency would likely drop as a result. Technical analysis in forex trading also relies on the ability to read a chart. Learning how to read a forex chart can be very complicated, but it is also very useful. Charts vary in style and time frame. Different types of charts are Japanese candlesticks, line charts, and bar charts, and their time frames can vary from as little as one second to as much as ten years. All have their own benefits.

Types of indicators used in forex trading are oscillators, Larry Williams Indicators, moving averages, and momentum indicators. Oscillators are based off of identifying highs and lows and turning points. For example, when a certain stock has been declining for a while and is reaching one of its all-time lows, an investor may view this as a good time to buy, because it is due for a rebound. This may also be risky business, however, because sometimes these downward trends don't stop and lead to bankruptcy. Larry Williams Indicators are a bunch of technical tools developed by Larry Williams in the 1980s. Moving averages measure the momentum and direction of certain trends. They compare current market values to market averages, believing that prices usually fluctuate around the average over a given period of time. Momentum indicators are somewhat a mix of oscillators and moving averages. Traders that use this method try to pinpoint where the price action is at its height to make large gains quickly. Fundamental and technical indicators will be explored more in depth.

The terms spread, leverage, pip, and margin are all important in understanding forex trading. Spread is the difference between buy and sell price for the same thing from a market maker. In other words, a market maker will buy for one price and sell for another, so if the market price doesn't change, a trader will actually lose money. Pips are used to describe the change in currency rates. One pip is equal to 0.0001, except for in Yen, where one pip is 0.01. This is because currency rates do not change by a lot, so it is easier to express it in pips. Margin is a type of collateral used by trading providers to make sure an investor can pay up in the case of large losses. It is a deposit on the trading account to cover potential future losses. Leverage is allowing a trader to play with a larger amount of money than they actually deposited. It can allow a trader to control anywhere from 50-400 times more than the amount they deposited, allowing for larger gains but also putting all their money at risk.

Two more important terms in trading stocks are long and short. Going long refers to the process of buying low and selling high. A trader, who expects a certain stock to increase in value in the future, will buy a certain number of shares and sell them when they have reached a desirable price. Selling short is a little trickier. If a trader expects that a certain stock will decrease in value for whatever reason, they can sell short to try to profit from this. They basically borrow shares of said stock from their broker and sell that at the current market price and then use this money to buy the shares back once the prices have fallen to a target level. Selling short can be very risky, however, because the stock market is inevitably unpredictable.

Another important concept to know about as a trader is hedge funds. A hedge fund is a privately managed portfolio of investments, which uses highly advanced trading strategies in both domestic and international markets with the goal of generating high returns. They are used to offset losses during a market downturn and generate returns higher than traditional stock and bond investments. Because they are private, they are open to a limited number of investors and require a very high initial investment. In tight times, hedge funds would look to commodities such as gold to make money, in what would otherwise seem an unprofitable situation.

3.0 – Methodology - Trading in the Forex Market

3.1 – Trading Platforms

There are a variety of trading platforms you can use for forex trading and below are the tutorials for the two we had used; MetaTrader4 and TradeStation 9.0.

3.1.1 – MetaTrader4

MetaTrader4 is a very common and user friendly currency trading platform. Below are the fundamentals of using MetaTrader4:

First you want to set up your graphs and the currency you want to see so right click on the side with all the symbols and click Chart Window to see the chart window of it. Up top you will see

the time intervals for each chart: . Next, you can change the appearance of the price movements such as lines, bars, or candlesticks.



After everything is all set, you can also change the background of your chart so it will save ink if you choose to print it or have less strain on your eyes. To do this, simply right click anywhere on the chart and click properties. You will be prompted with this window:



Figure 1 - MT4 Chart Properties

In this window, you can use their convenient color schemes that MT4 has built in or set up your own colors for everything.

To set up an order, click on  New Order

After you click on  New Order to set up an order, an order screen pops up with a real time window of the currency pair:

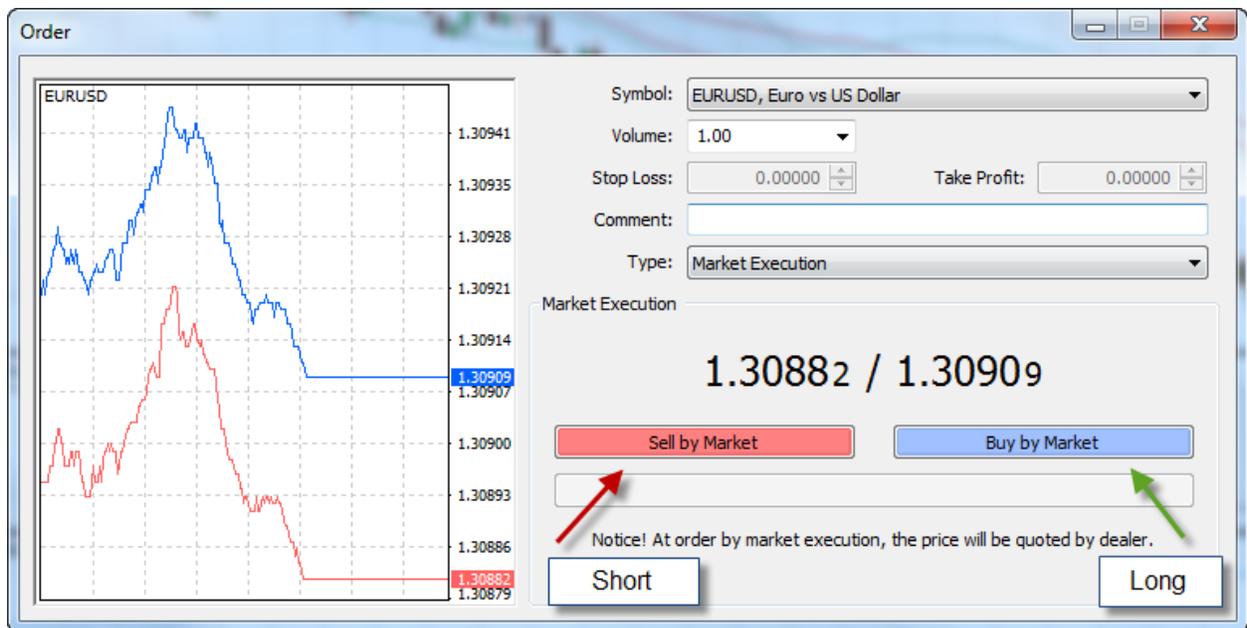


Figure 2 - MT4 Order Window

In this window, you can pick the currency you want to go short or go long on. You can pick the lot size by the Volume: drag down box and you can type a comment so you know what happened and why you traded. The Type drop down box you see is to set either an instant order or a pending order to execute when certain conditions are met. The bottom two buttons in red and blue does a short or does a long. Notice how you can not set stop loss or set profit when you do an instant buy. You will have to click on **Trade** | on the bottom of the terminal and then right click on the trade you just did and click “Modify or Delete Order”. Now you can set your stop loss (in red) and your take profit (in blue):

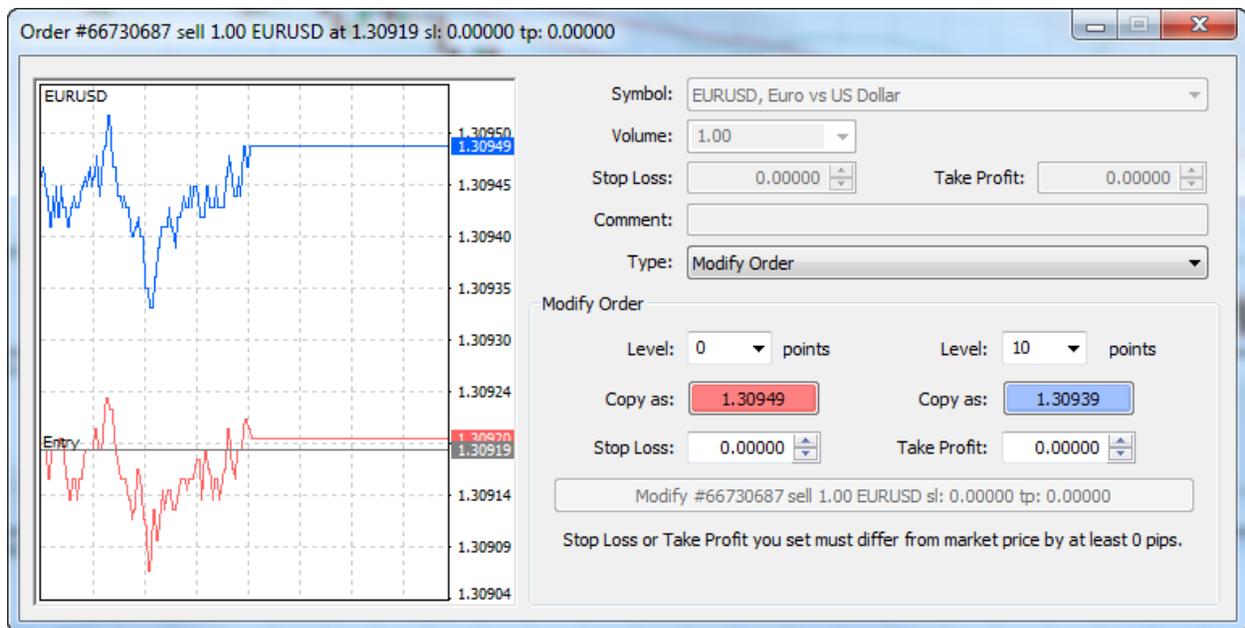


Figure 3 - MT4 Stop Loss/Take Profit

Once you set up your take profit and your stop loss and you want to close the order before either one hits, you can right click your trade again in the Trade terminal and click “Close Order.” Now on the bottom it will have the close button in yellow.

To add in expert advisors, you can do so by:

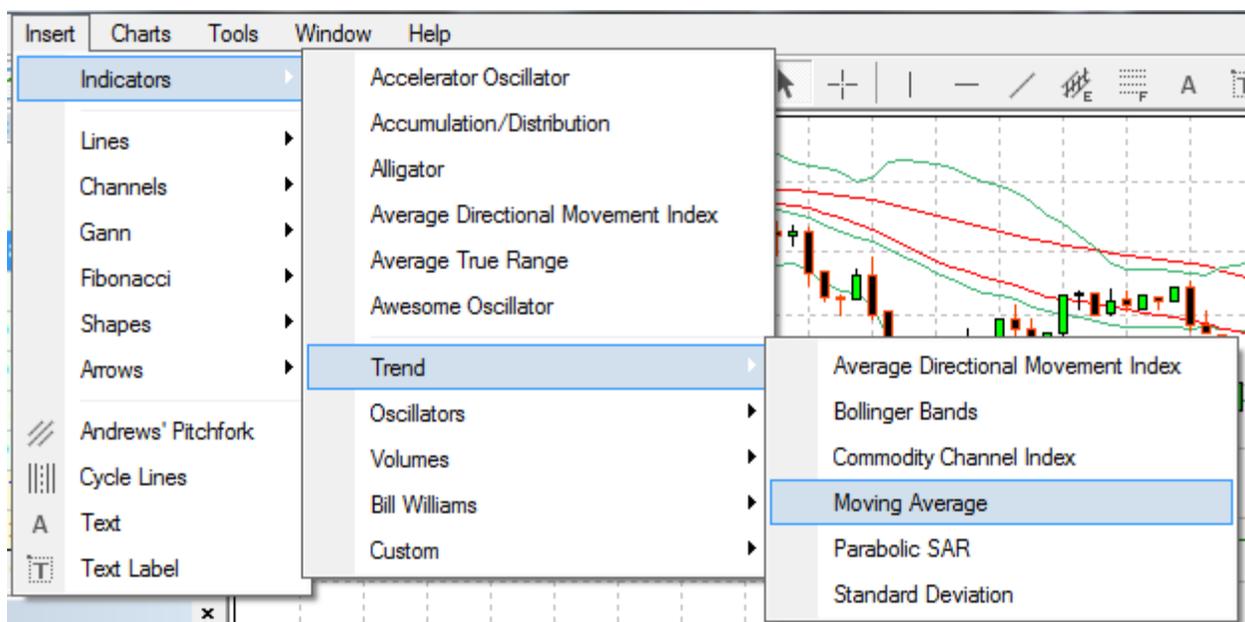


Figure 4 - Indicators In MT4

When you set up all the parameters on the indicator and you want to either adjust it or delete, simply right click on the indicator on the graph and you can modify or delete it.

3.1.2 - TradeStation 9.0

Another very commonly used trading platform is TradeStation 9.0. It offers similar features as MetaTrader, but also has a little more to offer. However, it is a little more difficult to get acclimated with the software. These are the basics to navigating TradeStation 9.0 and using its basic functions.

When you first open your TradeStation Platform, it will look something like the window shown in Figure 5. Take note of where the Order Bar and Shortcut Bar are, because these will be very useful when using this particular platform.

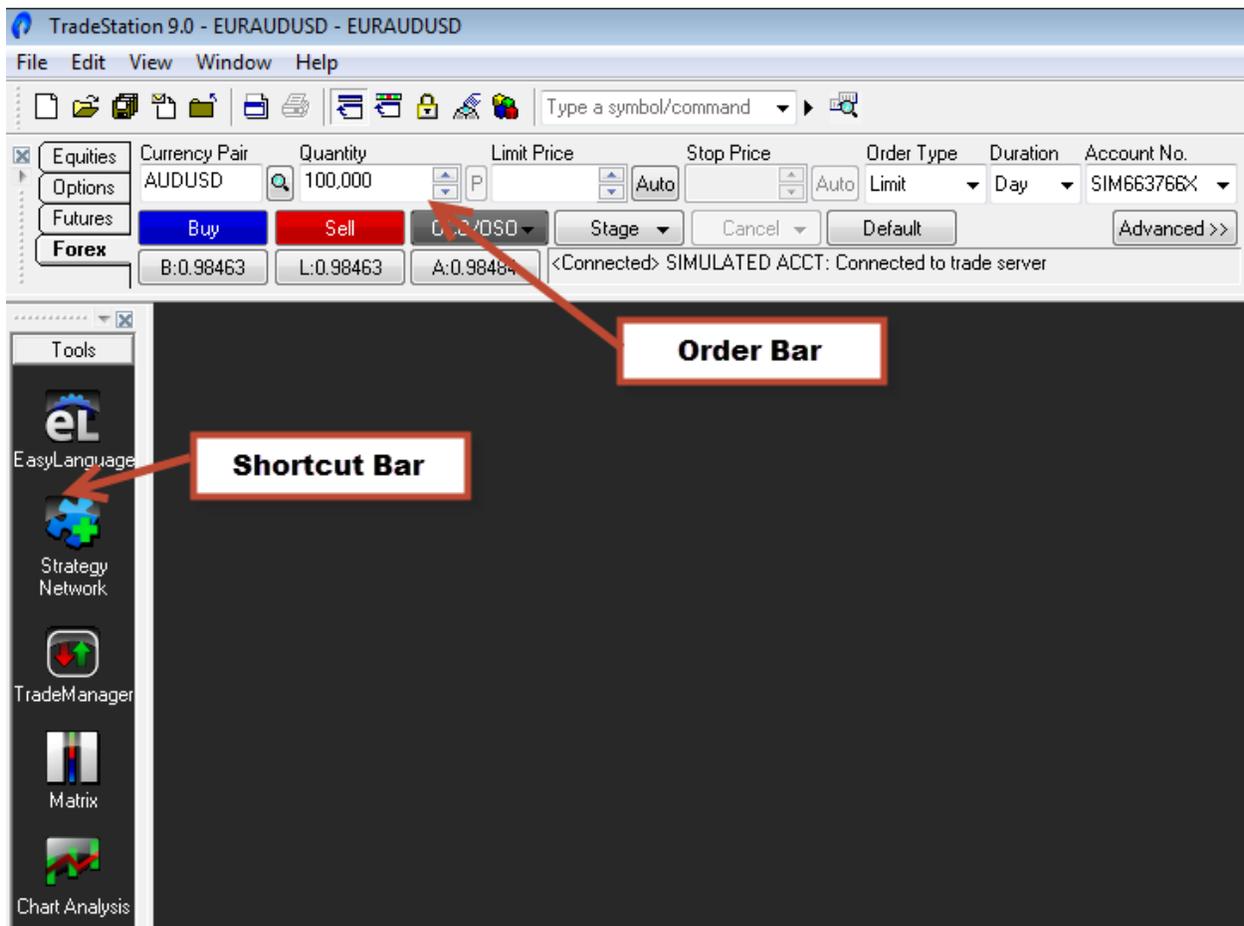


Figure 5 - TradeStation 9.0 Window

If your screen does not look exactly like this, open the “View” tab and make sure it looks like the one shown in Figure 7.

Once you have done this, the next step would be to open a trade window. You can do this by clicking “File” → “New” → “Window,” as

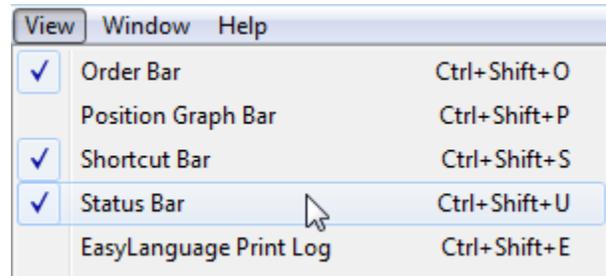


Figure 7 - TradeStation 9.0 View Window

shown in the Figure 6 below, and then by clicking “Chart Analysis” on the next screen. You can also access this through the shortcut bar or by using Ctrl+N.



Figure 6 - TradeStation 9.0 Chart

Once you have done this, you will see a trade window like the one shown in Figure 6 above. On the top of the window it will show you what stock or currency pair you are trading and the time interval you are looking at. You can change the settings of the

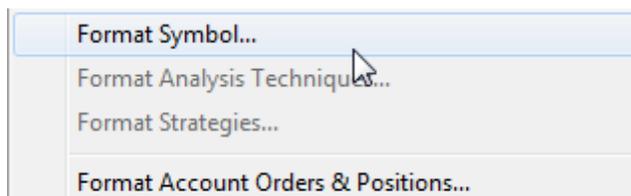


Figure 8 - TradeStation 9.0

window by right clicking anywhere in the window and selecting “Format Symbol” as shown in Figure X. From here you will be able to change which stock or currency pair you are viewing, the time interval, and the bar type, among other things. You can also change colors and overall appearance by clicking “Format Window” from this same menu bar.

There are a lot of technical indicators built into TradeStation. You can access these by clicking “Insert” → “Indicator,” at which point you will be able to choose from a large list of indicators, including everything from simple moving averages, to oscillators and Fibonacci numbers. All of your indicators can be accessed and edited by clicking “Format” → “Analysis Techniques.” You can edit the color of the indicator as well as the numerical values that go into creating the indicator.

Once you have your window set up the way you like it, with your desired currency pair, time interval, indicators, colors, etc., you are ready to make some trades. The easiest way to make a trade is to use the Order Bar. The order bar is shown in Figure 9.



Figure 9 - TradeStation 9.0 Order Bar

The Order Bar gives you a choice to trade equities, options, futures, a forex. We have appropriately chosen the forex tab. Note that you can change the currency pairs you wish to trade, the quantity or lot size. Before you make any trades make sure you are on the correct currency pair, using the correct Account Number, and change the Order Type from “Limit” to “Market.” From here it is as simple clicking “Buy” or “Sell” depending on the entry conditions. You can view all of your open positions by clicking on the Trade Manager in the Shortcut Bar.

Here you can see your profit or loss. You can also close any positions by right clicking them and selecting “Close Position.”

Understanding these basic features should allow anyone to trade comfortably using this platform. As said before, however, these are simply the basics to using the TradeStation platform. There are a lot more features that this platform offers, and the only way one can familiarize his or her self with the program is to use it a lot.

3.2 – Example Trading Plan/Strategy

NEVER FULLY LEVERAGE. NEVER FORGET A STOP LOSS. ALWAYS THINK OF WORST CASE SCENARIO. DON'T BE GREEDY. BE PATIENT. HAVE FUN!

1. Stick to the Majors (EURUSD, GBPUSD, USDCHF, and USDJPY)
 - a. Lower spreads
 - b. More reliable
2. Trade in the morning between 8:00 and 10:00, NOT in the late afternoon
 - a. The market is more reliable in the morning, because both the London and New York markets are open
 - b. This adds more liquidity to the market, allowing for lower spreads and preventing big players from manipulating prices
3. Base most of your trades off of the 15 minute interval chart
 - a. This chart will show you the overall trend of the day
 - b. Short term trends that move in the same direction as the trend of the day tend to be stronger than those which move against it
 - c. Keep in mind long term support and resistance levels that may cause what appears to be an overwhelmingly upward trend to turn downward
4. Look at the different currency pairs, and narrow it down to which one(s) you want to work with
 - a. If there is no clear trend developing in a particular currency, there's no need to waste your time trading with it
 - b. It is easier to focus on maybe 1 or 2 as opposed to 4 or 5, and then you can have more than one time interval open for a single currency pair
5. When you have an idea of the long term trend, look the 5 minute and 1 minute intervals
 - a. Look at the trends here and try to match them up with the long term trend
6. Technical Indicators Used
 - a. Candlestick chart – gives more information about the direction in a particular interval as well as the high and low in the interval
 - b. 50 Day Moving Average – gives a good idea of the direction and strength of a trend. Less sensitive than the 14 day moving average but not quite as rigid as the 200 day moving average

- c. Stochastic Indicator – Shows overbought and oversold levels and can also show the beginning and end of a trend
 - d. ATR – shows the strength of an ongoing trend
 - e. Parabolic SAR – when combined with the Stochastic and ATR, can be very useful in signaling strength and direction of trends
 - f. Bollinger Bands – shows periods of consolidation and breakout as well dynamic support and resistance levels
7. Always perform a preliminary technical analysis before starting to trade for the day.
- a. This should take about a half hour and should be used to identify overall trends on the day and long term support and resistance levels
8. Signal to go LONG
- a. Watch the stochastic indicator window; if the %K line crosses over the %D line in the upward direction when they are in the oversold range, go long
 - i. Confirm this in the ATR window by looking at the strength of the trend
 - ii. The stronger the upward trend the better
 - b. If a currency pair has been lingering a clear support and resistance
 - i. Use Bollinger lines to determine these levels
 - ii. Wait until it has hit the support and gone up **at least** 10 pips from there to go long. Again confirm the strength of the trend in the ATR window
 - iii. If it hits the resistance level and carries on **at least** 10 pips past that point go long. Confirm this in the ATR window. Don't get sucked in by market manipulators.
 - c. Don't trade against a longer term downward trend unless it has reached a long term support level, and is clearly turning around
 - d. Signal to exit long trade is when the lines appear to be getting closer together and are approaching the overbought range.
9. Signal to sell SHORT
- a. Watch the stochastic indicator window; if the %K line crosses over the %D line in the downward direction when they are in the overbought range, sell short
 - i. Confirm this in the ATR window by looking at the strength of the trend
 - ii. The stronger the downward trend the better

- b. If a currency pair has been lingering a clear support and resistance
 - i. Use Bollinger lines to determine these levels
 - ii. Wait until it has hit the resistance and gone down **at least** 10 pips from there to sell short. Again confirm the strength of the trend in the ATR window
 - iii. If it hits the support level and carries on **at least** 10 pips past that point sell short. Confirm this in the ATR window. Don't get sucked in by market manipulators.

10. Money Management

- a. Reward: risk ratio of 3:1 or higher
 - i. This means the possible profit is three times higher than the stop loss
- b. Always set a stop loss of 30-40 pips
 - i. Stop losses can be a little more lenient for long term trades
- c. Include a take profit as well
 - i. Adjust the take profit as the trade goes on to ensure that you allow for improvement but also ensure that you maintain profit
 - ii. If you profit 100 for instance, set the stop loss at 75, and see if it continues to go up. If it goes down, you still profit. If it goes up, continue to adjust it accordingly
- d. Never risk more than 10% of your account at a time
 - i. Keep in mind that the leverage you are playing with greatly affects the amount of your account that you are risking
- e. Set a loss limit for the day
 - i. If you lose too many trades in a row or surpass a monetary level that you are uncomfortable with, accept that it is not your day and stop trading
 - ii. Being stressed out causes stupid decisions
- f. Also set a goal for the day
 - i. If you don't set a reasonable goal that you want to reach for the day you may keep winning get cocky and put it all on the line and just so happen to forget a stop loss that time around

3.3 – Money Management

For a money management on a starter demo account, you usually start with \$100,000 so a good rule of thumb is to not risk more than 2% of your total equity. After one or a few bad trades, take a step back and stop trading for the day and wait until the next day so you do not become frustrated and trade just to trade. Continue to monitor the market and see if you can find any good trends developing that you might see again tomorrow. Two percent of \$100,000 is \$2,000. With a 50:1 leverage and 1 standard lot with a \$100,000 account, the market can move against me 9800 pips before you get a margin call since that brings your available margin to zero. Of course this would not happen as you would have a stop loss but 9800 pips is a very comfortable number. You can also shoot for the best reward to risk ratio possible when doing all of your trading.

3.3.1 – Loss Management

Similar to money management, loss management is similar in way that you want to manage your money to minimize your loss per trade. The main way to ensure you don't lose big is to set a stop loss and determine your trade lot size. The bigger the lot size, the bigger the risks you will take which will incur huge losses if it goes the wrong way for you. You will have to find a comfortable percent of your money you can lose without regret and use that to figure out what kind of lot size you will be trading with. The other way to minimizing losses is to set stop losses. Usually on quick trades within an hour to two, the stop loss is within the range of 5-15 depending on how volatile the market is. On longer duration trades, you will want to set a higher stop loss as the price movements will be a lot bigger than short term trades.

3.4 – Fundamental Indicators

Below will highlight the top fundamental indicators here in the U.S. – the GDP, U.S. Non-Farm Payroll, Interest Rate, and Retail Sales.

3.4.1 – GDP

GDP stands for Gross Domestic Product and it's a value of all of the completed products, goods, and services that are produced within a countries borders. The GDP is a year-to-date report that represents the past year of production and includes all public consumption, government outlays, investments, exports, and imports that occur within a defined territory. This fundamental indicator is used to gauge the economic health of a country and is also used to determine the standard of living. Naturally the value of the US-dollar and GDP would go hand in hand. The GDP basically shows how well we are doing as a country, so you would expect that if the number is high the value of our currency would reflect that. On the other hand, if a country has a low GDP, then the value of their currency is likely to be lower.

3.4.2 – Nonfarm Payroll

The nonfarm payroll is a statistic that represents the total number of paid US workers of any business with exception to government employees, private household employees, employees of nonprofit organizations, and farm employees. It is commonly referred to in the Gartman Letter, and many people use it as an indicator of the strength of the U.S. economy. It is reported by the US Bureau of Labor Statistics and comes out on the first Friday of every month. The report encompasses approximately 80% of the workers who produce the entire GDP so it is a great way to determine the strength of the economy. For this reason it has a large effect on the forex market. If the nonfarm payroll increases over a month, we would expect to see an increase in the value of the US-dollar. If it decreases, we would expect the opposite. There are also estimates that are put out before the release of the report and these would also affect the value of the US-dollar. If the report is below what the economists expected then the currency tends to be weaker and when it comes out higher than expected, the currency price will go higher.

3.4.3 – Interest Rate

The interest rate is the amount charged by a lender for someone to borrow money. The forex market is affected by this because when interest rates are lower people will have an easier time borrowing and paying back their loans. When this happens it is a good sign for the economy and usually a sign that the market is getting stronger. The interest rates that the Forex market pays attention to are the FOMC interest rates because these rates give a better view at the broad market.

This report is a measure of the sales of retail goods over a certain time period. The monthly report in the US is released by the Census Bureau and the Department of Commerce and comes out two weeks after the end of every month. The report covers the previous month and compares historical data, but the year over year comparisons are used more because it shows trends for the consumer based on the season. The report is made up of in store sales and out of store sales and is usually broken down into groups which are beverages, clothing, and autos. These sales are a large part of the GDP and an extended drop off in retail sales can often lead to a recession because tax receipts will be lowered and companies will have to let people go. Also the retail report is a very timely report unlike some other reports which are a month or two late for what they are reporting. This report only waits two weeks and with all the value in the report, the market can become very volatile at the time of its release.

3.5 – Technical Indicators

The two main types of technical indicators are leading and lagging. Leading indicators have predicting qualities – preceding price movements – while lagging indicators follow price movements and are used as a confirmation tool. A category of indicators known as oscillators focus on a bound range and use average high and low values to predict trends and turnarounds. Two other tools used are crossovers and divergence. Crossovers are very commonly used and

show when the price moves through a moving average or when two moving averages cross over each other. Divergence is when the price is going in the opposite direction of the indicator and shows the user that the direction of the price trend is weakening.

There are other types of indicators that have more specific uses. Average directional index (ADX) shows the strength of a current trend. It is used more to identify momentum rather than direction. Positive and negative directional indicators are plotted and measured on a scale from zero to 100, with readings below 20 indicating a weak trend and readings above 40 indicating a strong trend. The Aroon indicator shows the security and magnitude of a trend. It analyzes the amount of time since the highest and lowest prices in a given time period, which can be altered according to a user's preference. Aroon oscillators plot the difference between these values between a range of -100 and 100, with a centerline at zero. The further a given value is from the center line shows the trader how strong a certain trend is. The moving average convergence divergence (MACD) uses two moving averages to measure momentum. It shows the difference between the two moving averages against a centerline, and is used to measure short-term momentum as opposed to long term. The stochastic oscillator uses highs, lows, and moving averages to measure momentum. The idea is that upward trends should be closing near high points, downward trends should be closing near low points, and momentum should be strongest in the middle of these cycles.

3.5.1 – Support/Resistance

These are levels that indicate when prices are likely to reverse. You can tell when prices are likely to reverse when there is a bounce on the resistance or the support levels. Simply, the highest point reached in a certain point is the resistance and the lowest point a currency pair has reached is the support. A few things about support and resistance indicators are that the more often a price tests a level of support or resistance without actually touching or breaking it shows

that the area of resistance or support is very strong. Also, when the price passes through resistance, it could mean that the resistance is now the support. When the price breaks through a support or resistance level, the strength of that depends on how the support or resistance levels have been holding.

3.5.2 – Fibonacci Indicator

The Fibonacci Indicator is a support/resistance indicator in which it's made up of retracements and extensions levels and it's used to help you enter a trade in the direction of the trend. The retracement ratios are 0.236, 0.382, 0.500, 0.618, and 0.764. The extension ratios are 1.272, 1.382, 1.500, and 1.618. These ratios will be just like support and resistance levels in which it helps you decide when to sell or buy depending on what you see. To use the Fibonacci indicator, use the tool in the trading platform and pick a high point and a low point and then pick the levels you want to show. Usually when the price is moving below the 0.382 level, it could very well mean that the trend is reversing. If you are in an uptrend, you will see that the retracement of the price will land on the 0.382, 0.500 or the 0.618 levels as they are strong support levels.



Figure 10 - Fibonacci Indicator

3.5.3 – Elliott Wave Theory

The Elliott Wave Theory is somewhat related to the Fibonacci number sequence. The Elliott Wave Theory is used as an approach to market analysis and it is based on repetitive wave patterns and Fibonacci number sequence. It could be used to predict where prices are most likely going to reverse. To use it, it is called a 5-3 wave pattern. The first 5 wave pattern is called the impulse waves and the last 3 wave pattern is called the corrective waves. Using this 5-3 wave pattern, the waves 1,3, and 5 are motive which means that they go along with the overall trend while the waves 2 and 4 are corrective waves.

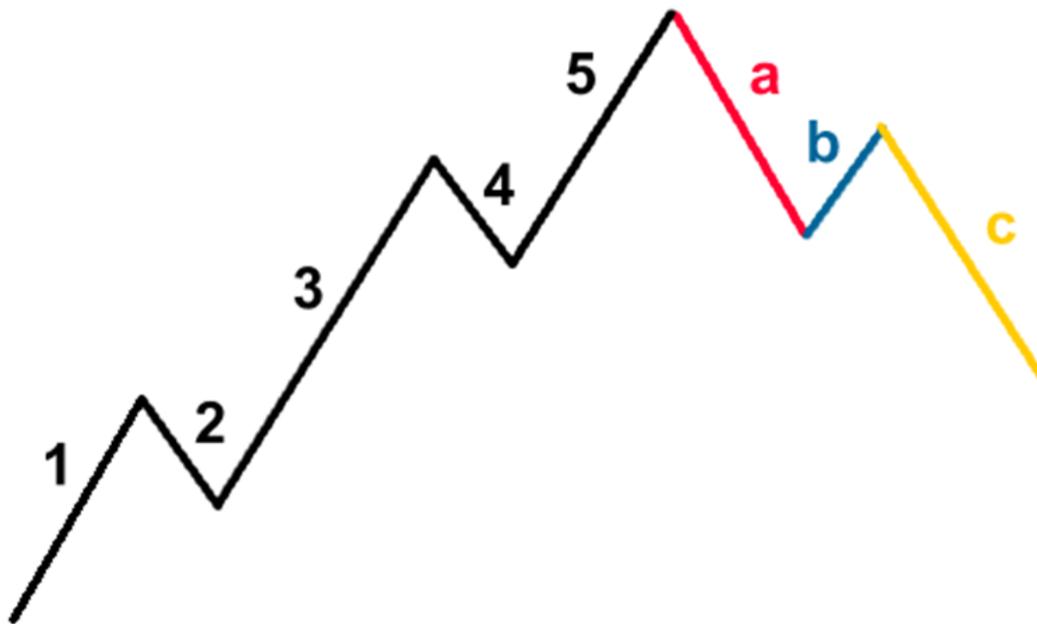


Figure 11 - Colored Elliott Wave Theory; 5 wave trend corrected and reversed by 3 wave countertrend in a bull market.

The wave 1 is when the stock makes its initial move upwards and it is usually caused by a small amount of people that suddenly feel that the price of a stock is cheap and it's a perfect time to buy. This causes the price to rise.

The wave 2 is when the people who were in the original wave that considers that the stock is overvalued and take profits. This causes the stock to go down but it would not go as low as it was in the previous wave where it would be a bargain to buy.

The wave 3 is usually the longest and strongest wave in which the more people find out about the stock and that they want to buy it. This causes the stock price to go back high and higher than the end of wave 1.

The wave 4 is when the traders take the profits and it's usually a weak wave since people are usually still bullish.

The wave 5 is most people get on the train and it's when it becomes overpriced. ¹

¹ <http://www.babypips.com/school/the-5-3-wave-patterns.html>

There are three basic corrective 3 wave countertrends and they are the Zig-Zag Formation, the Flat Formation, and the Triangle Formation.

The Zig-Zag Formation is formed when there are very steep moves in the price that goes against the main dominant trend. Wave b would be the shortest in this case and it could happen twice or even three times in a correction.

The Flat Formation is formed when the waves are generally equal in length with wave B reversing wave A and wave C reversing wave B. These are simple sideways corrective waves.

The Triangle Formation is a corrective pattern that forms by either diverging or converging trend lines. Triangles are made up of 5 waves (a, b, c, d, e) that move in a sideways fashion against the trend and these triangles can be all sort of shapes such as symmetrical, descending, ascending, or expanding.²

There are three cardinal rules of the Elliott Wave Theory and they are:

Rule 1: Wave 3 can never be the shortest wave

Rule 2: Wave 2 can never go further than the start of wave 1

Rule 3: Wave 4 can never cross in the same area as wave 1

There are also common trends in the Elliott Wave Theory:

Truncation: Wave 5 does not move beyond the end of wave 3

Wave 5 usually goes beyond the trend line of Wave 3.

Wave 3 is usually very long, sharp, and extended.

Wave 2 and 4 bounce off the Fibonacci retracement levels quite often.³

² <http://www.babypips.com/school/abc-correction.html>

³ <http://www.babypips.com/school/the-3-cardinal-rules-and-some-guidelines.html>

To actually use the Elliott Wave Theory, you can take into consideration into what each wave represents. A strong buy signal could be when wave 2 drops about 50% of wave 1 and the wave 3 could be starting soon. You can set your stop loss at the bottom of wave 1.⁴



Figure 12 - Elliott Wave Theory in Action

Shown is an example of the Elliott Wave Theory in action on an EURUSD currency. Once you decide which waves are what, you can easily predict future price movements and buy at the beginning of each wave.

3.5.4 – FOREX Pivot Point

The FOREX Pivot Point is another support/resistance indicator which is pretty simple in which you gather previous market information and use that information to form pivot points to allow a better understand of the current resistance and support levels. The previous market information you need are the previous day’s open, high, low, and close values. To get these pivot point levels, there are free pivot calculators online or there is a good chance that your trading

⁴ <http://www.babypips.com/school/riding-elliotts-waves.html>

platform can easily plot these. Pivot point levels can be used as entry levels and exit levels. As an entry level, you can usually enter a long position when you are in an uptrend and you see the price break above the pivot level. Place the stop loss just below the pivot level. As an exit level if you had entered a long position after the uptrend has broken the pivot level, set a take profit 10 to 15 pips below the next highest pivot level. If you had entered a short after seeing the price repelled by the pivot, exit the trade once the price move down half of a pivot length.⁵



Figure 13 – Forex Pivot Point

3.5.5 – Bollinger Bands

The Bollinger Bands is an indicator used as support and resistance levels but it could also be used to measure the volatility of the market.

⁵ <http://www.forexindicator.org/forex-pivot-point-trading-tutorial.html>

To use Bollinger Bands, it is basically three bands that revolve around the simple moving average. The upper band shows the simple moving average +2x standard deviation. The middle band is just the simple moving average and the lower band shows the simple moving average -2x standard deviation. To set up Bollinger bands, you can use the 20 days simple moving average and plus and minus 2x standard deviation for the upper and lower bands. If the price goes through either the upper or lower bands constantly, then you will have to adjust them. These bands show support and resistance and when the upper and lower bands are narrow, it usually means that it is consolidating. If the bands are wide apart, then it usually means that it's in a period of strong price movement. If the bands squeeze together, it usually means that a breakout is getting ready to happen. This is called a Bollinger squeeze.

To use to measure a market's volatility, the market is quiet when the bands contract and the market is "loud" when the bands expand. When the prices hit the Bollinger bands, it tends to bounce to return to the middle of the Bollinger bands. You can use this information to do quick trades or if the market is just not doing much so you can tell there is a clear trend of going back to the middle every time it hits the bands to trade in a time of no movement.^{6 7}

⁶ <http://www.forexindicator.org/forex-bollinger-bands-explained.html>

⁷ <http://www.babypips.com/school/bollinger-bands.html>



Figure 14 - Bollinger Bands



Figure 15 - Bollinger Bands

3.5.6 - Moving Averages

Moving averages are charts that take averages of historic data so you can use them to determine if a currency pair is on its way up, down, or just ranging. It's a tool that smoothes out price action. Simple Moving Averages seem to be a safer trend and it's a little slow but the Exponential Moving Averages is quicker and will allow you to buy in and get out at the optimal time but there could be a lot of fake outs. To use Moving Averages to aid buying or selling in the FOREX market, you need to plot the moving averages charts on the actual currency pair

chart. For up trends, it's usually when the price is above the moving average. For down trends, it's usually when the price is below the moving average. It's a lot better to have more than one moving average on your charts because this will indicate a clearer signal of whether a currency pair will be trending up or trending down. When you have more than one Moving Average plot on your chart, the crossover between the two or more moving averages could indicate a change in direction. Moving Averages also indicate dynamic support and resistance levels and you can use it as a benchmark to where you can expect the currency pair to bounce to. It acts as the lower boundary and the upper boundary.



Figure 16 - 10 EMA, 20 EMA

3.5.7 – Simple Moving Averages

Simple Moving Averages are a study of the historic trend of data calculated by adding up the last “n” period’s closing prices and then dividing that by “n”. An example to calculate a 5 day simple moving average is finding the previous closing prices for the last 5 days:

Day 1: 1.39258

Day 2: 1.39597

Day 3: 1.38675

Day 4: 1.39617

Day 5: 1.38598

And then finding the average of these 5 days:

$$(1.39258 + 1.39597 + 1.38675 + 1.39617 + 1.38598) / 5 = 1.39149$$

With the use of Simple Moving Averages, it is a nice indicator to see if a pair is trending up, down, or just ranging but it is very simple so spikes in old data could mess up the simple moving average.



Figure 17 - 5 SMA, 30 SMA, 62 SMA

3.5.8 - Exponential Moving Averages

Since simple moving averages are not always truly representative of a historic trend as there could be spikes, you can use exponential moving averages. Exponential moving average helps clear the spikes as it puts more weight into calculation in the most recent days. It also

responds quicker than the Simple Moving Average. From the example given in the Simple Moving Averages above, days 3, 4, and 5 would have more weight taken into consideration when calculating the exponential moving averages so if there was a spike on day two, there would have been a lesser value and it would not have as big an effect on the moving average. The best way to use Moving Averages is to plot different types so you can see both the long term movement and the short term movement.

Some pros and cons comparison:

	SMA	EMA
Pros	Displays a smooth chart which eliminates most fakeouts.	Quick Moving and is good at showing recent price swings.
Cons	Slow moving, which may cause a lag in buying and selling signals	More prone to cause fakeouts and give errant signals. ⁸



Figure 18 - 30 EMA Compared to 30 SMA

⁸ <http://www.babypips.com/school/sma-vs-ema.html#ixzz1ZIDrCwoM>

3.5.9 – FOREX Stochastic Indicator

The stochastic indicator is a tool that is used to compare the current price of a currency pair to the high and low points at another time in history. This can be used to show where the market conditions could be overbought or oversold. It's made up of 2 lines, %K and %D, and there are 3 types of stochastic indicators. The three types are full, fast, and slow but the fast and the slow ones are the most common ones. Fast stochastic is more sensitive than the slower ones. This is a useful indicator because you can look at the slow one to find an entry signal. When %K crosses above the %D and moves above 20, go long but when %K crosses below the %D and moves below 80, go short. If it's about the 80 line, then it means that the market is overbought. If it's below the 20 line, it means the market is oversold. It could also be used as an exit signal and it's the opposite theory behind this. It could also be used as a reversal signal when the market makes a lower low while the stochastic makes a higher low as that gives an indication of the market going to reverse up. For a reverse down, look for when the market makes a higher high and the stochastic makes a lower high.⁹



Figure 19 - Stochastic Indicator

⁹ <http://www.forexindicator.org/forex-stochastic-indicator-explained.html>



Figure 20 - Stochastic Indicator

3.5.10 – MACD Indicator

The MACD Indicator is a lagging indicator in which it analyzes past data and displays it in a chart. You can also use this indicator as a leading indicator to try to guess what the next movement of price would be. MACD stands for Moving Average Convergence Divergence and it can be used to identify moving averages that could be indicating new trends, bullish or bearish.

To use MACD, set the settings for it to be 26 or 12 which is the most common setting. It means 26 days and 12 days exponential moving averages. The higher the number, the more past data it uses and the slower the indicator. The opposite applies so that the lower the number of days, the faster it is. A setting of 12, 26, 9 as MACD parameters would mean that there are 12 previous bars of the faster moving average, 26 previous bars of the slower moving average, and 9 previous bars of the difference between the two moving averages. To actually use the graph, when the MACD line cuts through the trigger line in the upward direction, it usually means that there is an upward trend or movement. When there is a crossover in the downward direction, it usually means that there is a downward trend or movement. Also, when the currency pair moves

above the MACD lines, it is called a negative divergence and it means that there is usually a downside movement. The opposite applies in which if the currency pair moves below the MACD lines, it is called a positive divergence and there is usually an upward movement. The downside of MACD is that since it represents moving averages of other moving averages and is smoothed out by another moving average, there would be some lag in trends.¹⁰



Figure 21 - MACD in Action

3.5.11 - CCI Indicator

The CCI Indicator is short for Commodity Channel Index Indicator and it can be used as a buy and sell signal, a reversal identifier, and an oscillator.

To use the CCI Indicator, MT4 should automatically calculate and plot the indicator and will have +100 and -100 levels. Whenever the CCI Indicator moves above the +100 level, it means that there is a strong uptrend and you should enter the market and go long. If it goes below the -100 level, there is a strong downward trend and you should sell or exit. To identify reversals, you can see if there is a CCI trend line being breached and that the market will move in

¹⁰ <http://www.forexindicator.org/forex-macd-indicator-explained.html>

the direction of the breach. The CCI Indicator also has positive divergence and negative divergence just like the MCAD Indicator. When the currency pair goes above the CCI line, it is called a negative divergence and that means the market is going to go down. When the currency pair goes below the CCI line, it is a positive divergence and that means the market is going to go up. This is the same trend as the MCAD Indicator. As an oscillator, when you see that the indicator is below the -200 level, it means that you should go long once it goes above the -100 level as the market is in an oversold zone. When it is at the +200 level, you should go short when it goes below the +100 level as the market is in an overbought zone. ¹¹



Figure 22 - CCI Indicator

¹¹ <http://www.forexindicator.org/forex-cci-indicator-explained.html>

3.5.12 – Average True Range Indicator

The ATR Indicator is used to measure the volatility of a currency pair. There are three different ATR's of currency pairs and they are recent high minus the recent low, recent high minus the previous close, and recent low minus the previous close. To use the ATR, MT4 should automatically be able to calculate these.

To use the ATR Indicator, you need to see if the ATR is showing a big value or a small value. If it's a small value, it usually means that the market is consolidating and waiting for a breakout. If you see that the ATR is a big value, it usually means that the market is pretty strong and you're in a breakout. ¹²

¹² <http://www.forexindicator.org/average-true-range-atr-indicator-explained.html>

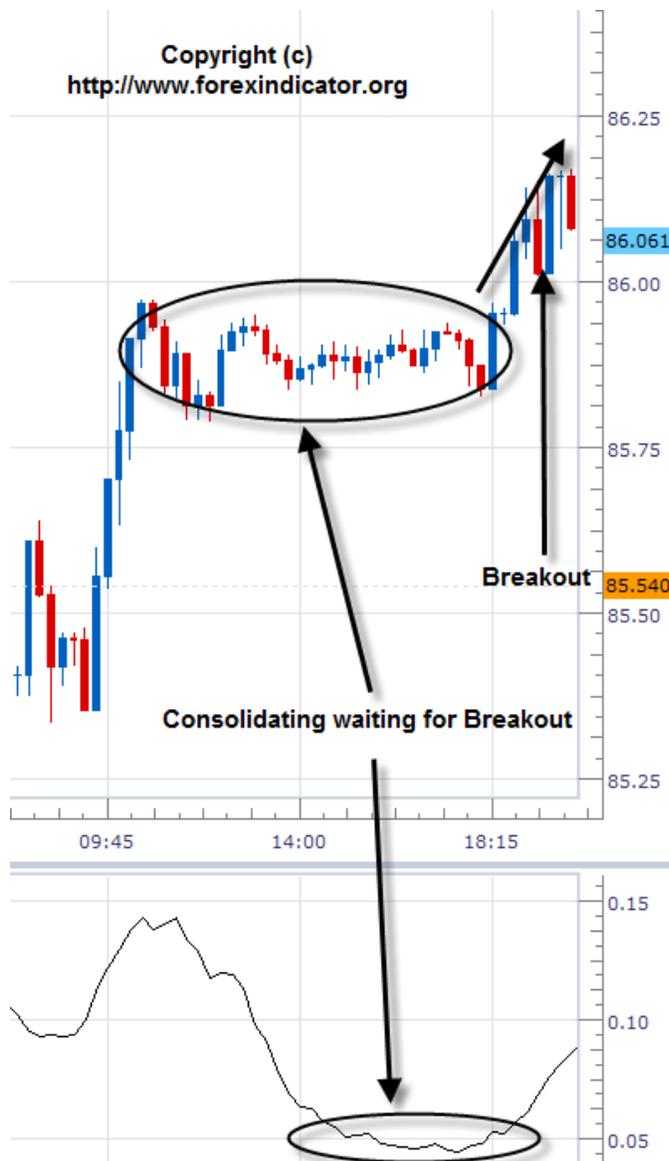


Figure 23 - Average True Range Indicator

3.5.13 - ADX Indicator

The ADX Indicator is an indicator to determine the status of trends. The indicator itself is a single line with value ranging from 0 to 100 and it's uni-directional.

To use the ADX Indicator; when it is moving below the 25 level, it means that the market is very weak. When the indicator moves above the 25 level, it means that the trend is becoming stronger and stronger. The higher the number, the stronger the trend. You can also use the ADX Indicator to determine divergence just like the CCI and the MACD. The same theory applies

with the ADX Indicator. If you see the ADX Indicator making lower highs while the price makes higher highs, it's a good time to close your trade if you went long. The opposite applies just like CCI and the MACD. The ADX Indicator could also be used to trade breakouts as you can use the ADX Indicator to determine when a breakout is actually real or not depending if it moved above the 25 level or not. It is a good indicator for breakouts because you can actually check if it's valid or not if it moved above the 25 level.^{13 14}



Figure 24 - ADX Indicator

¹³ <http://www.forexindicator.org/forex-adx-indicator-explained.html>

¹⁴ <http://www.babypips.com/school/average-directional-index.html>



Figure 25 - ADX Indicator

3.5.14 – Parabolic SAR

The Parabolic SAR (Stop and Reversal) is an indicator that can help us determine when a trend might be ending. It places dots or points onto your chart that could indicate a potential price movement reversal. It's a very simple indicator to use as when the dots are below the candles, you should buy. When the dots are above the candles, you should sell. To use the Parabolic SAR to exit trades, you can see when there are three dots going in the opposite direction. If there are three dots going in the opposite direction, the earlier trend is probably over and an opposite trend is now happening.¹⁵

¹⁵ <http://www.babypips.com/school/parabolic-sar.html>



Figure 26 - Parabolic SAR

3.5.15 – Relative Strength Index

The Relative Strength Index (RSI) is an index that measures the ratio of up moves to down moves and normalizes that calculation so there could be an index made with a range from 0-100. It is very similar to the stochastic indicator because it identifies overbought or oversold conditions. If the RSI is greater than or equal to 70, then it could be seen that the market is overbought. If the RSI is smaller than or equal to 30, then it could be a signal that the market is oversold. If it drops below 30, it could also mean that the move could be over and that there could be almost no more sellers left in the market. You can also use the RSI as a trend confirmer as if a trend is possibly forming, just look at the RSI. If you think there is a possible uptrend, then the RSI should be above the 50 level. If you think there is a possible downtrend, then the RSI should be below the 50 level. Make sure to wait until there is a cross of the 50 level to avoid fake outs.¹⁶

¹⁶ <http://www.babypips.com/school/relative-strength-index.html>



Figure 27 - RSI Example

You can see the picture above to see how it is used to indicate an oversold condition in the EURUSD market.

3.5.16 – Ichimoku Kinko Hyo

Ichimoku Kinko Hyo is an indicator that predicts future price momentum and determines future areas of support and resistance. It is mainly used on JPY pairs hence the name as it means “a glance at a chart in equilibrium”.



Figure 28 - Ichimoku Kinko Hyo

Shown above is a picture of the Ichimoku Kinko Hyo indicator on a chart. It's a lot easier to explain it with a chart. The blue line called the Kijun Sen is the base line and it is calculated by averaging the highest high and the lowest low from the past 26 periods. The red line is called the Tenkan Sen and it is the turning line. It is derived from averaging the highest high and the lowest low for the past nine periods. The green line is called the Chikou Span and it is the lagging line. It is that day's closing price plotted 26 periods behind. The orange lines are called the Senkou Span and there are a few lines. The first Senkou line is calculated by the averages of the Tenkan Sen (red) and the Kijun Sen (blue) and plotted 26 periods ahead. The second line is derived from averaging the highest high and the lowest low for the past 52 periods and plotted 26 periods ahead.

The blue line, the Kijun Sen acts as an indicator of future price movements. If the price is higher than the line, then it could mean that the price could climb higher in the future. If the price is below the line, then it could mean that the price could keep dropping in the future.

The red line, the Tenkan Sen, is an indicator of the market trend. If the red line is moving up or down, it could mean that the market is trending. If the red line moves horizontally, it could mean that the market is ranging.

The green line, the Chikou Span, is an indicator for buy or sell signals. If the green line crosses the price in the bottom to up direction, then that is a buy signal. If the green line crosses the price from the top to down direction, then that is a sell signal.

The orange lines, the Senkou Span, act as support and resistance levels. When the price is above the orange lines, the top line acts as the first support level while the bottom line acts as the second support level. When the price is below the orange lines, the bottom line acts as the first resistance level while the top line acts as the second resistance level.¹⁷

3.5.17 – Swing Trading

Swing trading is a form of scalping, which is a way of trying to get ahead of a trend and capitalize on the whole movement. It is a very risky type of trading, but also a very profitable type of trading when executed correctly. A swing is made up of a V or N shape (See pictures on following page), and is formed by a reversal or retracement in price movement. The best time to utilize swing trading – or any type of trading for that matter – is during London Open and New York Open trading hours, because these are the times that commonly have the most violent – and reliable – swings. Other times are more vulnerable to fake outs. Swing trading requires the use of MACD, and oscillator, and/or Parabolic SAR. In order to swing trade, you must do technical analysis before the market opens to find out all the major points of support and resistance. You should wait for a trend line to break, which can be signaled by your MACD or Stochastic oscillator. It is important to wait until the trend line is actually broken and confirmed before entering a trade as to not get sucked into a fake out.

¹⁷ <http://www.babypips.com/school/ichimoku-kinko-hyo.html>



Figure 29 - Swing Trading

3.5.18 - Spinning Top and Railway Track

The spinning top and the railway track are both used as signals of possible reversals in the market. Both of these indicators are based off of candlestick charts. The spinning top is made up of a

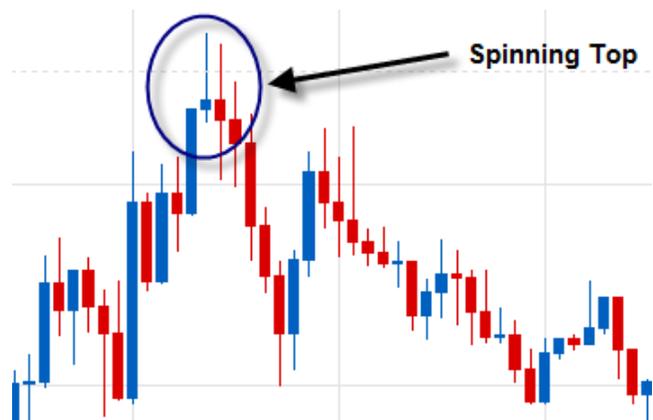


Figure 30 - Spinning Top

short body with a long wick at the top and bottom. This usually indicates indecision among traders, and commonly indicates a price reversal (See picture above). The railway track is usually

a sign of traders getting into the wrong position and quickly exiting, resulting in two long opposite candles. This also indicates a price reversal (See picture to the right). Both of these indicators are especially effective when the other technical indicators on your trading platform – like the MACD or Stochastic oscillator – are indicating the same price reversal.



Figure 31 - Railway Track

4.0 – Launching a Forex Money Management Company

When trying to create a business that deals with managing money and trading in the forex market, there is a lot of planning and a lot of steps to be taken to ensure the safety of everyone's money and set you apart from the competition. Major things to take into consideration are the main advantages and disadvantages of launching the company here in the states or elsewhere. One must also consider the possible legal structures of the company and the amount of liability each shareholder has in the company. You must also put a lot of time into developing a complex money management strategy. Finally you must know the agencies responsible for overseeing such activities and acquire the proper licensing.

4.1 – Location Advantage

The first step in creating a company is to decide where you want to locate your company. For money management companies this is a very important decision because of all the regulations that need to be followed. In the United States every company must be a member of The Commodity Futures Trading Commission (CFTC) and the National Futures Association (NFA). Being a member of these subjects the company to regular audits to observe everything from the practices of the company all the way down to the training of the employees. Companies are also subject to regular financial reports which mean that records have to be very well kept and most importantly kept honestly. Also in the US, in the Forex market the leverage is set at a maximum of 50:1 to protect investors from losing large amount of money that they do not have. International countries have a few less regulations to adhere to because of the amount of regulations in other countries. Due to the economy crisis and hedge fund managers such as Madoff there have been a lot more regulations put in to avoid people having their money stolen. Setting up a company in another country only requires you to follow those countries regulations,

which vary by country. For the most part there is one major regulating body in each country to oversee the money management companies and make sure they operate fairly and justly. Also in the forex market outside the US can have a leverage of up to 400:1 in the Forex market.

For our company we have decided to stay in the US and follow the regulations. There are more rules to follow but we feel that with more regulations it will give our clients more trust in us and they will not have to worry about illegal practices. Also with all of the audits and reports we will have to keep our records very well and make sure our company is run in the proper manor, which will make the company better overall.

4.2 - Legal Structure

When creating a money management company of any type, it is important to know and understand the different types of legal structures. The type of structure you choose will prove vital in protecting both the company's assets, as well as the money of your investors.

There are many types of different legal structures that are available to be formed. The main ones are sole proprietorship, general partnership, limited partnership, limited liability partnership, corporation, limited liability company. The main differences we looked at for this that are most important to our company are the risks involved, our liability, taxation, the transferability of the business, and expenses. We have conducted research about all of them and our summary is outlined below:

4.2.1 - Sole Proprietorship:

This is the most basic form of a business and is the ideal structure for a small business. It is because the start up costs for a sole proprietorship is a lot lower compared to bigger business legal structures. In terms of taxation, all profits get taxed as your personal income so you will earn a lot more. The legal term for this is "pass through" income taxation. The risks involved in a

sole proprietorship would be medium as you can close your business at will. Although you can close your business at will, you have unlimited liability if anything goes wrong as it is a sole proprietorship. Unlimited liability includes your own personal assets too if your business debt is larger than your business asset. This is not very good for a company like ours even with a successful history of good trades as you would be reliable for anything and everything. This type of ownership would be ideal for smaller businesses such as a coffee shop and not one that manages a large amount of money.

4.2.2 – General Partnership:

A general partnership is basically what the name hints at, a partnership. This is a business structure owned by 2 or more people who acts as the owners and share profits. Like sole proprietorship, the startup cost is relatively low and the taxation works the same, with the profits treated as personal income tax. With more people comes more money and knowledge so that is another plus side of a general partnership. The risks involved in this would be slightly lower than sole proprietorship as you have one or more partners to count on but it could also act against you if there are disagreements. In terms of liability, it is similar to sole proprietorship but all partners share the unlimited liability. This type of ownership is slightly better for us as we are a group so it would make sense for us to be partners in business. However, it still holds unlimited liability on us and that is not advantageous.

4.2.3 – Limited Partnership:

A limited partnership has the same structure as a general partnership but it is more useful to raise capital. The difference between the two partnerships is that a limited partnership allows for investors to be “limited partners” in which they will invest in your company but they have limited liability if your company happens to fail. The limited partners have limited liability but the main partners in the partnership will still have to carry the burden of unlimited liability. It is

however helped out a little by the limited partners' investments. This is slightly better than a general partnership for our business but is still not very ideal.

4.2.4 – Limited Liability Partnership:

A limited liability partnership is very similar to a general partnership and a limited partnership. What's different about this one is that this one has limited liability for all the partners. This means that if your business fails, then limited liability kicks in and none of your personal assets can be taken into account to take care of your business's debt. This seems like the most ideal business structure for us as it is relatively simple to set up, has the taxation rules of a general partnership, and has limited liability.

4.2.5 – Corporation

A corporation is a business legal structure that is aimed for the bigger businesses. It is also the most common form of business structure for larger companies. The difference between a corporation and partnerships and sole proprietorships is that a corporation is not linked to owners as it exists separately as an entity just like another individual. It is in a way one individual entity controlled by multiple people as it has the same rights as an individual to buy and property, buy and sell shares, and take legal actions. The startup costs for a corporation is far greater than the startup costs for any business structure mentioned prior. In terms of taxation, it is completely different than the structures above as corporations are taxed twice. The best thing about a corporation is that you can raise a lot of investment capital and to have limited liability. The transfer of ownership is also easily transferable. Besides the start up costs and taxation being the negatives of a corporation, government agencies closely regulate corporations which in turn means a lot more work and regulations to meet whereas partnerships and individual ownership has much less. Since a corporation is such a large business and includes a bunch of paper work

and start up, we would most likely not choose this one even though of the advantages such as limited liability and the ability to raise capital.

4.2.6 – Limited Liability Company

A limited liability company is similar to a limited liability partnership in terms of start up costs, liability, and taxation. The startup cost for a limited liability company is slightly higher than a partnership. The liability is pretty much the same as you have limited liability which means you will have protection of your personal assets. For taxation, it is taxed the same way which means your profits are counted as personal income tax. Similar to partnership, you can also get out of a limited liability company at will. Given all these advantages of a general partnership and a corporation, this seems like the best bet for our company so we will go with the business structure of a limited liability company. A quick search shows that FXCM is also a LLC while Oanda is a corporation so that reassures our correct choice in business legal structures.

4.3 – Money and Risk Management

One of the most important aspects of a company of this nature is the money management policy. There are many different ways of going about structuring the money management of your company, and this can really separate you from the pack. Your money management strategy will ultimately be the deal sealer with your clients and give you credibility among investors.

Effectively this decision comes down to whether you want to hire someone to do the book keeping for you or if you want to do it yourself. In our case we would like to manage the money on our own by making calculated risks. By doing this we can set reasonable goals and make steady profits to reach them. Also to simplify things, all of the accounts we manage will be trading on the same trading account.

The first step in developing your money management strategy is to know how much you want to make and how much you're willing to risk. We would like to be able to promise

somewhere around a 2% return per month on the investor's money, but this does not mean that this is all we are making, otherwise the company would get no income. For this reason we would like to get closer to 4 or 5% per month, or between 50 and 60% a year. You can use this to calculate how much you want to make per day, and how much you're willing to lose per day.

As far as single trades go, we always set stop loss and take profit levels. We also set our take profit at least two times higher than the stop loss, meaning we like to have a risk to reward ratio of 2:1 or higher. This manages our losses and locks in profit. We never risk any more than 2% of our account balance with stop loss, and we always calculate stop loss ahead of time. We also use support and resistance lines to determine stop losses.

Our goal is to make steady money, not have make or break trades once in a while. We want to lock in our strategy and be able to consistently pull down steady profits week by week, month by month. It is a rule of ours never to get excited about one important trade. Every trade is equally important, and they all have the same realistic goals.

Another important aspect of our money management is the hours at which we trade. To maximize our trading potential we have agreed to trade only during peak trading hours. This means the London session and the American session, and that's it – 3:00 a.m. or 8:00 a.m. These times are chosen, because the market is most reliable at these times and has high liquidity and therefore lower spreads. We will never fall victim to market manipulation.

4.4 – Government Regulation

It's very important to know which US agencies oversee and regulate the operation of companies that manage money by trading currencies. It is also important to know their rules, so as to not run into any legal trouble down the road.

The United States Securities and Exchange Commission is the main federal agency that is responsible for enforcing the laws of foreign exchange currency trading. The SEC is responsible for enforcing acts relevant to the securities industry which means they enforce acts such as the Investment Advisers Act of 1940, the Sarbanes-Oxley Act of 2002, the Credit Rating Agency Reform Act of 2006, and more. This means that we need to follow all the acts that the SEC is responsible for and make sure we follow the rules of them in order to stay out of legal trouble. Other than the SEC, the Federal Reserve Banks and the U.S. Treasury also look and regulate the foreign exchange market to look for anything suspicious.

Another agency is the Commodity Futures Trading Commission. The CFTC was created back in 1974 to regulate futures and securities in the U.S. and has 6 major operating units. The units are the Division of clearing and Intermediary Oversight, Division of Market Oversight, Division of Enforcement, Office of Chief Economist, Office of the General Counsel, and the Office of the Executive Director. All of the divisions work together to regulate pretty much the whole futures trading as their roles include sales practices, customer protection, registration, financial integrity, market surveillance, reviews of futures guides and products, and to investigate and prosecute any wrong doings. The Office of Chief Economist is responsible for providing economic advice while the Office of the General Counsel is responsible for legal advising for the Commission. The Office of the Executive Director is the management part of the CFTC and deals with all the management and administrative issues.

One more agency is the National Futures Association and it is a self-regulatory organization for the U.S. futures market. It is a very good indicator of whether a futures business is credible or not and the NFA also works with the CFTC to find flaws and frauds.

4.5 – Licensing

In order to gain legitimacy in this business, you need to have proper licensing. No one in their right mind is going to hand over their money to a bunch of college kids with a trading plan and money management strategy. The forex market is an unpredictable place, and investors need peace of mind. A license shows professionalism as well as experience, and is absolutely necessary in creating a company of this nature. In order to manage someone's money in the forex market you would need a series 7 license and a series 34 license. The series 7 license allows an individual to make and place trades for a customer. The state can also require investment adviser representatives to have the series 65 license. We would not need a series 3 license, because we are not interested in trading anything but currencies here.

4.6 – Marketing Strategy

How we will spread the word about our company to gain trust among our clientele and a positive reputation. While in the process of building our reputation, we will offer a lower rate of return and some other sort of incentive to investing with us. We will also offer three different plans, one geared toward low-risk people, another toward high-risk people, and one that appeals to the people who fall in the middle. Each risk level will have its own trading strategy, money management, and potential rate of return.

Spreading the word about a new money management company will not be easy. We will be starting with relatively low funding, and therefore will not be able to use expensive advertisement methods. To start, much of our recognition will come from word of mouth. The best way to market a company is to have a common ground and certain level of trust between the company and the customer. For this reason we will start by targeting our friends and family, building a solid reputation with them, and having them refer their friends and family. We will

offer incentives for referring a friend, much like what certain cable companies are doing nowadays. For every person that you refer, you will get \$10 put into your trading account. This will cause people to *want* to spread the word, and we will get a lot more clientele this way.

Once we have a large clientele, it will be up to our performance as traders to gain a good reputation. No matter how many people we have, if we do not perform and achieve results, we will not have a solid reputation. Once we build our reputation locally, we will then move onto larger business ventures. With experience and a built up reputation, it will be a lot easier to market ourselves to larger corporations and get investments and funding.

As mentioned before, we will have three different tiers of trading, based on the level of risk. We had initially planned on offering a 2% return on investment per month, because it was higher than what most companies offer now, but because we have no reputation, there is no way that anyone would trust us to live up to that. We do still want to offer this option as our third and highest tier of risk. This tier will employ a more risky trading strategy, but with the potential of more reward. Tier 1, the lowest risk level, will offer a 1% return on investment per month, but with a far lower level of risk than tier 3. A lot more trades will be executed on tier 3 than on tier 1, and the risk to reward ratio will also be lower for tier 3. Tier 1 trades will only use 1 standard lot, while tier 3 trades may use multiple lots. Right in the middle of both of these will be tier 2. This will offer a 1.5% return on investment per month, and will be a nice balance of risk and profit. This will be the tier that we recommend for most of our customers.

The difference between the trading strategies in each tier will lie in the time interval traded on. We will always stick to our trading strategy, using the Stochastic and moving average crosses along with basic support and resistance levels. Tier 1 trades will be executed based off longer term oscillations seen in the 15-30 minute intervals. Tier 2 trades will be based mainly off

the 15-minute interval, and tier 3 trades will be executed on all levels; this means more trades, and more opportunities for profit, but also more potential for losses.

Conclusion

After 7 months of experience with the forex market and studying its tendencies, a successful money management company is now a very real possibility. Through research and practicing with prop accounts we have learned how the forex market works on multiple levels. This includes the effect of real world problems on the market as well as technical factors that show how the market is going to react. Based off of this research a trading plan was created that outlines how the company will invest a client's money. There are multiple plans depending on the level of risk that the client would be comfortable with. Also included in this plan is the percentage the company will expect to make based off of the amount of money invested and the level of risk associated with the investment. A risk management system is outlined that tells how we will trade and the stop losses of the trades that will be made. Based off of this trading plan the group created automatic trading robots that would successfully make trades based off of certain conditions. The conditions which we made the robots trade are the same conditions that the group traded and that are outlined in the plan. Research on where and how the company would be constructed was also done. This included government regulations imposed on companies inside and outside of the United States. Liability issues with the owners of the company were considered as well as the structure of the insurance of the company. Through this project our group gained a much greater understanding of the Forex market and how it works on a micro and macro level. This along with the knowing of how to create and protect a company will give us the tools we need to manage ours and other people's money and allow us to invest our money intelligently in the future.

Recommendations

For future IQPs, we would recommend a very similar structure, but with more idea for the students of what the ultimate goal will be. The order in which we learned the material, focusing on individual aspects, served us well in our overall understanding of the subject, but we felt that we were not always aware of what the end result would be. If the students knew that in the end it would all conclude around launching a successful forex trading company, we may have been able to focus our research accordingly. Other than that, the order in which we went about it, and the way we concentrated on each aspect one at a time, really allowed our knowledge to build upon itself, leading to a thorough understanding of it all.

Another recommendation we would make is to give an alternative to programming. We think it was pretty clear that some groups simply lacked programming skills, and this really affected our ability to make complex trading robots. In the future you could either try to make sure that each group has someone who is a capable programmer, or make it so that groups can choose between marketing a trading robot and marketing a money management firm. This way groups will not be affected negatively because of their inability to program.

One final recommendation we would have to make is to have more group trading chat rooms and more demonstrations in class of how you trade. We had talked about doing this in class a few times, but it was very hard to have everybody present at the same time. We think it is definitely something that should be implemented in the future, because a lot can be learned from watching other people trade in real time and also trading and making decisions as a large group, and talking about the decisions as you make them, getting real time criticism.

A recommendation for students taking this IQP in the future would be to work closely with others taking the class. People can offer valuable advice and can be a great tool when you are unsure how to do something. Most of the time others are having similar problems and you

can work as a group to figure them out. Your classmates will be more than happy to help, and all it takes is simply walking up to someone and asking. It is an invaluable resource that should be used whenever possible.

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Appendix A – Global Development and its Impact on the Forex Market

This will be a summary of the events that have taken place since the start of this project and will explain their impact on the forex market.

A-1 Election of Mr. Yoshihiko Noda as Japan's new Prime Minister

Mr. Yoshihiko has been the Finance Minister in Mr. Kan's Administration. Mr. Noda had defeated his rival, Mr. Banri Kaieda, in the second round of votes by 215-177. This affects things in a macroeconomic sense because Mr. Noda has been a support of a materially higher consumption tax in Japan and a very strong supporter of the increased US-Japanese military cooperation in Asia. Gartman finds that a higher consumption tax in Japan is illogical because Japan has been in depression for almost two decades. Mr. Noda also believes in nuclear power and that nuclear power is going to play a role in powering Japan on a daily basis. Also, since Mr. Noda was very conservative about using his powers to intervene in the FOREX market when he was the finance minister so it will be interesting to see who Mr. Noda appoints as his replacement. The MOF has intervened twice during Mr. Noda's tenure, after the tsunami at the Fukushima nuclear power plant earlier this year. The MOF stands for the Ministry of Finance and it's one of the cabinet level ministries of the Japanese government. When Mr. Noda has chosen Mr. Jun Azumi as the new Minister of Finance, it had seemed to surprise Gartman because Mr. Azumi is very young at an age of 49 years old. The position seems to have always been for a more senior ranking member of the party. There is speculation that Mr. Noda's first pick was Mr. Katsuya Okada but since Mr. Noda was going to be very involved in the Finance Ministry than most previous Prime Ministers in the previous years, Mr. Okada had declined.

I agree with Gartman that the higher consumption tax in Japan seems illogical because Japan has been in depression for so long. However, it seems like it could be working for them as

the debt Japan owes is to its people. With so much support from its own people, it is likely that its own people will keep supporting Japan and keep paying a higher consumption tax. A higher consumption tax will give more money to the government which will in turn hopefully turns things around in Japan after the disaster. It also seems to be a good thing that Mr. Noda is going to be more involved with the Finance Ministry than the previous Prime Ministers in the previous years but it could also be bad because he would be working two different positions at once if he gets too involved with the Finance Ministry.

A-2 The Tying of the Swiss National Bank to the Euro

The Swiss National Bank has chosen to peg the Franc to the EUR at 1.2000 EURs/CHF and that the Swiss National Bank would expend however much money it needs to spend to do so. This is interesting because in history, there had never been a case in which a stronger currency regime will willingly tie itself to a lesser, weaker currency regime. Gartman acknowledges that it might have been done by some nation, major or minor, but he is not aware of such event happening. With the Swiss National Bank pegging the franc to the EUR, it basically means that the Swiss Franc is done as a currency. It means that it is basically the EUR because it's pegged at the same relative value. Since the Franc is a "safe haven" for a lot of investors during times of monetary duress, these investors will now have to look somewhere else for a "safe haven". This is the first time since 1978 that the Swiss National Bank has limited the value of the Swiss Franc in this way against another currency.¹⁸

What's interesting about this is how the Swiss National Bank has decided to peg itself to a currency that is a lot weaker. It's also interesting how the economy is going to react to this because since the Swiss Franc is a safe haven currency, where are people going to put their money after this peg happens? Gold seems to be a clear next choice but it has not been very

¹⁸ <http://finance.yahoo.com/news/Swiss-central-bank-sets-limit-apf-2514152395.html?x=0&.v=11>

stable in recent weeks and months. The Swiss Franc had soared by a third since the collapse of the Lehman Brothers in 2008 as investors invest in the Swiss Franc since it's a safe haven currency. Will this peg also slow down growth or increase growth for the Swiss? It should increase the growth of the Swiss economy as exports and tourism would be cheaper. Since the massive overvaluation of the Swiss Franc will pose a threat to the Swiss economy, how will this peg to the EUR affect the Swiss economy? Hopefully this is a right choice for the Swiss as it could fix their overvaluation of the Swiss Franc as there are too many investors using the Swiss Franc as a safe haven currency. There could be other implications with pegging a currency make as the Swiss National Bank will have to keep printing money and buying other currencies to keep their value down. With a stronger Swiss Franc, the exports of Swiss products would be very expensive. With a weaker Swiss Franc, it could help the export business in Switzerland and also the tourism business. It could very well help the whole Swiss economy because the Swiss government estimated that the recent rise in the strength of the Swiss Franc's value will reduce the growth rate of the Swiss economy by 0.3% this year and by another 0.6% the following year. The exports of jewelry, precious metals, machinery, and electronics were on the decline as well.¹⁹ The actions made by the Swiss National Bank might be in consideration by Japan as Japan has the same problem of having too high of a currency which makes exports very expensive.²⁰

I think this is a smart move by the Swiss National Bank to actually enforce your currency to be lower so it's not as overvalued. The peg will allow for the Swiss Franc to be weaker and for the exports out of Switzerland to be cheaper. It will also help the tourism business as everything is so expensive in Switzerland. A Big Mac from McDonalds in Switzerland right now costs a

¹⁹ <http://finance.yahoo.com/news/Swiss-central-bank-sets-limit-apf-2514152395.html?x=0&.v=11>

²⁰ <http://english.aljazeera.net/business/2011/09/2011979103975856.html>

little more than \$8 so the tourism business right now is not doing very well as everything is so expensive. I'm not quite sure what it would mean overall for the whole FOREX market though if the Swiss Franc is going to be pegged to the EUR. Also, since the Swiss Franc would now not be a safe haven currency anymore, investors might look to the Yen and that would be bad as the Japan Finance Ministry are also trying to devalue their currency.²¹

A-3 Operation Twist

The Federal Reserve has announced their new operation from their two day meeting and it is a stimulus move which revives a policy from the 1960's. It is called "Operation Twist" and it is supposed to sell \$400 billion in short term treasuries in exchange for the same amount of longer-term bonds starting in October and ending in June 2012. The Federal Reserve plans to sell the securities with remaining maturities of 3 years or less and plan to buy securities with maturities of six to thirty years. This would be an example in money and it would be dollar for dollar so no new money would be forced into the banking system. This exchange from short term treasuries to long term bonds would lower yields on long term bonds while keeping the rates of short term bonds around the same. This move would therefore push down the interest rates on a wide variety of loans such as mortgages to business loans which would give consumers and companies an incentive to borrow and spend money. Mainly, it seems like this operation would support the mortgage markets as there was a new paragraph quoted in the Gartman Letter that says:

"To help support conditions in mortgage markets, the Committee will now reinvest principal payments from its holdings of agency debt and agency mortgage-backed securities in agency mortgage back securities. In addition, the Committee will maintain its existing policy of rolling over maturing Treasury securities at auction."

²¹ <http://www.forexnews.com/forex-news-story/what-would-a-swiss-franc-peg-to-the-euro-mean-to-world-currencies>

This clause that was added shows how important the mortgage market is to the economy and how the Federal Reserve is trying to make it better. The last sentence of rolling over maturing Treasury securities is a little confusing but hopefully the Fed is doing something about the securities they have.²²

It would be interesting to see how this Operation Twist would work because back in 1961, a similar operation was done it had only lowered the long term rates by 0.15 of a percent. Even though Gartman had been a supporter of the actions of the Federal Reserve, Gartman thinks that this decision was a poor decision and that it was ill-advised and would do damage to the national regional and small banks. He thinks this because the national regional and small banks depend on the positive slope to the curve to get profits. By twisting the curve, the nation's banks seem to have been dealt a very severe blow. He believes that the twist in the curve would have little to no affect on the mortgage market and the housing market as it is such a small shift. Overall, Gartman believes that the twist is a bad idea because it would harm the nations smaller banks that rely on the positively sloped yield curve to get profits.²³

I would agree with Gartman on Operation Twist as it appears that it did not do much back when this sort of policy was enacted back in 1961. The twist in the curve would have only a very little change to the mortgage market and the long term rates. From what I understand, the twisting in the curve would hurt smaller banks because they would borrow short and lend long and that twisting it would affect that ratio and would net less profits to the smaller banks. Hopefully this would not be a very severe case because if it was a very small change in long term rates, it would be a small change in short term rates as well.

²² http://money.cnn.com/2011/09/21/news/economy/federal_reserve_operation_twist/index.htm

²³ <http://www.guardian.co.uk/business/2011/sep/21/operation-twist-federal-reserve-gamble-us-economic-stimulus>

A-4 Japan's Situation

Japan has a lot of debt right now and the Yen is way too strong for Japan's liking for Japan to recover. The Swiss Franc and the Yen were the safe haven currencies and with the move made by the Swiss Franc to peg itself to the EUR, the Yen looks more and more as a better safe haven currency. With such a strong currency, the Japan is not doing as well as there is economic news that show how they are not doing so well in terms of their own economy. A leading indicator for corporate capital spending, core machinery orders, have fell 8.2% in July from the previous month in Japan. This means that Japan itself is not doing so well and a strong currency would make situations worse. Exports have also fallen due to the strong Yen. Japan also has a net debt that is bigger as a share of GDP and it also has a primary budget deficit.

I think it would be smart for Japan to try to lower their currency as it is too strong for them to bounce back from their debts right now. I would assume they would do something similar that the Swiss National Bank is doing and that is to buy unlimited amounts of other currencies to try to lower their currency. It's also interesting as we talked about in class that the Japanese debt is mainly held by its own people and that is why Japan is doing so well. It appears that households alone have around \$16 trillion in assets and that is roughly twice the amount of outstanding government bonds. Corporations and firms also hold a lot of the debt. It would be very interesting to see where Japan will lead and how they would handle their too strong of a Yen.²⁴

A-5 The Situation in Europe

The spotlight in Europe is put on Greece as Greece fights its way against an inevitable default. Issue after issue of the Garton Letter, Garton is very keen on the fact that Greece would end up defaulting sometime in the near future as the situation there is not improving and

²⁴ <http://www.economist.com/node/18988858>

countries that support Greece may not be able to continue to support Greece. If Greece defaults, it seems that other European countries such as Italy would default as well. Gartman also talks about how the working people of Greece such as teachers, dock workers, lawyers, doctors, health care workers, plumbers, pipefitters, carpenters, bartenders, and all would not abide by these austerity measures if Greece does not default. Austerity measures mean that there is a lower spending and a reduction of benefits and public services provided to help cut a country's deficit. An example of other countries not being able to continue to support Greece is in the Gartman Letter issue from September 14. In this issue, Gartman goes over how Mr. Wen from China had spoke at a World Economic Forum event and that he basically said that China has countless times lent a helping hand to Europe and that they would continue to invest in Europe. However, he wants and expects proper action to be taken so that China's investments there would be secure and right now he is not quite convinced that investments there are safe. The markets appear to have granted a 90% or more probability to an imminent Greek default so Mr. Wen has basically told Europe that this cannot be allowed to spread as China has investments all over Europe. It is also historically shown that Greece has defaulted on its loans. Other European countries are not doing too well either such as Italy as Standard and Poors had decided to cut its debt rating on Italy one notch. Italy went from A+/A-1+ to A/A-1 and Standard and Poors also decided that the outlook for Italy was negative. Italy has Europe's second largest debt level in raw terms. Buyers of Italy's debt have become skeptical and nervous on Italy's ability to repay them.

If Greece happens to default, there would be a "Domino Effect" in which other PIIGS (Portugal, Italy, Spain, and Ireland) would follow. Basically, if Greece defaults, countries such as Italy, Portugal, and Spain would most likely follow as you can not really expect these countries to continue with all their debt from investors abroad. There is basically an idea that Gartman

brings up that is basically if you are either Portugal, Spain, or Italy and you see Greece default on its loan, why would you try to stick it out and take the higher road and pay the outstanding debts? This “Domino Effect” would have a huge effect on the world economy as there is so much money from other countries involved invested in these European countries. Germany, represented by Ms. Merkel, for one has said that they would try their best and use all of the economic and political tools to prevent Greece from defaulting. This was stated in the September 14th Gartman Letter but in the September 12th Gartman Letter, it seems that Germany does not want to give Greece any more money as history has shown over and over that Greece would default on its loans. This makes it seem like Germany is split in helping Greece as the German people does not seem to want their tax dollars being sent to countries that might default but the higher authorities see the bigger picture in which a Greece default would lead to other defaults which would be devastating for European countries. There was also a mentioning about how Jurgen Stark has resigned from his position at the ECB which would mean that the interests of the people of Germany were being torn to tatters by others in the ECB committee. Jurgen Stark was very old school in terms of his ways of banking as he had old guard principals to central banking and that he was “stark” in his attitudes. His resignation also immediately had an effect on the EUR as it fell instantly when the news of his resignation went public.

I think that it is smart that Germany is trying their best to help Greece as if Greece falls, Germany could be in a lot of trouble as well as they are pretty much tied together along with the rest of the European countries. I also find that it is very interesting that you can see the trends with the EUR in real time looking at the EURUSD currency trade in MT4. The whole past month after the initial drop in the EUR it had been pretty much around the same level and nothing much seems to have happened. Right now it is mainly just hanging around the same levels and there

are occasional spikes but it pretty much stays in the relative position. If Greece really defaults and it seems like it would given the history of Greece and the adamant position of Garton on an inevitable Greece default, it seems like it would be devastating to the world economy. The big countries such as China and Germany seems to have huge stakes in the situation in Greece and the other European countries and it seems like the U.S. have some stake in it too as the Fed has also made loans to European banks.

A-6 Euro Zone

The Euro zone has struck a second deal to help Greece with private banks and insurers on October 27th and they plan to complete this package so Greece would have another financial aid program in place before 2012. The package is said to be 130 billion Euros. In this deal, private banks and insurers agree to a 50% private sector losses on Greek bonds which would cut Greece's debt burden by 100 billion Euros which would cut its debts to 120% of GDP by 2020. It is currently at 160% of GDP which would be a huge improvement. From this deal, the Euro zone will also offer credit enhancements to the private sectors which would total to 30 billion Euros. Another conclusion from the meeting was to increase the European Financial Stability Facility bailout fund. Currently, there is around 290 billion Euros left in the fund from 440 billion Euros as it had been used already to help Ireland, Portugal, and Greece. They would leverage 250 billion Euros 4 or 5 times which would produce around one trillion Euros in the bailout fund. To do the leverage, they would either offer insurance or first loss guarantees and they want to attract investment from China and Brazil. There is not yet a precise number of how much they would try to leverage but it probably would not be higher than 1.4 trillion Euros as they would have to leverage a lot to get higher than that. This plan is good news for the EUR as the EUR has been trading upward through the significant 1.4000 level. Whether or not this

program would work, the EUR has responded in a positive way and has been trending upwards the whole day on October 27th.^{25 26}



Figure 32 - Macroeconomic Issues EURUSD 1.4 Mark

Pictured is the EURUSD currency pair and you can tell that the EUR has been trending upwards and has broken through the 1.4000 mark.

I think that it is a good idea that the Euro zone had decided to help Greece once more and that it is very important for European countries to work together. I'm not quite sure how the leveraging of the bailout money to get to one trillion Euros work but I would assume it is based VERY heavily on investors and how much trust they can put into the Euro zone and the situation in Europe. China has given their input on how they want their investments to be safe and how they are getting more and more skeptical every day in terms of how safe their investment is. From a report today (October, 27), the Chinese Premier Wen Jiabao had signaled some sort of

²⁵ <http://www.reuters.com/article/2011/10/27/eurozone-idUSL5E7LR0M220111027>

²⁶ <http://www.businessweek.com/news/2011-10-27/sarkozy-wins-china-cooperation-pledge-as-japan-plans-efsf-aid.html>

willingness to help with the European Union. What China is worried about however is that there is disagreement amongst the European policy makers so that it makes China uneasy on spending money on a plan even Europeans do not want to support. This is very true in the case of Germany as the people of Germany do not want their tax money helping Greece for example. It would be interesting on how the Euro zone can get their investments to raise their bailout fund to around one trillion Euros. There are some programs the banks are trying to make so that China and Brazil can play a role and it appears that there would be programs in which China and Brazil would recycle their trade surpluses through Europe in the form of debt issues. These programs would be called “Special Purpose Vehicles” and Gartman had compared this to the Special Purpose Vehicles that were related to Enron. There is also the factor of how much is enough as there is already so much money pumped in Greece so one do not really know how much would be a good bailout fund.

A-7 Development Late October to Early December 2011

The following information was gathered from reading the *Gartman Letter* daily for the past couple of months and following news updates on forexlive.com.

In mid-November Japan made yet another unsuccessful attempt at intervening with the increasing value of the Yen. They had announced previously that they have \$200 billion to intervene with the situation, which they put to use earlier this week. The efforts were successful at first, but the MOF decided not to intervene for a second day and thus the Yen was pushed back up in the next day of trading. They refrained from intervention again on the third day, and it seems as if all hope has been lost on this fourth attempt to stabilize the currency.

Europe has been all over the headlines in the last couple of months. They were able to spark everyone’s interest their plan for a plan, allowing EURUSD to trade back up to the all-

important 1.4000 level once again. In mid-November S&P filed false report about Europe downgrading France's debt, which caused a huge downward spike for the EUR. The losses were regained after the false rumor was proven wrong, but the "damage had been done." But it just seems to be problem after problem for Europe, with a number of its countries in serious debt, and two of its countries losing their prime ministers and feeling their way into new governments. The Italian president has asked Mr. Monti to form a new government, and in Greece the new Prime Minister, Mr. Papademos, has also undertaken the same task. Now we have two "technocrat" governments in the Eurozone. Hopefully the new leaders can remain un-political and focus on their tasks of forming governments that will reduce debt, cut spending, and increase national productivity.

Nicolas Sarkozy called for a change that will ask for the creation of a European Monetary Fund to support countries in need. The ECB's new president, Mr. Draghi, made a statement that forces authorities to be concerned about both inflationary and deflationary risks. They are trying to weaken to currency in order to strengthen the economy and save the union. S&P has put 15 Euro-zone countries on "credit watch." It is clear that something must happen in Europe, because the real way to get rid of deficits is with economic growth.

The source of a lot of Europe's problems in the past few months has been Greece, which is currently on the brink of leaving the EMU. Greece is expected to run out of funding by the end of the year. It is unclear whether they will default, leave the EMU, or be kicked out of the EMU. In Germany, discussion has begun concerning the requirements for a member of the EMU to be allowed to leave on its own accord, or how the "core" nations will be able to force nations out that cannot repay their debt.

Europe seems to be taking drastic measures to prevent this from happening. In the meantime, Mr. Papandreou chose to stand down from his position of Prime Minister. Mr. Papademos took his position and set out to make a new coalition/unity government which would include a number of austerity measures. This transfer of power was not supportive of the EUR. It is unclear as to who will become prime minister when actual elections are held. There was chaos in Athens over the austerity measures with tear gas and violence in the streets.

Italy has also seen its fair share of problems. Their government has been on the verge of failure, and the ECB has considered stopping the buying of Italian debt unless Italy figures out its situation. On top of all this Prime Minister Berlusconi stepped down from his position. Senator Monti was put in charge of creating a new government. Italy had austerity measures imposed upon them by the “Troika” in order to start paying back their debt.

France also found its way into the headlines a few times. They voiced their rising concern with continuously worsening situation in Europe which has driven their lending rates through the roof. They have been fighting for reform, but Germany shows no interest in reform because of the small affect the recession is having upon their country. There has also been speculation that France’s AAA debt rating may be lowered sooner rather than later. Germany decided to make a stability pact with the French that will take effect on the first day of the new year and change the treaties that govern Europe. The pact will impose even more austerity measures for Europe and punishments for not fulfilling them. It will also require the ECB to buy European debt more aggressively and be a “crisis fighter.”

Chinese government has taken action to cut its reserve requirements from 21.5% to 21.0% causing the Renminbi to be weaker. This was a signal that something big had changed in the market today and the ECB and Federal Reserve reported that “swap lines” had been opened

to create liquidity for the European Monetary authorities. The swap lines are simply to supply dollars overseas at a cheaper rate than had been previously available. The FED lends money to foreign banks for a period of time during the liquidity and the banks use the money to lend to local banks.

In two months, Canada has lost 54,000 jobs, and considering their lower population in comparison to the U.S., this is a very high number. As a result the Canadian dollar has fallen relative to the U.S. dollar. For the first time in a long time the USD has traded higher than the Canadian dollar.

Here in the United States, the state of the economy is unclear. The Fed says the economy is getting better and worse at the same time. There is not much news which would give reason for joy or despair; just same stuff, different day. Consumers have been spending more money than expected in this holiday season; businesses are purchasing more equipment and software; and inflation has dropped as the price of oil and gas prices have fallen. However, the Fed says that GDP and employment won't improve as much as was previously estimated. This has caused economic growth estimates for this year to be nearly cut in half. Federal Reserve Chairman Ben Bernanke says that the Fed is ready to provide more monetary stimulus if necessary. One possibility would be to do a large-scale purchasing of mortgage backed securities. The Fed chief also talked of the possibility of providing clearer, more dependent data on exactly how long the Fed will keep the federal funds rate near zero. The Fed will try to use its remaining tools of asset purchases and communication in combination with one another to achieve its dual mandate of maximum employment and price stability. Other than that, unemployment has held relatively steady as well as many other economic indicators. Some things are signaling a turnaround while others are saying that we are still in a recession. The future is uncertain.

One positive thing that the U.S. economy has going for it at this time is its rising oil production, due mostly to the discovery of shales capable of producing vast amount of natural gas products. Oil production here in the U.S. has risen drastically in the past few years, and as more and more shales are being discovered, this number is expected to do nothing less than rise, and at an exponential rate. Not only will this bring money in the U.S., but it will also create countless new jobs, and will cause business to thrive in the areas of these shale formations. Also, as we are able to create more and more of our own oil, our dependency on other countries for oil will decrease, and hopefully oil prices will drop for the citizens here in the U.S. as well. This could really stimulate our economy and hopefully steer us away from recession.

President Obama spoke in China, asking China to stop “gaming” the system and start acting like a “grown up” economy. As of late, China’s success has been due to their ability to keep their currency’s value low. This shall prove to be popular among people here in America, but his stance will not be taken kindly from those in Beijing.

A-8 Development January to February 2012

As the term started the situation in Europe was still worsening while US, Canada, Australia, and New Zealand were improving. Canada and US are working on the oil pipeline project but Canada had become less and less cooperative if the US didn’t do what Canada wants. Also the money borrowed from the ECB in Europe was approaching 600 Billion and therefore the ECB was pushing for more monetary policies and austerity programs. Mr. Draghi said that this was not the way to deal with the debt because more austerity would be a recipe for recession or depression, not growth. All of the European countries have had their debt rating go down with the exceptions being Finland, Germany, Luxembourg and Netherlands. France and Australia have been cut to AA+, Slovenia cut to A+, Slovakia and Spain cut to A, Malta cut to A-, Italy cut

to BBB+, Cyprus cut to BB+, Portugal to BB, and Greece remains at a CC. The EFSF's debt rating had also been cut down to a AA+, which resulted in Netherlands, Finland, and Luxembourg announcing that they will no longer put money into the EFSF. After this the IMF vowed to help the European situation but the ECB owns 40 billion in Greek debt and Garton was very doubtful of Greek debt. Despite all of this there was finally a plan worked out to create a rescue fund for Greece. The ESM and EFSF were combined to make a fund as large as 750 billion euros. Now it is a waiting game to see if the new austerity measures and the bailout fund works to reduce the crisis in Europe.

In the US the term started off good for the economy especially the value of the USD with respect to the Euro because of the situation over there. Despite the crisis level the currency pair never dropped as much as people thought, going down to only about 1.2. Also unemployment decline considerably throughout the term, capped off in January when the unemployment report showed the decline had been from 50,000 to 352,000 jobless claims. Garton commented on the dependency of the market based on this report and he does not like it because the report is almost never right and is constantly being revised in later months.

Appendix B – Gartman Letter Summary

Thursday November 17th

- With the situation in Europe still making front page news, the US dollar will continue to strengthen. In general western hemisphere currencies have been relatively strong as of late.
- France is becoming more and more worried about the situation in Europe as their borrowing rates have raised quite drastically. They are urging the ECB and ESFS to take action. Germany, which has not been affected as much, is more reluctant to make any changes at this time.
- The economic data of the day says that industrial production here in the US rose 0.7% in October, which was higher than expected. Industrial production levels are far higher than the lows set during the recession in the summer of 2009 but are still below the levels we experienced pre-recession in fall of 2007.
- Foreign holdings of US debt increased 1.9% in September which suggests that foreign demand for US debt remains strong.

Friday November 18th

- It was thought the EUR might make a recovery but chaos in Athens and images of tear gas and violence in the streets prevented this from happening
- The occupy Wall Street movement has gotten achieved more recognition and success than was originally anticipated.
- France's debt rating may be lowered sooner rather than later. The debate between France and Germany continues, with France pushing for reform and Germany rather content with its current situation.
- With all the negativity in Europe it is surprising that the EUR has remained steady as long as it has, but it is uncertain how long this will last.
- We await the results of the President of the Federal Reserve Bank speaking this morning as well as the results of the Conference Board's Coincident Leading and Lagging Indicators.

Monday November 21st

- Thanksgiving is this week so the markets will most likely be quiet, as they have been in the past.
- Super committee in congress has to make 1.2 trillion in deficit reductions. This is a task of cutting 1.2 trillion from budgets over the next ten years. However the reports from Washington are that neither the democrats nor republicans have budged over their positions. The republicans refuse to budge on the tax increase that the democrats want and the democrats have refused to budge on the entitlement cuts that the republicans want.
- Debate in Europe is over whether the ECB should buy the sovereign debts of the nations in Europe and it is basically everybody vs. Germany. Germany has made it known that they do not want this to happen, and France is the leader of the opposition.

Tuesday November 22nd

- The Dollar is up and down today while the other dollars are weak.
- Obama made a speech saying the budget cuts will be “done with a scalpel rather than an ax” which is not too good considering the large deficit.
- S&P and Moody’s said they would not downgrade the US’s sovereign debt rating despite no decision from congress, which is a good thing at this point.
- Despite bad news in Europe the EUR wont falter and is staying at 1.3400.

Wednesday November 23rd

- FOMC meeting minutes;
- QE III – very likely on the way
- unemployment rates concern – rate holding steady at 9.1%
- housing market concerns – still very weak
- Talk about how Sarkozy and Merkkel would be talking to revise Treaties (Political and monetary)

Thursday November 24th

- Latest German bond offering failed → game in Europe changed so Germany

Friday November 25th

- Both Sarkozy and Merckel want to make revisions to the Treaties, both political and monetary unions
- France might lose AAA rating soon

Monday November 28th

- Germany is going to make announcement later this week regarding the stability pact that was made with the French. The pact will take effect on January first and is a change to the treaties that govern Europe.
- First component is there will be more austerity measures that must be taken by all the members of the EMU and the punishments for not obeying these measures are mandatory for EURO-zone members. The second component is the ECB will now be expected to buy European debt aggressively and be a “crisis fighter”.
- This news sent the EUR up but it did not hold at its highs for too long.
- Gartman says that the beneficiaries of this pact are “dollar” countries like Canada and the US. Mainly Canada because of their banking system which is in very good shape, they are rich in raw materials, a lot of port facilities, educated work force, and a nation of laws and property rights that are protected.

Tuesday November 29th

- There is another European Finance Minister’s summit meeting which is planning to downgrade banks across Europe because the governments were too strained to come o their aid. Also S&P is talking about downgrading France’s AAA rating in the next two weeks. Also at the meeting they are expected to approve an expansion of the EFSF’s ability to buy Spanish and Italian debts.
- There is also talk of the US’s AAA rating being downgraded unless something is done about the US budget deficit.
- Italy is set to auction 8 billion in notes today, both a 3 year and a 10 year note which shall demand coupons above 7%.

- News from the political Unions in the UK is getting worse. Britain's Labor party said that it will oppose any expansion of Brussels' power if it means any damage might be brought upon prospects for economic growth in the UK. Douglas Alexander said that joining the single currency was never on the Labor's agenda and he says the UK will not lose influence in the world if it remains outside of the monetary union.

Wednesday November 30th

- EUR has been moving today, has traded at 1.3260 up to 1.3440, although the rest of the market is pretty stable.
- Garton commented about the EUR and the concept of the countries that make up that currency. He didn't think it would work when it was first created and he is very surprised that it has remained in the global spot light for as long as it has. The history of violence among the countries that comprise the EUR has made it destined to fail, as the notion that they could forgive and forget is clearly against human nature.
- There is also talk that the IMF could be pressed into coming to EUR's aid but this is a misconceived notion. That would mean that the treasuries of America, Canada, Australia, or New Zealand would vote to spend their tax payers dollars to help out the non tax payers in Greece and Italy etc. In a time of 5% unemployment and large GDP growth this might be a possibility but at the current state this is impossible and it is nothing but rumors.

Thursday December 1st

- Chinese government has taken action to cut its reserve requirements from 21.5% to 21.0% and this has the Renminbi weaker today. This was a signal that something big had changed in the market today and the ECB and Federal Reserve reported that "swap lines" had been opened to create liquidity for the European Monetary authorities.
- The swap lines are simply to supply dollars overseas at a cheaper rate than had been previously available. The FED lends money to foreign banks for a period of time during the liquidity and the banks use the money to lend to local banks.
- Poland Foreign Minister, Mr. Sikorski said that he fears German inactivity more than German power and he encourages them to do something. He realizes that the survival of

Poland is based on the EURO ZONE and needs it to be strong. Therefore doing nothing is not the answer and actions needs to be taken.

Friday December 2, 2011

- Nicolas Sarkozy called for a change that will ask for the creation of a European Monetary Fund to support countries in need. He did it without much approval or assent.
- The ECB's new president, Mr. Draghi, made a statement that forces authorities to be concerned about both inflationary and deflationary risks. They are trying to weaken to currency in order to strengthen the economy and save the union.
- The ISM Manufacturing Index rose 1.9 points to 52.7 in November, which was better than expected. The New Orders Index increased 4.3 percent from October to 56.7 percent. The Prices Index also rose 4 percent to 45 percent, but prices of raw materials continue to decrease for the second month in a row.
- Unemployment is still relatively constant.

Monday December 5, 2011

- In two months, Canada has lost 54,000 jobs, and considering their lower population in comparison to the U.S., this is a very high number. As a result the Canadian dollar has fallen relative to the U.S. dollar.
- The central banks of Europe, Canada, Japan, and the U.S. agreed last week to lower the price of existing U.S. dollar liquidity swaps.
- Today, Italy will learn how severe their austerity measures will be. It is expected that they will have to make a lot of sacrifices. Similarly, Greece is expected to approve their austere budget on the 7th.

Tuesday December 6, 2011

- S&P has put 15 Euro-zone countries on "credit watch"
- Could cut ratings within the next ninety days
- It is because of constant pressure of the countries as we know the problems of Europe, it has put downward pressure on Eurozone's credit rating
- Austria, Belgium, Finland, Germany, Luxembourg, the Netherlands would most likely have their ratings cut by one notch

- Other Eurozone countries might be cut by two
- Encourages leaders in Europe and ECB to let banks be more aggressive
- Garton finds that the “constitutions” that Merkel and Sarkozy would revise pretty much when they want disconcerting
- U.S. Treasury; Geithner going to meet with Germany’s Finance minister and Ms. Merkel
- 4th trip there, shows the U.S. cares about the situation in Europe
- Reserve Bank of Australia cut base rate by 25bps which brings it to 4.25%; lowest level since a year and a half ago

Wednesday December 7, 2011

- Starts off talking about ECB monetary policy committee meetings and how Mr. Geithner (U.S. Treasury Secretary) would be there too
- Talks about how the monetary and political unions made before were supposed to keep Germany under rules and regulations but Germany remains top dog
 - Berlin dictate new rules of new treaties
 - Germany dictates debt/GDP ratios, spending programs, taxation regulations
- Basically Germany dictates and others would have to sign whether they like it or not
- Garton speculates that there will be a lot of compromise in the Eurozone regarding debt, spending, taxes, etc and how there might be a new super governmental organization similar to the IMF
- Germany to have more severe debt/GDP ratios, new “supra-national bond buying mechanism”

Thursday December 8, 2011

- Forex market is “in neutral” today and most likely into tomorrow because everyone is awaiting the outcomes of the meetings in Europe. Nothing could happen or agreements could be made about debt reduction, rules, punishment and so forth.
- Something needs to happen in Europe because the real way to get rid of deficits is with economic growth so progress must occur.
- ECB President Mario Draghi said that a material overhaul of the euro zone’s fiscal rules is an absolute prerequisite to the banks playing a greater role in helping the debt crisis.

- Possibility of a rate cut at the ECB monetary policy committee today.

Wednesday January 11th

- Situation in Europe getting worse and worse while the US, Canada, Australia, and New Zealand are going strong
- Canadian prime minister following the US less and less with his decision to press ahead with Canada's interests in mind if the US doesn't do what Canada expects such as the oil pipeline project
- Canadian dollar strongly over-bought...became more over-bought so this shows how unpredictable the market is
- Money borrowed from ECB by European banks approaching \$600 billion
 - Banks in Europe losing faith

Thursday January 12th

- ECB has been pushing more and more monetary policies
 - Clear difference of ECB under Mr. Draghi compared to ECB under Mr. Trichet
 - Balance sheet has rose from 2.0 trillion euros to 2.69 trillion euros
- Mr. Draghi knows that continued austerity programs along with other mandates are ingredients for recession if not fully fledged depression
- China inflation fallen to a new 15 months low of 4.1%

Friday January 13th

- Strong auction of Spanish debt; major reversal being traced out
 - Sold twice as much as they had targeted
- Italy will sell bonds too and hopes for the best
 - Rome selling 3 billion euros of three year notes, 1.75 billion of two old notes
 - 90 billion euro of Italian bonds/notes will mature between Feb/April
 - Madrid has 86 billion euro of bonds that will mature through the end of the year
- Italian Prime Minister Mario Monti intends to put a new tax on financial transactions
- Jobless claims rose, retail sales were disappointing

Monday January 16th

- (S&P) Only Finland, Germany, Luxembourg, and Netherlands have AAA ratings
- (S&P) France and Austria cut to AA+, Slovenia was cut to A+, Slovakia and Spain cut to A, Malta cut to A-, Italy cut to BBB+, Cyprus to BB+, Portugal to BB, Greece is still at CC.
 - France in danger of another cut as public debt and budget deficits continue to rise because of the poor economy
- Seems to be waiting for Moody's and Fitch to see what they would do in reaction to S&P's decisions

- ESFS rating might be in jeopardy as France and Austria have fallen from AAA to AA+ and the S&P had said that they would use the lowest of the ESFS's rating to rate it so it would possibly be changed to AA+
- Risks for institutional investors of European debt are heavily skewed
- For Greece, the situation is still pretty bad but seem to have worked out a deal with banks, pension funds, and hedge funds to accept a 50% cut.
 - Need to convince IMF and EUR to lend them more money to stay alive

Wednesday, January 18th

- The AAA rating of the EFSF has been downgraded to AA+, which puts upward pressure upon interest rates. The Netherlands, Finland, and Luxembourg announced they have no intention of putting more money into the EFSF.
- The FDIC proposed an idea of requiring banks in control of over \$10 billion to undergo annual stress tests to evaluate their performance financial stability.

Thursday, January 19th

- The IMF has vowed its aid to the European situation, but past experiences have people worried about the outcome.
- The Australian government reported that the employment totals there fell 29,300, which was far worse than expected. The unemployment rate itself remained steady. It seems they have learned something from the statisticians in the US labor department.

Friday, January 20th

- Greek Finance Minister, Mr. Evangelos spoke on the progress being made with the Greek debt situation and addressed the importance of acting now.
- Weekly jobless claims saw a remarkable drop of 50,000 to 352,000, the largest single-week decline since September '05. The amount is expected to settle a middle point but the decline is still impressive.
- The Fed. St. Louis adjusted monetary base has remained overall unchanged for months.

Friday January 27th

- Yen strengthening a lot from buying of the Yen by Japanese exporters
- Ms. Christine Legarde from ECB says that they have no choice but to accept losses from Greek debt
 - -ECB owns ~40 billion euros of Greek debt
- Still, Gartman remains very doubtful of Greece because of Greece's past history
- Trend of weekly jobless claims to be "from the upper left to the lower right"
- National Statistics Institute in Madrid reported that the # of unemployed rushed past 5.0 million

Monday January 30th

- Australia's banks on "credit watch" so the Aussie dollar is under a lot of pressure
- In Europe, it seems like they have agreed to a permanent rescue fund; seems like they have summit meetings on a regular basis
 - Told there is progress made with the discussions between holders of Greek debt and the Greek government
- European Stability Mechanism (ESM) will be live in July
 - Funds from ESM and EFSF will be combined, fund as large as 750 billion euros.

Tuesday January 31st

- EUR is strong and the dollar is weak because of news that 25 of the 27 EU nations have agreed to a program to bail out Greece. Only UK and Czech Republic haven't signed.
- Compact will put into place balanced budget rules that are national laws for all EU countries.
- Garton doesn't like the compact because it just makes budget cuts rather than supporting economic growth.
- Unemployment report to come out in the US but speculation on this number is foolish.

Wednesday February 1st

- Market has finally started to understand the error in the ways of how Europe is cutting so much spending and not supporting economic growth. Because of this EUR is bearish.
- The Swiss Franc almost made a cross of 1.2 relative to the EUR and traded at 2.015. Swiss Bank has made it known that it will defend the 1.2 number with whatever means they need.
- Sarkozy and Merkel don't seem to like each other and after the last round of meeting Sarkozy said he would not be pushed around by Germany.
- Man opposing Sarkozy for presidency has made it public he does not like the compact and if elected will try to abrogate the compact or renegotiate the terms.

Thursday February 2nd

- Market is quiet today and really waiting to see in the EURUSD can break the 1.3200 level.
- Garton again commented on how he does not think the market dependency on the Employment Situation Report in the US is a good idea.
- Japan is again concerned about the value of the Yen and Juri Azumi, the Minister of Finance, is demanding a more aggressive stance on quantitative easing to bring the Yen down.

Appendix C – Our Trades in the Forex Market

Pak's Trades

Forex Capital Markets, LLC

Account: 2089478136 Name: B Term

Currency: USD

2012 January 13, 21:55

Closed Transactions:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Close Time	Price	Commission	Taxes	Swap	Profit
6121564 2	2011.11.14 22:02	balance		Deposit									100 000.00
6122997 6	2011.11.15 02:21	sell	1.0 0	eurus d	1.3632 5	1.3637 0	1.3627 5	2011.11.15 02:33	1.3630 0	0.00	0.00	0.00	25.00
6124772 0	2011.11.15 07:03	sell	1.0 0	eurus d	1.3599 0	0.0000 0	0.0000 0	2011.11.15 07:07	1.3588 6	0.00	0.00	0.00	104.00
6135622 0	2011.11.16 00:55	sell	1.0 0	eurus d	1.3507 1	1.3516 5	0.0000 0	2011.11.16 00:59	1.3516 5	0.00	0.00	0.00	-94.00
6135881 6	2011.11.16 01:38	buy	1.0 0	eurus d	1.3509 8	1.3487 0	1.3509 8	2011.11.16 02:03	1.3487 0	0.00	0.00	0.00	-228.00
6188549 7	2011.11.22 07:48	sell	1.0 0	eurus d	1.3524 5	0.0000 0	1.3495 0	2011.11.22 13:50	1.3495 0	0.00	0.00	0.00	295.00
6210867 6	2011.11.24 09:10	sell	1.0 0	eurus d	1.3395 0	0.0000 0	1.3368 5	2011.11.24 10:45	1.3368 5	0.00	0.00	0.00	265.00
6239384 6	2011.11.29 06:02	sell	1.0 0	eurus d	1.3360 3	0.0000 0	1.3326 0	2011.11.29 08:41	1.3326 0	0.00	0.00	0.00	343.00
6292886 6	2011.12.06 01:53	buy	1.0 0	eurus d	1.3368 4	0.0000 0	1.3380 0	2011.12.06 02:31	1.3373 4	0.00	0.00	0.00	50.00
6302681 2	2011.12.07 07:04	buy	1.0 0	eurus d	1.3448 7	0.0000 0	0.0000 0	2011.12.07 07:39	1.3440 5	0.00	0.00	0.00	-82.00
6311303 7	2011.12.08 07:11	sell	1.0 0	eurus d	1.3407 4	0.0000 0	1.3377 5	2011.12.08 13:59	1.3377 5	0.00	0.00	0.00	299.00
6322336 8	2011.12.09 07:00	sell	1.0 0	eurus d	1.3301 8	0.0000 0	0.0000 0	2011.12.09 07:08	1.3293 0	0.00	0.00	0.00	88.00
6478901 1	2012.01.10 07:59	sell	1.0 0	eurus d	1.2768 2	0.0000 0	0.0000 0	2012.01.10 08:08	1.2756 3	0.00	0.00	0.00	119.00
										0.00	0.00	0.00	1 184.00
Closed P/L:												1 184.00	

Open Trades:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Market Price	Price	Commission	Taxes	Swap	Profit
No transactions													
										0.00	0.00	0.00	0.00
Floating P/L:												0.00	

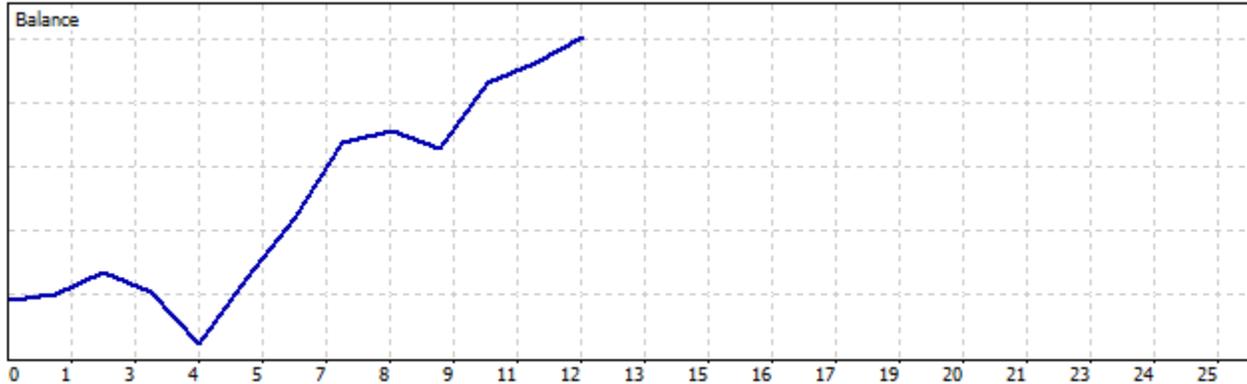
Working Orders:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Market Price
No transactions								

Summary:

Deposit/Withdrawal:	100 000.00	Credit Facility:	0.00		
Closed Trade P/L:	1 184.00	Floating P/L:	0.00	Margin:	0.00
Balance:	101 184.00	Equity:	101 184.00	Free Margin:	101 184.00

Details:



Gross Profit:	1 588.00	Gross Loss:	404.00	Total Net Profit:	1 184.00
Profit Factor:	3.93	Expected Payoff:	98.67		
Absolute Drawdown:	193.00	Maximal Drawdown:	322.00 (0.32%)	Relative Drawdown:	0.32% (322.00)
Total Trades:	12	Short Positions (won %):	9 (88.89%)	Long Positions (won %):	3 (33.33%)
		Profit Trades (% of total):	9 (75.00%)	Loss trades (% of total):	3 (25.00%)
Largest		profit trade:	343.00	loss trade:	-228.00
Average		profit trade:	176.44	loss trade:	-134.67
Maximum		consecutive wins (\$):	4 (953.00)	consecutive losses (\$):	2 (-322.00)
Maximal		consecutive profit (count):	953.00 (4)	consecutive loss (count):	-322.00 (2)
Average		consecutive wins:	3	consecutive losses:	2

Figure 33 - B Term Trade Summary

Overall from trading between 11/14/2011 to 1/10/2012, I had made a profit of \$1,184.00 which is pretty good for personal benefit but it does not meet our requirements of trying to achieve 20% return on our investments. Daily, I had needed to get 8 pips a day because there are 260 trading days in an average trading year. With an initial investment of \$100,000, 20% of it is \$20,000 divided by 260 days is 76.9 which is rounded up to 8 pips (\$80) to make it much simpler. I had found myself not to be able to trade every single day with other responsibilities so

that goal was not met even though I tried to go for more than 8 pips every time I traded. To try to better this next term, I will try to trade with bigger lots to increase my profit.

Looking at the history log of my B term MT4 account, the trades look good and seems to be strategic as I had remembered them to be. There has not been much stop losses put in but I hope to put them in this term. I had not used the stop loss as I was previously frustrated with opening a trade and setting a stop loss and pretty quickly have it close because it hit the stop loss. Next, it would seem to just trigger my stop loss and then do a reversal of what I had expected to have happened so I just stopped using stop loss. I also watch the screen pretty often when I have an open position so I am somewhat a human stop loss as I will exit the trade if it is going very badly.

The history also shows the average profit and losses and my average profit was \$176.44 while my average loss was \$-134.67 which is pretty good but still not ideal. Ideally, I want my risk-reward ratio to be greater than the ratio it is at now. My largest profit was \$343.00 and my largest loss was \$-228 which is similar to the ratios of the average profit and losses. Again, this is not as ideal as I would have liked as \$-228 for a loss is pretty huge with 22.8 pips lost. The history also shows that I prefer to go short as this whole past term the EURUSD has not really rallied up that high. Constantly, it would just hold the current price point and eventually give up and go lower and lower. This will probably be the case again this term considering how the Eurozone nations are not doing very well. In terms of winning trades compared to losing trades, I have a 75% success rate looking at the history. This is a pretty good ratio but I just need to put in stop losses to make customers feel better if they were to see the history of my trades.

I had also used the group account to make a few trades. I had mostly went long on this account and had only used a lot size of one. Here is the trade history summary:

Forex Capital Markets, LLC

Account: 2089468771 Name: Phi

Currency: USD

2012 January 13, 21:55

Closed Transactions:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Close Time	Price	Commission	Taxes	Swap	Profit
6078841 5	2011.11.09 02:41	balance		Deposit									300 000.00
6136660 3	2011.11.16 02:22	buy	1.0 0	eurus d	1.3462 3	0.0000 0	0.0000 0	2011.11.16 02:26	1.3463 8	0.00	0.00	0.00	15.00
6139470 3	2011.11.16 05:30	buy	1.0 0	eurus d	1.3449 2	1.3441 5	0.0000 0	2011.11.16 05:39	1.3449 6	0.00	0.00	0.00	4.00
6154458 3	2011.11.17 07:16	sell	8.0 0	eurus d	1.3488 9	0.0000 0	1.3483 5	2011.11.17 07:21	1.3483 5	0.00	0.00	0.00	432.00
6252518 9	2011.11.30 06:23	buy	1.0 0	eurus d	1.3317 2	0.0000 0	1.3333 3	2011.11.30 11:40	1.3333 3	0.00	0.00	0.00	161.00
										0.00	0.00	0.00	612.00
												Closed P/L:	612.00

Open Trades:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Price	Commission	Taxes	Swap	Profit	
No transactions													
										0.00	0.00	0.00	0.00
												Floating P/L:	0.00

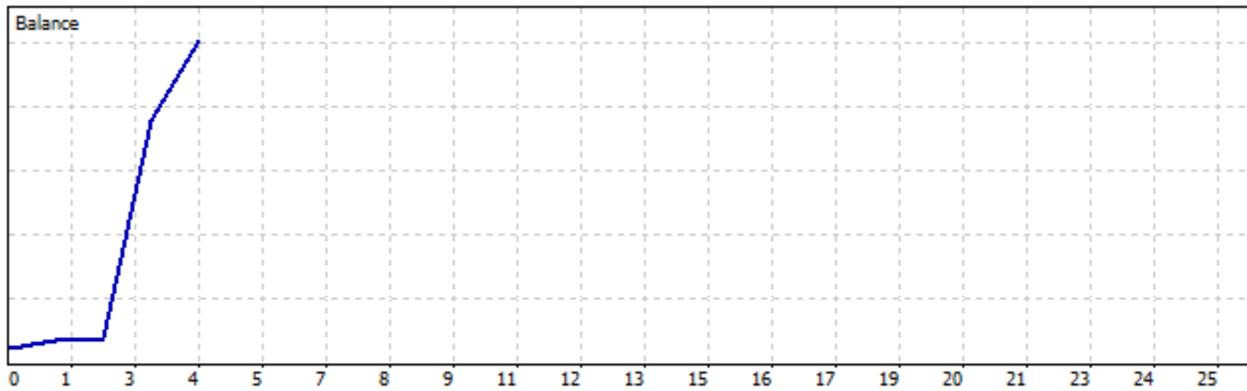
Working Orders:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Market Price
No transactions								

Summary:

Deposit/Withdrawal:	300 000.00	Credit Facility:	0.00
Closed Trade P/L:	612.00	Floating P/L:	0.00
Balance:	300 612.00	Equity:	300 612.00
		Margin:	0.00
		Free Margin:	300 612.00

Details:



Gross Profit:	612.00	Gross Loss:	0.00	Total Net Profit:	612.00
Profit Factor:		Expected Payoff:	153.00		
Absolute Drawdown:	0.00	Maximal Drawdown:	0.00 (0.00%)	Relative Drawdown:	0.00% (0.00)
Total Trades:	4	Short Positions (won %):	1 (100.00%)	Long Positions (won %):	3 (100.00%)
		Profit Trades (% of total):	4 (100.00%)	Loss trades (% of total):	0 (0.00%)
Largest		profit trade:	432.00	loss trade:	0.00
Average		profit trade:	153.00	loss trade:	0.00
Maximum		consecutive wins (\$):	4 (612.00)	consecutive losses (\$):	0 (0.00)
Maximal		consecutive profit (count):	612.00 (4)	consecutive loss (count):	0.00 (0)
Average		consecutive wins:	4	consecutive losses:	0

Figure 34 - B Term Trade Summary 2

When I traded with the group account, I was a lot more worried and paid more attention to all the details with the trends. I had one eight standard lot position but it was actually a mistake as I had tried to trade with bigger lot sizes on my A term account. When I switched accounts, I had not realized that the eight lot size for positions has stayed in the memory and had in a way defaulted itself to eight lots. That was quite a surprise when I saw eight lots and I had made it into a very short trade, ending it within just five minutes. This was a little preview of how trading with bigger lots is like because 5.4 pips had made \$432 profit.

I had intended to compare my A term MT4 account to my B term MT4 account but sadly I cannot access the history of my A term account anymore. I get the error:

2012.01.15 21:00:28 AccountHistory: '2089358493' cannot login to: FXCM-Demo

So I guess that my account has been closed since I had forgotten to log in at least every 30 days. However, I can see that the balance of it is \$138,636.03 and that is because I had played around with 8 lots as trades and went on riskier trades when I used the account for “fun” trades during B term.

Sample Trades

Here are some examples of my methodology at work:

Sample Trade 1

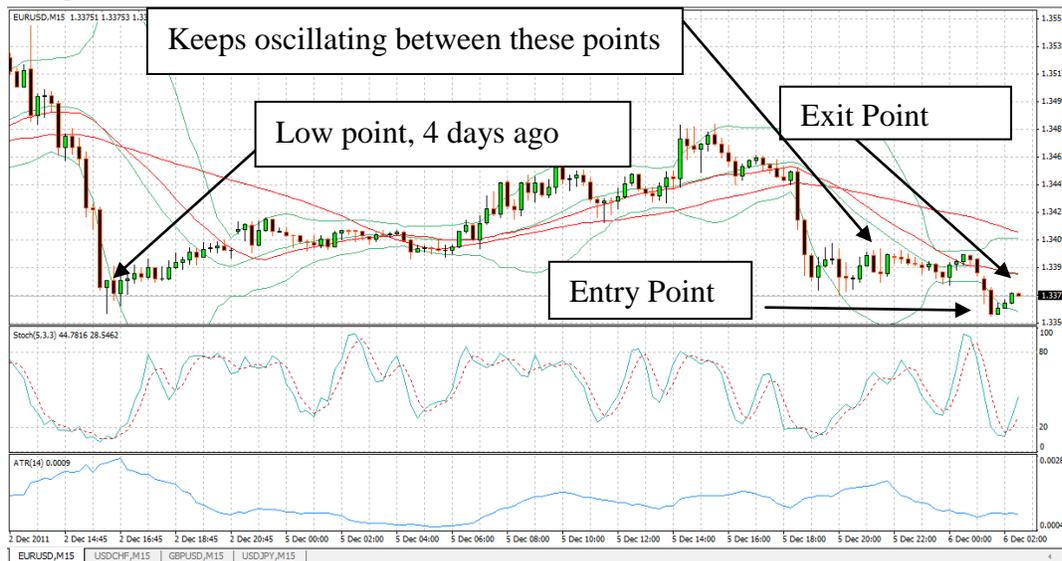


Figure 35 - Trade Methodology Example

Summary:

Currency: EURUSD

Trade Size: 1 Lot

Trade Type: Long

Long at: 1.33684

Closed at: 1.33734

Profit: \$50 (5.0 pips)

This was a unique trade because it is very rare that I open long positions. Following my methodology, there were no moving average crosses but the stochastic oscillator was above .2 and it had appeared that the currency has reached its low point from 4 days ago and should be rebounding up so I had opened a long position. I had closed it shortly after as you can tell from the section beforehand that it's going up and down by 5-10 pips so I felt like 5 pips was a conservative amount to gain from that time of trading. The set up for this trade was the downward trend that happened and the trigger for it was to breach the lowest pivot point from 4 days ago. The exit condition was finding the average movement the currency had at that time and determining how many pips was a safe amount to go for.

Sample Trade 2



Figure 36 - Trade Methodology Example 2

Currency: EURUSD

Trade Size: 1 Lot

Trade Type: Short

Short at: 1.33603

Sold at: 1.33315

Profit: \$288 (28.8 pips)

You can also follow my trading methodology on short position trades. For this trade, I did use the moving average crossover but it was more of a secondary indicator I had used for the

trade. When I saw the moving average crossover, I had knew something would happen soon and it had slowly and slowly with small red candlesticks start going down. As the candlesticks were forming, I could tell that there were still a lot of resistance to dropping down as all the early red candlesticks were filled very little. However, I had decided to follow through with the logic of moving average crossovers and did a short at pretty much the highest point and happily watched it keep going down. The set up on this trade was the moving average crossover and then the trigger was having the price very close to the Bollinger band and the previous 2 price peaks. The exit condition was the price being almost at the lowest point of the green trend right before hand. I like to play it safe and assume it doesn't go down to the pivot points and it has worked out pretty well in this case as it went down a little more but had gone back up a considerable amount afterwards. Looking back onto this trade, I am still not sure how I would have got on to open a long position after I had closed my short position as you can tell that the price had shot up and then shot back down in a bigger fashion.

Sample Trade 3



Figure 37 - Methodology Example 3

Currency: EURUSD

Trade Size: 1 Lot

Trade Type: Short

Short at: 1.35990

Sold at: 1.35886

Profit: \$104 (10.4 pips)

This last trade demonstrates my trading methodology perfectly. For this trade, I had seen that there was a moving average crossover so I was already expecting something big to happen. This was the set up for me in this trade. There were also the red bars starting to form and even with a little pressure, I knew that it would fall as it hasn't been that high for some time in context of the 1 minute chart. The trigger was the Bollinger bands and it was triggered when the green bar has penetrated through the line and then had started to fall back down. I took this opportunity to open a short position and it had started to fall which was going exactly the way I had anticipated. Next, it had reached close to the recent lowest point as shown in the graph above and that was my exit condition so I had closed the trade around there. This trade happened in the 1 minute chart so it had moved extremely fast and I had been very careful.

Josh's Trades

Trade 1



Figure 38 - Trade 1 EURUSD 1-min

Currency: EURUSD

Position: Long

Lot Size: 1 Standard Lot

Rationale: From watching the charts for the hour leading up to this, I was able to draw clear positive trend lines in my head. The price would increase and consolidate repeatedly with small downward trends every once in a while. The overall trend starting from 6:00 a.m. was clearly positive, and I knew the next oversold region would be a good time to go long. The slight downward trend between 7:15 and 7:30 was the signal I was looking for, bringing the Stochastic into the oversold region. I watched the Stochastic make the crossover in the positive direction, but waited for confirmation with the Moving Averages. There were a couple of solid bars in the upward direction, and the ATR began to rise as well. As soon as the 12 Day Moving Average crossed the 26 Day Moving Average I “entered” the trade. I made one huge mistake, however. I

forgot to change my Order Type to “Market” and instead placed a “Limit” Order. I realized this 30 seconds too late and missed out on my opportunity.

11/10/11 07:35:23 AM	11/10/11 07:37:32 AM	EURUSD	Buy	100,000	0	1.36260
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Possible Profit/Loss: I placed the limit order at 1.36260. Assuming this was a market order, I would have rode it out until I saw the first red bar, which closed at around 1.36330, a possible 7 pip profit, or about \$70.

Lessons Learned: Always check the order type!

Trade 2



Figure 39 - Trade 2 EURUSD 1-min

Currency: EURUSD

Position: Long

Lot Size: 1 Standard Lot

Entry/Exit Levels: 1.36303/1.36337

Profit/Loss (Pips/Dollars): 3.4 pips/ \$34



Figure 40 - Trade 2 Zoom-in

Rationale: This trade was based off a lot of the same trends as the trade before it. From watching the charts for the hour leading up to this, I was able to draw clear positive trend lines in my head. The price would increase and consolidate repeatedly with small downward trends every once in a while. The overall trend starting from 6:00 a.m. was clearly positive, and I knew that oversold regions would be followed by a solid upward trend. There was a brief downward trend followed by a period of consolidation bringing the Stochastic into the oversold region for quite some time, setting the scene – in my opinion – for a long overdue upward spike. My mistake here was leaving the room during the consolidation for a couple of minutes, thinking it would not be a problem. By the time I had gotten back, both the Stochastic and the moving averages had crossed in the upward direction, and I had missed several solid bars. I decided to jump in right away, even though I had missed a good part of the spike. I did make money here, but it could have been more.

Lessons Learned: First thing that I learned here was that if you are banking on small trends to make money, you need to be watching the charts very closely, because the price movement you are looking for can happen at any time. I also learned that it's not a good idea to jump right into a trade after you missed the initial price movement. It will not achieve optimal results, and being patient always pays off, because there is bound to be another price movement you can capitalize on.

Trade 3



Figure 41 - Trade 3 EURUSD

Currency: EURUSD

Position: Long

Lot Size: 1 Standard Lot

Entry/Exit Levels: 1.36391/1.36439

Profit/Loss (Pips/Dollars): 4.8 pips/ \$48

Rationale: This trade was made off of the same trend as the two previous trades. The upward trend seemed to be holding pretty well throughout the morning of trading and was allowing for quick and reliable profits. One thing I noted before I went into the trade was a resistance level that was developing over the past two peaks. I would use this as my exit point on this trade. Once again the price made a slight downward trend, bringing the Stochastic into the oversold range. The price was still within the upward trend I defined above. A crossover in the stochastic window, followed by two solid green bars and a similar crossover with the moving averages was my signal to enter the trade. It turned against me for a couple of candles, but I was not particularly worried because they weren't that big and they had relatively large wicks. After this,

the price continued in the upward direction until it reached a level that was very close to the resistance level I had made note of, which was my signal to exit the trade (upper right hand corner of the left picture).

Lessons Learned: Support and resistance levels are very important in deciding entry and exit levels.

Trades 4 & 5



Figure 42 - Trades 4&5 EURUSDD 1-min

Currency: EURUSD

Position: 4) Long 5) Short

Lot Size: 1 Standard Lot

Entry/Exit Levels: 4) 1.36393/1.36182 5) 1.36131/1.35809

Profit/Loss (Pips/Dollars): 4) -21.1 pips/ -\$221 5) 32.2 pips/ \$322

Rationale: I got a little overconfident on my fourth trade I made, with the consistency of the results I was achieving on the upward trend. I saw another downward trend, bringing the stochastic into the oversold range. Once again, there was a crossover signaling a price reversal, and I decided to jump the gun on this one, testing the reliability of the stochastic indicator by itself (big mistake). I saw that the moving averages were about to cross as well so I entered the trade a little early. They never crossed and I got sucked into a fake out. One thing that really killed me was the opening of the U.S. market, which completely reversed the upward trend of EURUSD. I rode it out for a little while, thinking it would correct itself, and decided to cut my losses when it dipped below 20 pips. My next trade was a short position on EURUSD, because the reversal in the trend was very clear after the open of early session here the U.S., and I knew that there had to be something going on that was causing this. I opened this position almost immediately after I closed the previous one, right at the beginning of the regular session in the U.S. The price dipped in my favor, and I rode this trend for 20-30 minutes. There were a few green bars along the way, but they were not large or convincing enough for me to exit my position. I closed my position when I saw two reasonably large green candles in a row.

Lessons Learned: From these trades I learned to be aware of the effect that the beginning of a session can have on the market. The EURUSD was clearly trending upward in the morning leading up to 8:00 a.m., but the beginning of the early session caused it to slow down, and the beginning of the regular session at 9:30 caused a complete reversal. From now on I will probably not have a trade open when a session is about to begin.

Trades 5 & 6



Figure 43 - Trades 5&6 EURUSD - 15 min

Currency: EURUSD

Position: Short

Lot Size: 1 Standard Lot each

Entry/Exit Levels: 1) 1.35384/1.35471 2) 1.35385/1.35579

Profit/Loss: 1) -8.7 pips/ -\$87 2) -19.4 pips/ -\$194 **Total)** -28.1 pips/ -\$281

Rationale: This was my first trade based off of mainly fundamental analysis and using candlesticks alone. The economic news of the day put Europe in a bad position and there were positive economic indicators for the U.S., so my inclination was to make short trades on EURUSD. As you can see from Figure 12 the trend of the day was clearly downward. In the 15-minute chart I was seeing well defined downward trends followed by short green bars then again by a series of red bars. There is a more zoomed in picture of the 5-minute chart below (Figure 13). I was trying to predict one of these movements, and on both occasions I would see a couple of green bars followed by a fairly large red bar, which I thought was signaling a continuation of

the downward trend. In both instances the price moved against me and I exited my position. Shortly after both of these trades, the price made the downward push I was hoping to catch before. It appears that the currency was in a short period of consolidation when I was trying to make this trade.

Lessons Learned: I learned that if you are trying to base trades off a longer term chart, you should be ready to make a longer term trade. In this case, I was right to assume that the price was going to go down, it just didn't happen right away. If I had held onto the trade for a little longer, I would've got the results I wanted.



Figure 44 - Trades 5&6 EURUSD - 5 min

Trade 7

Currency: EURUSD

Position: Short

Lot Size: 3 Standard Lots

Entry/Exit Levels: 1 Standard Lot @ 1.34724, +2 Standard Lots @ 1.34914/ 1.34583

Profit/Loss: 15.1 (\$151) on first position and 33.1 (\$662) on second position **Total) \$813**

Rationale: This trade was a long term trade based solely what I read in the Gartman Letter. It said that the U.S. Dollar was reigning supreme, and it continued to talk about the worsening situation in Europe. Once I read this I decided that I was going to make a long term short position on EURUSD. At first I sold 1 lot, but I upped to 3 lots and simply left to go to class. When I got back from class, I saw that the price had surprisingly gone up for quite some time while I was gone, but had reversed and made a sharp downward movement, resulting in an approximately \$700 profit. From looking at the 15-minute chart (Figure 14) below, I was able to pick out my exit strategy from locating a long term support level. I exited my trade when it hit that spot, which proved to be a good decision, because the price started to go back up not too long after that.

Lessons Learned: Fundamental analysis can actually be pretty useful, especially in situations like that which is going on in Europe.



Figure 45 - Trade 7

Trades 8 & 9

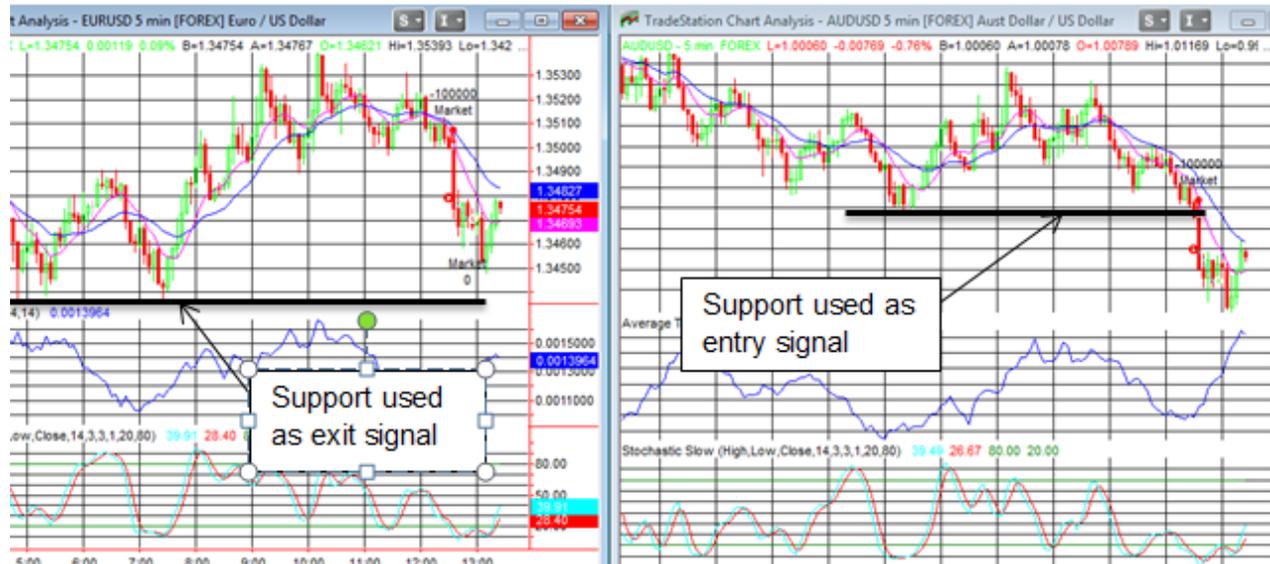


Figure 46 - Trades 8 & 9 EURUSD, AUDUSD - 5 min

Currency: EURUSD and AUDUSD

Position: Short

Lot Size: 1 Standard Lot each

Entry/Exit Levels: EURUSD) 1.34791/1.34705 AUDUSD) 1.00098/0.99941

Profit/Loss: EURUSD) 8.6 pips/ \$86 AUDUSD) 15.7 pips/ \$157 Total) 24.3 pips/ \$243

Rationale: This trade was sort of a freak accident. I don't usually trade in the middle of the day, but I decided to open my Trader Station platform and take a look at the charts. Not much was going but from looking at the AUDUSD 5 minute window (Figure 15) I was able to see a slight downward trend developing. There was also a long term support that had not been broken in quite some time, so I decided I would enter a short position if it broke through this level. Sure enough a huge red bar began to develop, so I entered a short position. I noticed that an almost identical situation was developing in the EURUSD window, which signaled to me that the reason for this movement had to do with the U.S. dollar, and that these prices would continue to move together. So I entered the same position with EURUSD. I drew a support level in the EURUSD

window that would be my exit position. Before the price even got to this point I saw some bars with large wicks developing, which signaled to me that there was resistance at that level, so I decided to exit the trade a little earlier. This wasn't a bad decision. Although the price did end up going down to a level very close to the line I had drawn, it made an upward reversal soon after.

Lessons Learned: I learned that if you are trying to base trades off a longer term chart, you should be ready to make a longer term trade. In this case, I was right to assume that the price was going to go down, it just didn't happen right away. If I had held onto the trade for a little longer, I would've got the results I wanted.

Trade 10



Figure 47 - Trade 10

Currency: EURUSD

Position: Short

Lot Size: 1 Standard Lot

Entry/Exit Levels: 1.34430/1.34303

Profit/Loss: 12.7 pips / \$127

Rationale: This trade was made around the beginning of the London session. Leading up to the trade the price was lingering in a well-defined region, but the ATR window was signaling that the market was beginning to trend strongly. Just before the trade the stochastic window was in the overbought region. It made a bearish crossover, which was followed by several red bars of relatively no significance in my opinion; they weren't very large. A large red bar began to develop (and rapidly) just as the moving averages made the bearish crossover that I look for before entering a trade. This was a clear signal for me to enter the trade. I rode out this bar and several bars after it until a rather large green bar signaled the end of the trend. This all happened within 7 minutes.

Lessons Learned: London session is a great time to trade.

Trade 11



Figure 48 - Trade 11

Currency: EURUSD

Position: Short

Lot Size: 1 Standard Lot

Entry/Exit Levels: 1.34837/1.34895

Profit/Loss: 5.5 pips / \$55

Rationale: This trade was made somewhere around the middle of the London session. From the 1 and minute charts I was able to identify a clear upward trend. Although the trend was gradual, it was also very reliable and showed no signs of reversing. I decided to enter the trade after I saw a large green bar. I rode the trade out through the slight down slopes, because the larger time intervals showed that this was normal for this trend, and the price was still making markedly higher highs. I exited the trade when I noticed that the downward trends were no longer followed by higher highs, but rather a steady oscillation of high and low values within the same support and resistance region.

Lessons Learned: Overall trends are good to trade off of. As long as the market is making consistently higher highs and consistently higher lows, it is fine to ride out the red bars and bank on the upward trend (vice versa).

Trade 12

EX L=1.02376 -0.00322 -0.31% B=1.02376 A=1.02392 O=1.02682 Hi=1.0270



I exited the trade right here when the bar opened. The bar had not moved and had no wicks. The exit position they had marked me at was considerably higher than my position and the current bar itself, which is not possible.

Figure 49 - Trade 12

Currency: EURUSD

Position: Short

Lot Size: 2 Standard Lot

Entry/Exit Levels: ??? (TradeStation has no record of it)

Profit/Loss: Should have been 5.1 pips / \$102 (See below)

Rationale: I based this trade off the clear downward trend developing in the window. I waited for a convincing red bar that would cause a further separation on the moving averages and entered the trade. This trade did something really screwy, however. I closed it out right at the beginning of the green bar you see above, with a profit of \$102. The platform then did something weird, and the profit changed to \$101.80 for a second, then in the end I ended up making \$28.94 (I've never seen a profit or loss go into cents). It also marked my exit level higher than the current bar, which also isn't possible.

Lessons Learned: TradeStation can do some crazy things

Trade 13



Figure 50 - 30 Minute Chart Support Level

Currency: EURUSD

Position: Long

Lot Size: 2 Standard Lot

Entry/Exit Levels: Another trade miraculously misplaced by TradeStation's database

Profit/Loss: Profit was about \$450

Rationale: This trade was based off two things. While I don't usually do overnight trading, I was compelled to give it a shot. From looking at the 30 and 60 minute interval charts, I noticed a support level that had not been broken in several days. I know from experience that these levels can be broken and the price can plummet, but I also knew that while I was sleeping the London session would be taking place. I know from trading during the London session and from just looking at the past charts that EURUSD – even when it is in an overall negative trend – tends to bounce back during the London session and continue downward at the start of the US market. For this reason I placed a long position of 2 lots right around the support level, and made it a point to set my alarm for the beginning of the U.S. market. As you can see the price had already started to drop a little bit, but it was still profitable nonetheless.

Lessons Learned: Overnight trades can be very profitable, but I am still not completely comfortable with the idea of it.

Trade 14

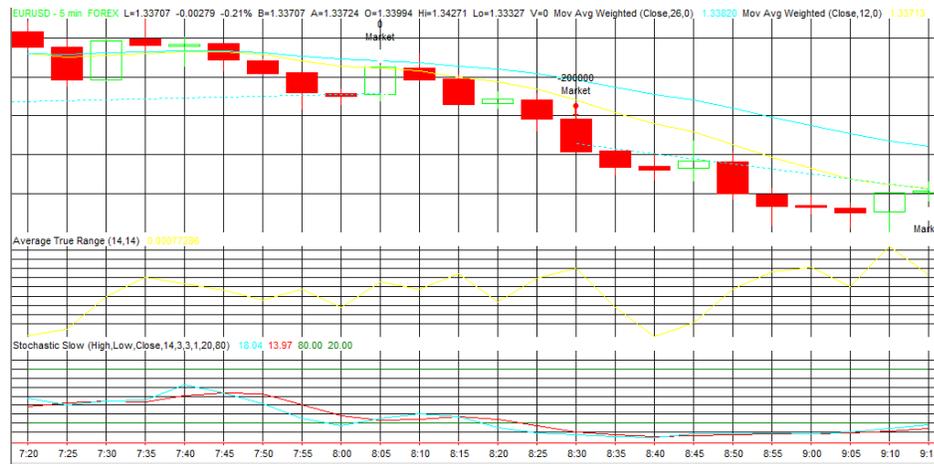


Figure 51 - Trade 14 EURUSD 5-min

Currency: EURUSD

Position: Short

Lot Size: 2 Standard Lot

Entry/Exit Levels: 1.33827/1.33710

Profit/Loss: 11.7 pips/ \$234

Rationale: This trade took place shortly after I closed my overnight trade. It was based off overall downward trend of the chart – 3 red, 1 green, 3 red, etc. It had been going down slowly since the open of the U.S. market. I waited for the end of the green bar and for the next 2 red bars to get into the trade, when I confirmed that the trend was going to continue. I rode it out until I saw a green bar followed by another green bar (the first in the whole trend), which signaled the end of the trend to me.

Lessons Learned: none

Trade 16



The price began to struggle around this level here, and when I looked further to the left of the chart I noticed an earlier resistance level that may have caused this, so I exited the trade

The market was in a period of consolidation and I drew this horizontal line which I used to set my buy stop level

Figure 53 - Trade 16 EURUSD 5-min

Currency: EURUSD

Position: Long

Lot Size: 2 Standard Lot

Entry/Exit Levels: 1.34125/ 1.34179

Profit/Loss: 5.4 pips / \$108

Rationale: This was another buy stop trade. I saw the price lingering in a clear level of support and resistance. There was a particular resistance level that had not been broken in quite some time, so I set a buy stop a few pips above it. Once again it was broken very quickly and I was entered into the trade. I rode it out until I saw weakness in the trend, which at first I thought may just be a small red bar in a series of green bars, but then I realized that it was struggling at another resistance level from earlier in the day. For this reason I exited the trade.

Lessons Learned: Keep track of multiple resistance levels, and try to predict where the price will peak out after it breaks one level.

I have learned a lot from my time trading this term. I have learned to be patient with my trades. It will often appear that the price is making a reversal and starting to trend in a particular direction. Sometimes I will enter a trade too soon, and the price will move against me rather quickly. It is better to wait to see if the trend will continue, rather than try to get in right away and ride the whole trend. Wait to see at least two or three solid candle sticks before you enter a trade. Also, I've learned not to be greedy. As opposed to trying to ride a trend to the bitter end, it is better to get out when you have reached a reasonable profit. I have also learned that a better way to judge when to get in or out of a trade is to use resistance levels. I have marked these levels on our graphs and have found that it helps me get in and out of trades at the right time.

I have also learned that using strictly one technical indicator is not always the best idea. I have found that when I entered a trade based strictly off of signals in the stochastic oscillator or the MACD, the price would often turn against me. It is better to use multiple indicators at the same time to ensure that the price change is real. For this reason, I tend to use the Stochastic and MACD in combination with the ATR. When I see the Stochastic and MACD making crosses at the same time and the ATR shows that it is a strong trend, it is a clear indication that it is a good trade to get into. In general, do not trade when the ATR is low, because this means the market is relatively quiet and more susceptible to unexpected price movements. I have also learned the importance of keeping fundamental factors in the back of my head when trading. They can often completely dictate the direction of the market.

Another important thing I have learned is not to try to predict what the graph is going to do in the future, and react to what it is currently doing. This means I will try to stay away from watching the graph go in one direction and then get in the opposite position to make money.

Instead I will try to jump on the large swing in one direction and take a portion of the profit, instead of going for the whole thing.

Fred's Trades

Forex Capital Markets, LLC

Account: 2089473870

Name: Fred Seymour

Currency: USD

2012 February 2, 23:32

Closed Transactions:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Close Time	Price	Commission	Taxes	Swap	Profit
65617438	2012.02.02 05:37	sell	5.00	eurusd	1.31672	1.32204	1.30565	2012.02.02 14:19	1.31176	0.00	0.00	0.00	2 480.00
65430631	2012.01.27 07:17	sell	5.00	audusd	1.06205	0.00000	0.00000	2012.01.27 07:18	1.06203	0.00	0.00	0.00	10.00
65416245	2012.01.26 18:40	sell	5.00	eurusd	1.31138	0.00000	0.00000	2012.01.26 18:44	1.31054	0.00	0.00	0.00	420.00
65412627	2012.01.26 16:34	buy	5.00	eurusd	1.31662	0.00000	0.00000	2012.01.26 16:38	1.31573	0.00	0.00	0.00	-445.00
65391738	2012.01.26 07:07	buy	5.00	eurusd	1.31284	1.31070	0.00000	2012.01.26 07:27	1.31070	0.00	0.00	0.00	-1 070.00
65365092	2012.01.25 14:19	buy	5.00	eurusd	1.29635	1.29695	0.00000	2012.01.25 16:46	1.29695	0.00	0.00	0.00	300.00
65338621	2012.01.24 21:15	sell	5.00	audusd	1.04757	1.04848	0.00000	2012.01.24 21:30	1.04848	0.00	0.00	0.00	-455.00
65270739	2012.01.23 16:08	sell	1.00	audusd	1.05342	0.00000	0.00000	2012.01.23 18:20	1.05332	0.00	0.00	0.00	10.00
65266725	2012.01.23 14:41	buy	1.00	audusd	1.05561	1.05188	0.00000	2012.01.23 16:07	1.05352	0.00	0.00	0.00	-209.00
65228691	2012.01.20 14:18	buy	5.00	eurusd	1.29321	1.29257	1.29420	2012.01.20 14:19	1.29257	0.00	0.00	0.00	-320.00
63535317	2011.12.13 23:47	sell	5.00	eurusd	1.30175	1.30675	0.00000	2011.12.14 14:51	1.29807	0.00	0.00	0.00	1 840.00
63362235	2011.12.12 16:50	sell	5.00	audusd	1.00581	1.00703	0.00000	2011.12.12 17:16	1.00703	0.00	0.00	0.00	-610.00
63197433	2011.12.08 20:40	sell	5.00	eurusd	1.33410	0.00000	0.00000	2011.12.08 20:55	1.33362	0.00	0.00	0.00	240.00
63194792	2011.12.08 20:26	buy	5.00	eurusd	1.33608	0.00000	0.00000	2011.12.08 20:36	1.33655	0.00	0.00	0.00	235.00
63171136	2011.12.08 15:21	sell	5.00	eurusd	1.33075	1.33208	1.32770	2011.12.08 15:42	1.33208	0.00	0.00	0.00	-665.00
63170999	2011.12.08 14:45	buy stop	5.00	eurusd	1.33475	1.33270	1.33745	2011.12.08 18:13	1.33211				cancelled
63108911	2011.12.08 11:01	sell	5.00	eurusd	1.33844	1.33922	1.33644	2011.12.08 11:02	1.33922	0.00	0.00	0.00	-390.00
63115652	2011.12.08 08:01	buy	5.00	eurusd	1.34215	1.34150	0.00000	2011.12.08 08:22	1.34150	0.00	0.00	0.00	-325.00
63071766	2011.12.07 15:45	buy	5.00	eurusd	1.33895	1.33750	1.34100	2011.12.07 17:29	1.34100	0.00	0.00	0.00	1 025.00
62986665	2011.12.06 15:47	sell	5.00	eurusd	1.33839	1.33990	1.33650	2011.12.06 16:38	1.33819	0.00	0.00	0.00	100.00
62982871	2011.12.06 15:01	buy	5.00	eurusd	1.33860	1.33735	1.33991	2011.12.06 15:02	1.33929	0.00	0.00	0.00	345.00
62803589	2011.12.02 15:16	buy	5.00	audusd	1.02685	1.02500	1.02880	2011.12.02 15:46	1.02500	0.00	0.00	0.00	-925.00
62803418	2011.12.02 15:10	sell	5.00	eurusd	1.34669	1.34944	0.00000	2011.12.04 22:56	1.34096	0.00	0.00	0.00	2 865.00
62802399	2011.12.02 14:57	buy	2.00	eurusd	1.34775	1.34690	0.00000	2011.12.02 15:06	1.34723	0.00	0.00	0.00	-104.00
62740939	2011.12.01 21:50	sell	2.00	audusd	1.02383	0.00000	0.00000	2011.12.01 21:54	1.02451	0.00	0.00	0.00	-136.00
62740345	2011.12.01 21:37	buy	2.00	audusd	1.02368	1.02405	0.00000	2011.12.01 21:49	1.02405	0.00	0.00	0.00	74.00
62740336	2011.12.01 21:36	buy	2.00	eurusd	1.34643	1.34590	0.00000	2011.12.01 21:50	1.34613	0.00	0.00	0.00	-60.00
62736202	2011.12.01 20:43	sell	2.00	audusd	1.02249	1.02310	1.02100	2011.12.01 21:12	1.02310	0.00	0.00	0.00	-122.00
62735762	2011.12.01 20:36	buy	2.00	audusd	1.02336	0.00000	0.00000	2011.12.01 20:37	1.02306	0.00	0.00	0.00	-60.00
62732394	2011.12.01 19:57	sell	2.00	eurusd	1.34641	0.00000	0.00000	2011.12.01 19:59	1.34597	0.00	0.00	0.00	88.00
62727665	2011.12.01 18:27	buy	2.00	audusd	1.02333	0.00000	0.00000	2011.12.01 18:44	1.02365	0.00	0.00	0.00	64.00
62724392	2011.12.01 17:42	sell	2.00	eurusd	1.34589	0.00000	0.00000	2011.12.01 18:01	1.34473	0.00	0.00	0.00	232.00
62723920	2011.12.01 17:37	sell	2.00	audusd	1.02180	1.02359	1.02055	2011.12.01 18:01	1.02094	0.00	0.00	0.00	172.00
62722716	2011.12.01 17:17	sell	2.00	eurusd	1.34682	1.34775	0.00000	2011.12.01 17:19	1.34775	0.00	0.00	0.00	-186.00
62683173	2011.12.01 11:39	buy	2.00	audusd	1.02193	0.00000	0.00000	2011.12.01 11:45	1.02111	0.00	0.00	0.00	-164.00
62678016	2011.12.01 10:45	sell	5.00	audusd	1.02154	0.00000	0.00000	2011.12.01 10:46	1.02213	0.00	0.00	0.00	-295.00
62677526	2011.12.01 10:39	sell	5.00	audusd	1.02264	0.00000	0.00000	2011.12.01 10:43	1.02239	0.00	0.00	0.00	125.00
62676494	2011.12.01 10:26	sell	5.00	audusd	1.02276	0.00000	0.00000	2011.12.01 10:28	1.02258	0.00	0.00	0.00	90.00
62675526	2011.12.01 10:18	sell	5.00	audusd	1.02229	0.00000	0.00000	2011.12.01 10:20	1.02215	0.00	0.00	0.00	70.00

62675174	2011.12.01 10:16	sell	1.00	eurusd	1.34853	0.00000	0.00000	2011.12.01 10:21	1.34855	0.00	0.00	0.00	-2.00
62674304	2011.12.01 10:04	buy	1.00	audusd	1.02342	0.00000	0.00000	2011.12.01 10:16	1.02321	0.00	0.00	0.00	-21.00
62668993	2011.12.01 09:30	buy	1.00	eurusd	1.34785	1.34861	0.00000	2011.12.01 10:16	1.34861	0.00	0.00	0.00	76.00
62665249	2011.12.01 08:59	buy	1.00	audusd	1.01791	0.00000	0.00000	2011.12.01 09:11	1.01653	0.00	0.00	0.00	-138.00
62663678	2011.12.01 08:46	sell	1.00	audusd	1.01522	0.00000	0.00000	2011.12.01 09:03	1.01825	0.00	0.00	0.00	-303.00
62662289	2011.12.01 08:34	buy	1.00	eurusd	1.34357	0.00000	0.00000	2011.12.01 08:36	1.34295	0.00	0.00	0.00	-62.00
62660210	2011.12.01 08:27	sell	1.00	eurusd	1.34468	1.34285	0.00000	2011.12.01 08:33	1.34285	0.00	0.00	0.00	183.00
62658903	2011.12.01 08:15	buy	1.00	eurusd	1.34556	0.00000	0.00000	2011.12.01 08:20	1.34559	0.00	0.00	0.00	3.00
62655726	2011.12.01 07:49	sell	1.00	eurusd	1.34523	0.00000	0.00000	2011.12.01 07:52	1.34446	0.00	0.00	0.00	77.00
62653800	2011.12.01 07:23	sell	1.00	eurusd	1.34566	1.34742	0.00000	2011.12.01 07:26	1.34668	0.00	0.00	0.00	-102.00
62539785	2011.11.30 08:52	buy	1.00	eurusd	1.32816	1.32903	1.33165	2011.11.30 09:14	1.32903	0.00	0.00	0.00	87.00
62537665	2011.11.30 08:30	sell	1.00	audusd	0.99630	0.99799	0.00000	2011.11.30 08:35	0.99615	0.00	0.00	0.00	15.00
62537088	2011.11.30 08:25	sell	1.00	audusd	0.99705	0.99866	0.00000	2011.11.30 08:27	0.99687	0.00	0.00	0.00	18.00
61517102	2011.11.17 00:58	buy	1.00	audusd	1.00487	0.00000	0.00000	2011.11.17 01:05	1.00417	0.00	0.00	0.00	-70.00
61504821	2011.11.16 21:27	sell	1.00	eurusd	1.34580	1.34765	0.00000	2011.11.17 00:19	1.34486	0.00	0.00	-12.57	94.00
61460667	2011.11.16 14:42	buy	1.00	eurusd	1.35047	1.34685	0.00000	2011.11.16 21:01	1.34685	0.00	0.00	0.00	-362.00
61459335	2011.11.16 14:31	buy	1.00	audusd	1.01237	1.01100	0.00000	2011.11.16 14:33	1.01100	0.00	0.00	0.00	-137.00
61410094	2011.11.16 08:16	buy	1.00	eurusd	1.34829	1.34633	0.00000	2011.11.16 08:24	1.34864	0.00	0.00	0.00	35.00
61408699	2011.11.16 08:09	buy	1.00	eurusd	1.34660	1.34710	0.00000	2011.11.16 08:16	1.34710	0.00	0.00	0.00	50.00
61407810	2011.11.16 08:02	sell	1.00	eurusd	1.34544	0.00000	0.00000	2011.11.16 08:05	1.34557	0.00	0.00	0.00	-13.00
61324581	2011.11.15 16:19	sell	1.00	eurusd	1.35090	0.00000	0.00000	2011.11.15 16:35	1.35029	0.00	0.00	0.00	61.00
61323853	2011.11.15 16:14	buy	1.00	eurusd	1.35297	1.35118	0.00000	2011.11.15 16:17	1.35178	0.00	0.00	0.00	-119.00
61095167	2011.11.11 18:25	sell	1.00	audusd	1.02791	1.02772	0.00000	2011.11.11 18:30	1.02772	0.00	0.00	0.00	19.00
61077798	2011.11.11 15:13	sell	1.00	audusd	1.02154	0.00000	0.00000	2011.11.11 15:18	1.02203	0.00	0.00	0.00	-49.00
61077219	2011.11.11 15:03	buy	1.00	audusd	1.02248	0.00000	1.02410	2011.11.11 15:31	1.02410	0.00	0.00	0.00	162.00
61069809	2011.11.11 14:10	buy	1.00	eurusd	1.36700	1.36720	0.00000	2011.11.11 14:13	1.36791	0.00	0.00	0.00	91.00
61068423	2011.11.11 13:49	sell	1.00	eurusd	1.36544	1.36518	0.00000	2011.11.11 13:56	1.36515	0.00	0.00	0.00	29.00
61067609	2011.11.11 13:36	buy	1.00	eurusd	1.36489	1.36559	0.00000	2011.11.11 13:49	1.36559	0.00	0.00	0.00	70.00
61067430	2011.11.11 13:35	balance		Deposit									100 000.00
										0.00	0.00	-12.57	3 936.00
													Closed P/L: 3 923.43

Open Trades:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Market Price	Price	Commission	Taxes	Swap	Profit
No transactions													
										0.00	0.00	0.00	0.00
													Floating P/L: 0.00

Working Orders:

Ticket	Open Time	Type	Size	Item	Price	S / L	T / P	Market Price
No transactions								

Summary:

Deposit/Withdrawal:	100 000.00	Credit Facility:	0.00
Closed Trade P/L:	3 923.43	Floating P/L:	0.00
Balance:	103 923.43	Equity:	103 923.43
		Margin:	0.00
		Free Margin:	103 923.43

Figure 55 - Fred's Trade Summary

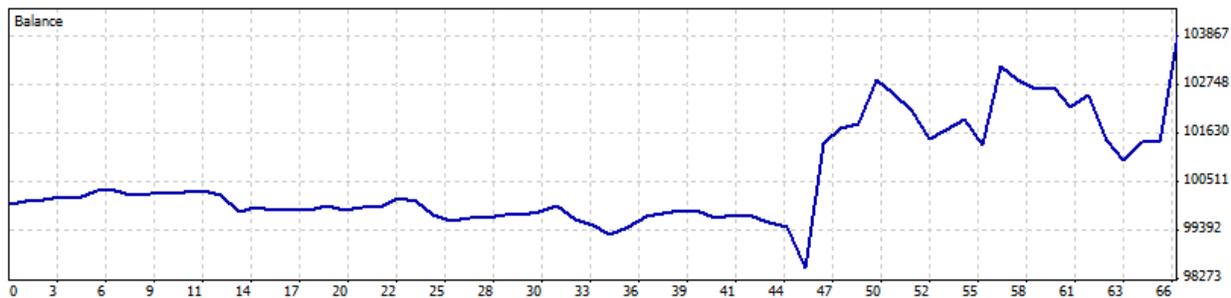


Figure 56 - Fred's Trade Summary

Gross Profit: 11 842.43	Gross Loss: 7 919.00	Total Net Profit: 3 923.43
Profit Factor: 1.50	Expected Payoff: 59.45	
Absolute Drawdown: 1 457.57	Maximal Drawdown: 2 189.00 (2.12%)	Relative Drawdown: 2.12% (2 189.00)
Total Trades: 66	Short Positions (won %): 35 (62.86%)	Long Positions (won %): 31 (45.16%)
Profit Trades (% of total): 36(54.55%)	Loss trades (% of total): 30 (45.45%)	Largest profit trade: 2 865.00
loss trade: -1 070.00	Average profit trade: 328.96	loss trade: -263.97
Maximum consecutive wins (\$): 4 (4 335.00)	consecutive losses (\$): 4 (-1 225.00)	Maximal consecutive profit (count): 4 335.00 (4)
consecutive loss (count): -1 515.00 (2)	Average consecutive wins: 2	consecutive losses: 2

Over my 2 terms of trading I managed to make \$3,923.43 in profit which is just under 4% of my initial investment. I did not achieve my goal that I set when I first started but I am still happy with my progress. 54% of all of my trades were profitable, which again isn't too spectacular but it is above 50% which means I am making a profit when I trade. As you can see by the graph I did not start making too much profit until towards the end. This was when I changed my strategy a bit and started doing 5 lot trades. I noticed that when I make a trade with more money invested I pay attention more and I get out very quickly if it starts to go against me. I also realized that when trading you need to trade the trends you see, not the trends you think are going to happen. When I realized this, my trading success improved drastically.

Appendix D – Programming Projects

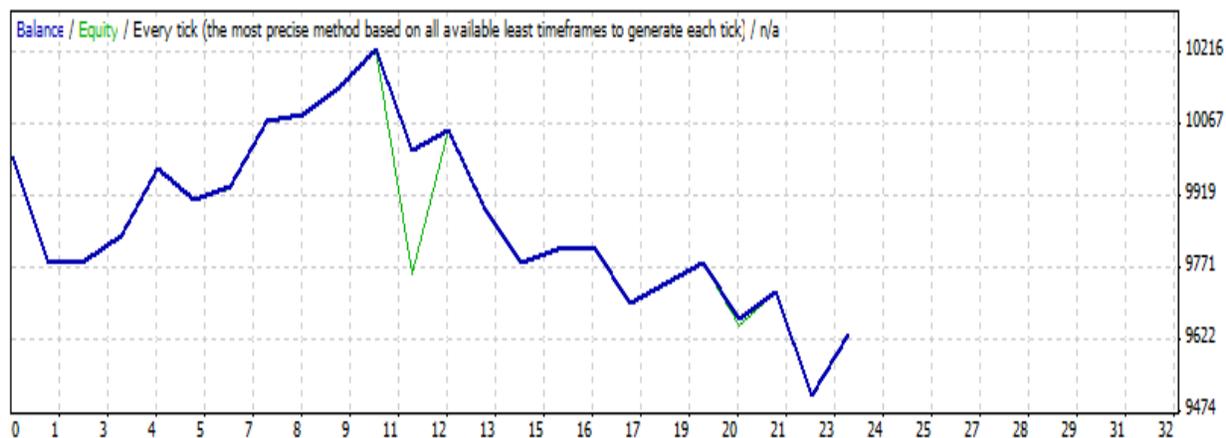
We will cover the programming projects we have been working on, both as a group and individually.

Group Project

We had initially planned to do a currency meter as our team programming project, but after much thought we have decided to change our idea. We saw that a lot of other teams were already doing a currency meter, and although our ideas were all different in some way or another, we decided to deviate from the path. The parameters of our next idea are a lot simpler and the program will be very useful.

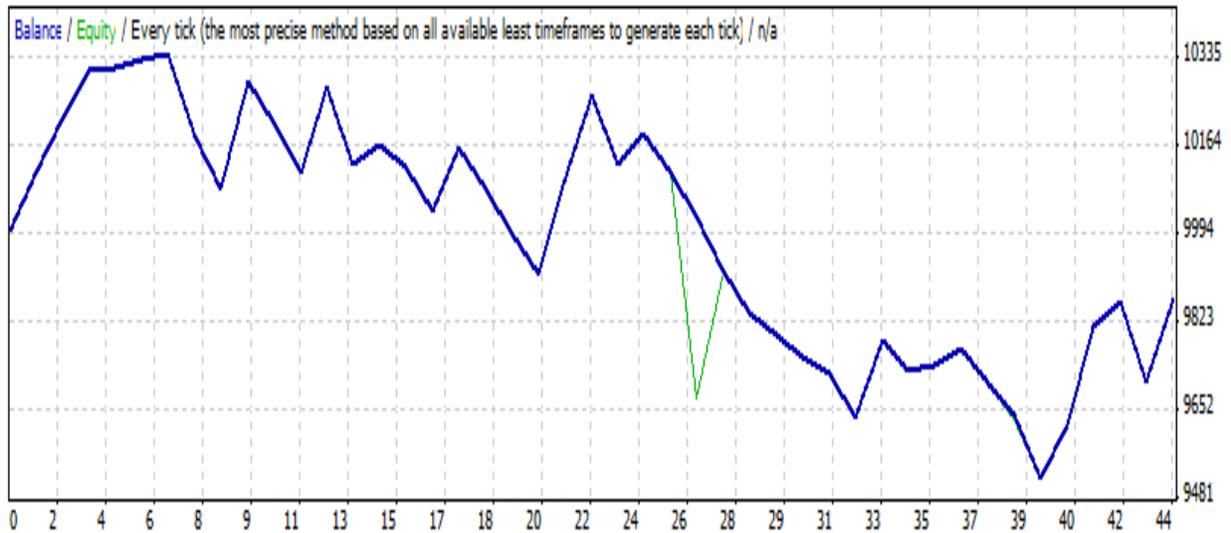
Our program will make trades based of exponential moving averages crosses and certain volatility conditions. The way it works is if the 5 day EMA crosses the 13 day EMA then the program will know that the currency is currently in a bull of bear condition, depending on the direction of the cross. Both the 5 minute and 15 minute graphs are monitored by the program so it can make trades based off of both conditions. There are also other trade conditions that need to be present for the program to make a trade. The first is no trade will be made if the ask price of the currency is higher than the current high of the currency. The program uses the force index to identify the strength of the currency at the time a trade is going to be made. It monitors the previous 3 bars and if the force is greater than .05 than the condition is met. If all of these conditions are met and the ask price minus the bid price is less than 4 pips, a trade will be made. The stop loss is also set for the trade based on the average price of the currency for the past 12 hours. There is also a trailing stop loss implemented with the program.

After testing the program it does not work to well and always results in a loss of money. We cannot figure out why it does not work and have changed parameter numerous times and no matter what happens it is always a loss. This could be a result of just the tested market conditions not working, because the time frame is this past August and September. The results for the 5 and 15 minute graph tests can be seen below.



Bars in test	2237	Ticks modelled	4090045	Modelling quality	n/a
Mismatched charts errors	6050				
Initial deposit	10000.00				
Total net profit	-368.50	Gross profit	843.00	Gross loss	-1211.50
Profit factor	0.70	Expected payoff	-16.02		
Absolute drawdown	626.00	Maximal drawdown	924.00 (8.97%)	Relative drawdown	8.97% (924.00)
Total trades	23	Short positions (won %)	0 (0.00%)	Long positions (won %)	23 (65.22%)
		Profit trades (% of total)	15 (65.22%)	Loss trades (% of total)	8 (34.78%)
	Largest	profit trade	139.50	loss trade	-217.00
	Average	profit trade	56.20	loss trade	-151.44
	Maximum	consecutive wins (profit in money)	5 (312.50)	consecutive losses (loss in money)	2 (-272.50)
	Maximal	consecutive profit (count of wins)	312.50 (5)	consecutive loss (count of losses)	-272.50 (2)
	Average	consecutive wins	2	consecutive losses	1

Figure 57 – 15M chart Results



x	Bars in test	2663	Ticks modelled	2037314	Modelling quality	n/a
	Mismatched charts errors	2055				
	Initial deposit	10000.00				
	Total net profit	-131.50	Gross profit	1968.50	Gross loss	-2100.00
	Profit factor	0.94	Expected payoff	-2.99		
	Absolute drawdown	506.50	Maximal drawdown	925.00 (8.88%)	Relative drawdown	8.88% (925.00)
	Total trades	44	Short positions (won %)	0 (0.00%)	Long positions (won %)	44 (45.45%)
			Profit trades (% of total)	20 (45.45%)	Loss trades (% of total)	24 (54.55%)
		Largest	profit trade	205.00	loss trade	-159.00
		Average	profit trade	98.42	loss trade	-87.50
		Maximum	consecutive wins (profit in money)	6 (343.50)	consecutive losses (loss in money)	8 (-551.00)
		Maximal	consecutive profit (count of wins)	345.00 (2)	consecutive loss (count of losses)	-551.00 (8)
		Average	consecutive wins	2	consecutive losses	2

Figure 58 – 15M chart Results

Code:

```
//+-----+
//                                     EMACrossTRail.mq4 |
//                                     Group 3   |
//                                     http://www.metaquotes.net |
```

```

//+-----+
#property copyright "Group 3"
#property link      "http://www.metaquotes.net"

//--- input parameters
extern double   TakeProfit=1500.0;
extern int      AllowedTrades=1;
extern double   TrailingStop=150.0;
extern double   SLfactor=1.5;

//+-----+
//| expert initialization function          |
//+-----+
int init()
{
//---

//---
    return(0);
}
//+-----+
//| expert deinitialization function      |
//+-----+
int deinit()
{
//---

//---
    return(0);
}
//+-----+
//| expert start function                 |
//+-----+
int start()
{
//---
    bool bull5=FALSE;
    bool bull15=FALSE;
    bool TradeAllow=True;
    bool Force=FALSE;

```

```

double vol=0.5;
double Stoploss;
int ticket;
double currenthigh=High[1];
double currentlow=Low[1];
double averages[12];
double currentaverage=0;

```

```

double ema5_5 = iMA(Symbol(),5,4,0,MODE_EMA,PRICE_CLOSE,0);
double ema5_15 = iMA(Symbol(),15,5,0,MODE_EMA,PRICE_CLOSE,0);
double ema13_5 = iMA(Symbol(),5,10,0,MODE_EMA,PRICE_CLOSE,0);
double ema13_15 = iMA(Symbol(),15,13,0,MODE_EMA,PRICE_CLOSE,0);
double sma5_501 = iMA(Symbol(),5,50,0,MODE_SMA,PRICE_CLOSE,0);
double sma5_502 = iMA(Symbol(),5,50,0,MODE_SMA,PRICE_CLOSE,2);
double sma5_503 = iMA(Symbol(),5,50,0,MODE_SMA,PRICE_CLOSE,3);
double forces = iForce(Symbol(), 0, 13,MODE_SMA,PRICE_CLOSE,0);
double forces2 = iForce(Symbol(), 0, 13,MODE_SMA,PRICE_CLOSE,3);
double rsi1 = iRSI(Symbol(),0,5,PRICE_CLOSE,0);

```

```

if (ema5_5>ema13_5) bull5=TRUE;
if (ema5_15>ema13_15) bull15=TRUE;

```

```

for(int i=0;i<24;i++)
{
if (currenthigh<High[i]) currenthigh=High[i];
if (currentlow>Low[i]) currentlow=Low[i];
}
if (Ask+100.0*Point>currenthigh) TradeAllow=FALSE;
if (forces<=0.02 && forces-forces2>0.05)Force=TRUE;
double total=OrdersTotal();
if (total<1)
{

```

```

    if (bull5==TRUE && sma5_501>sma5_503 && TradeAllow==TRUE && Force==TRUE
    && rsi1>50.0)
    {
    if (Ask-Bid<0.0004)
    {

    ticket=OrderSend(Symbol(),OP_BUY,vol,Ask, 3, 0, 0, "EMA5>EMA13", 01010,0,Green);
    for (int j=0;j<12;j++)
    {
    averages[j]=High[j+1]-Low[j+1];
    currentaverage=currentaverage+averages[j];
    }
    currentaverage=currentaverage/11;
    Stoploss=currentaverage*SLfactor;
    OrderModify(ticket,OrderOpenPrice(),Ask-Stoploss,Ask+TakeProfit*Point,0,Green);
    }
    }
}

for(int count=0;count<total;count++)
{
OrderSelect(count,SELECT_BY_POS,MODE_TRADES);
if(OrderType()<=OP_SELL && OrderSymbol()==Symbol())
{
if(OrderType()==OP_BUY)
{

if (TrailingStop>0)
{
if(Bid-OrderOpenPrice()>Point*TrailingStop)
{
if(OrderStopLoss()<Bid-Point*TrailingStop)
{
OrderModify(OrderTicket(),OrderOpenPrice(),Bid-
Point*TrailingStop,OrderTakeProfit(),0,Green);
return(0);
}
}
}
}
}
}
}
}

```


Backtesting Logs:

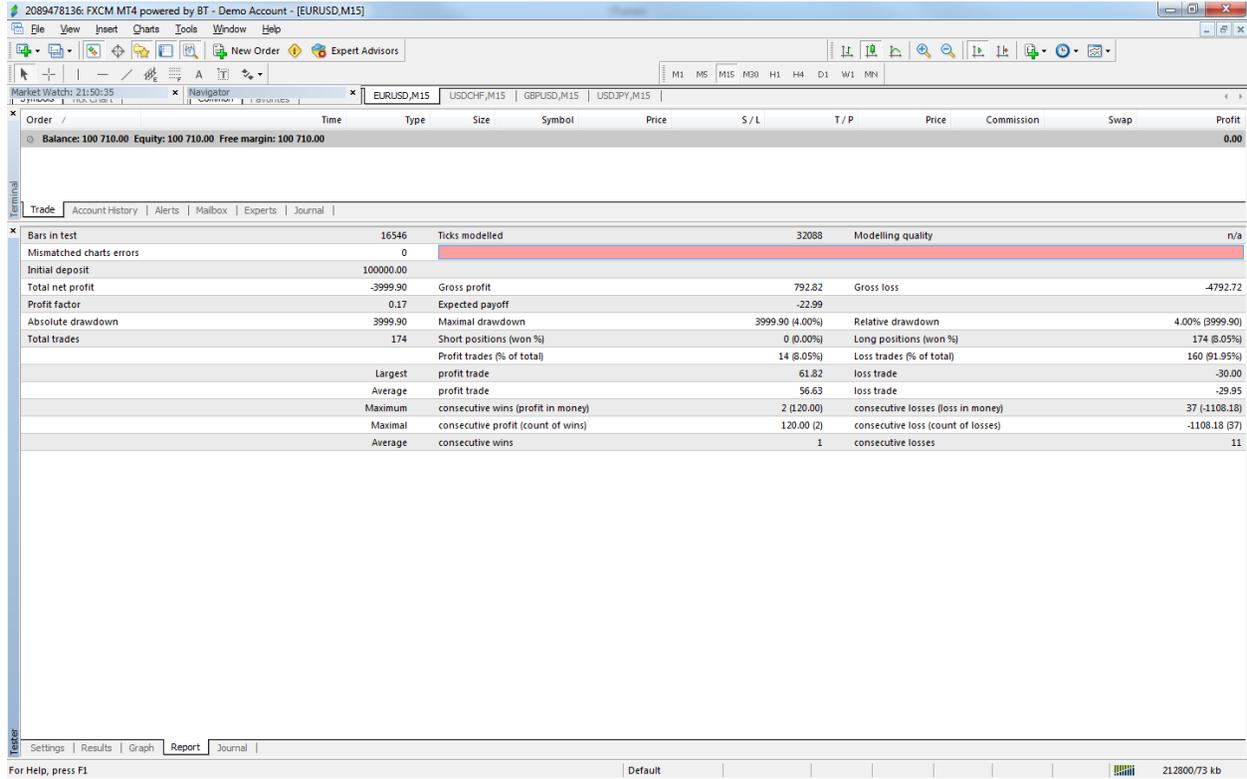


Figure 59 Pak's Program's Backtest, 25MA and 50MA

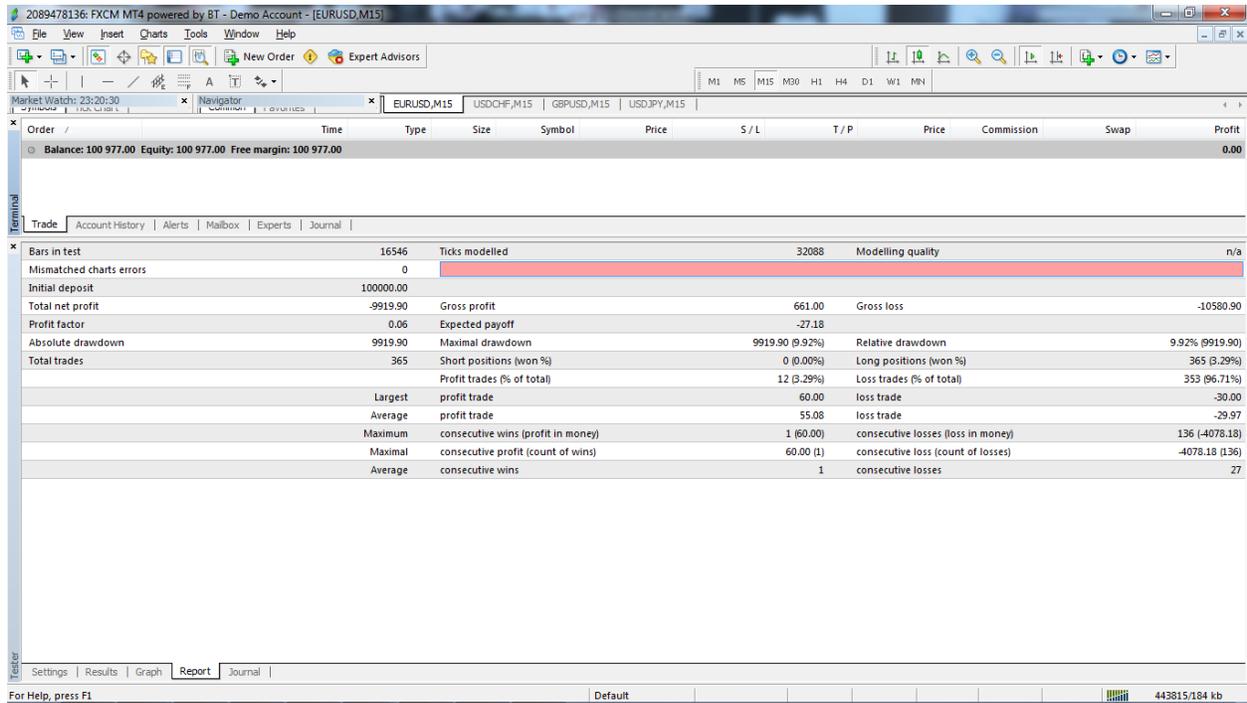


Figure 60 Pak's Program's Backtest, 12MA and 24MA

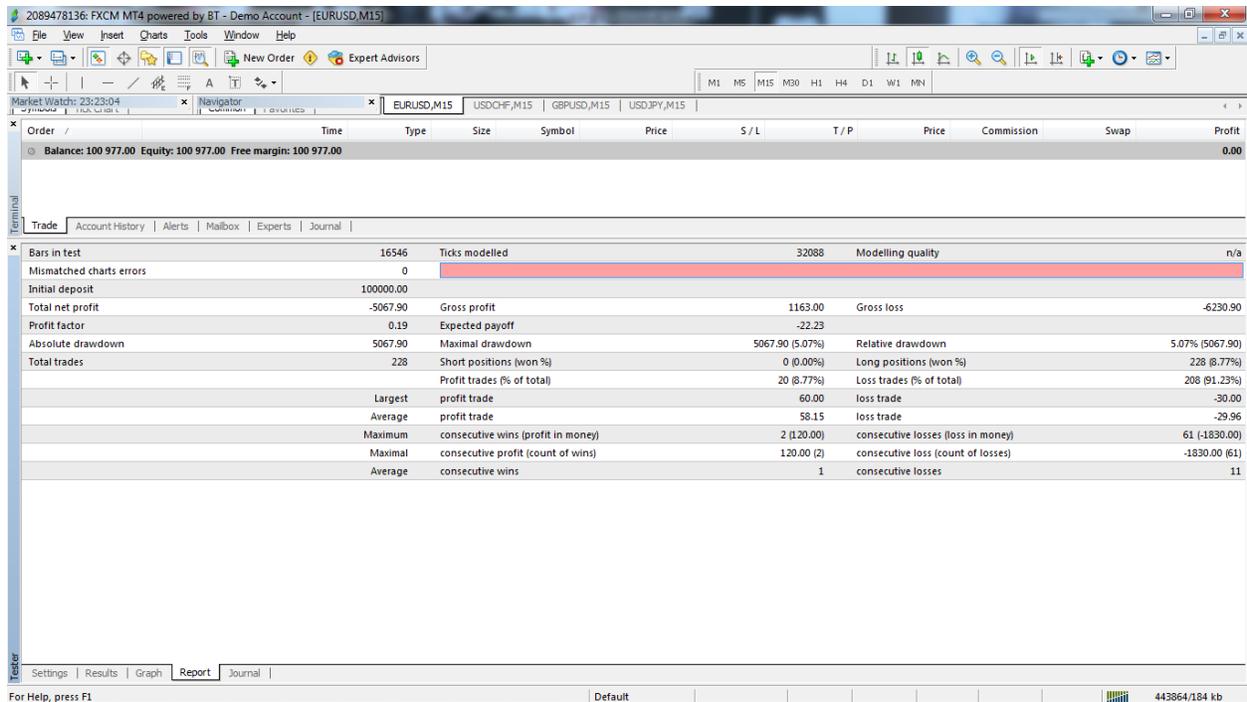


Figure 61 Pak's Program's Backtest, 18MA and 36MA

As you can tell from the back testing, my script is not perfected right now as it had a total net profit of -\$3999.90 with a gross profit of \$782.82. The profit factor is 0.17 so it is only 17% right with a total of 174 trades made.

I had wanted during B term to add another indicator to my expert advisor as it had not really been successful so I had added the stochastic oscillator. I had made my expert advisor follow the conditions of the moving averages crosses and if the stochastic is over .2 to make sure that it is a good trend. With the stochastic oscillator, here is my backtesting log:

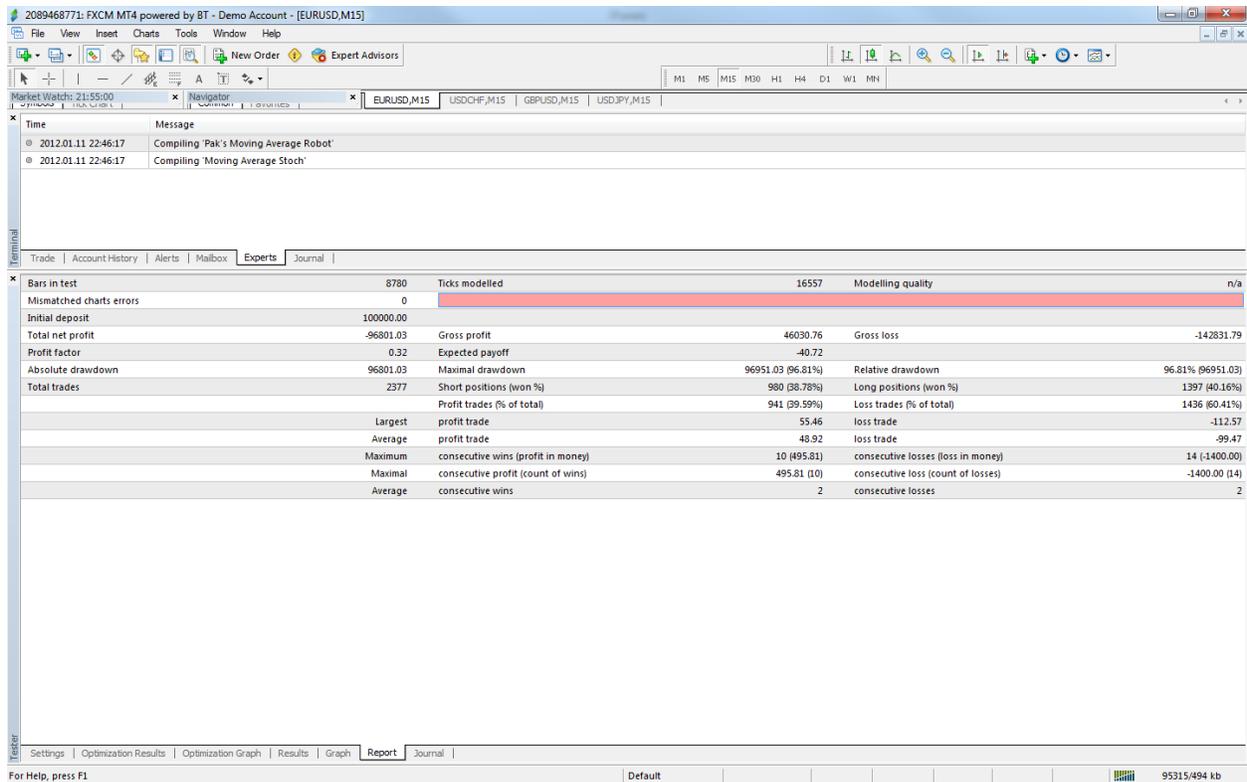


Figure 62 Pak's Program's Backtest, 25MA and 50MA with Stochastic

As you can tell from that latest back test, the profit factor has increased to .32 but it is still not a profitable robot. With the stochastic value of at least 20 implemented with the moving average crossovers, this expert advisor has become more successful but needs more improvements to be actually used with real money. Other than adding the stochastic oscillator to the program, I had changed the values of the stop loss, take profit, trailing stop loss, and the time period. The moving averages are 25 day periods and 50 day periods which is the same as the first test. The stop loss is now 100 with a take profit of 50 and a trailing stop of 25. For reference, the old stop loss was set to 30, the old take profit was set at 60, and the old trailing stop loss was set at 30. I had also changed the period to thirty minutes to make sure that the moving average crossovers would be even safer to use. The stop loss is bigger than the profit is something I had tried out but after professor Radzicki's presentation, I feel like mathematically, I would not work

out that great. My reasoning behind raising these was that there are a lot more fluctuations of prices so a lower stop loss would trigger to close the position way too quick.

After seeing professor Radzicki's trading robot and his robot's methods, I realized that my expert advisor is still very, very basic and is not adapt to my trading methodology yet. My expert advisor is not as smart as it could be to have adaptive take profit and stop losses since I have a different take profit and stop loss with every trade. If somehow the expert advisor could use the data from the past four to seven days to mathematically figure out the take profit and stop loss points from recent lows and highs, then it would be closer to my trading methodology. I think that was the main problem with my expert advisor because waiting for crossovers for an entry condition and then waiting for another crossover for an exit condition takes a very long time especially in the 30 minute charts.

Josh's Programming Project

For my programming project I wanted to create something that mimics my trading style. I use the Stochastic Oscillator and two weighted moving averages to make most of my trading decisions. I have found that the Stochastic Oscillator generally signals a price reversal a little earlier than the moving averages and sometimes even jumps the gun a little bit. There are often cases where the Stochastic Oscillator will fall victim to fake outs. It will signal a price reversal and the price will move in that direction very slightly, but the moving averages never cross and the price continues going in the direction it was going before. For this reason I like to wait for the moving averages to cross as well, at which point I will enter a trade. I have written the code for this simple parameter, but there is much to be added. The code I have as of now is this:

```
inputs: Length( 14 ), OverSold( 20 ), Price( Close ), FastLength( 12 ),  
SlowLength( 26 ) ;  
variables: oFastK( 0 ), oFastD( 0 ), oSlowK( 0 ), oSlowD( 0 ), FastAvg( 0 ),  
SlowAvg( 0 ) ;
```

```

Value1 = Stochastic( H, L, C, Length, 3, 3, 1, oFastK, oFastD, oSlowK, oSlowD
) ;

if CurrentBar > 2 and oSlowK crosses over oSlowD and oSlowK < OverSold then
begin
{ CB > 2 check used to avoid spurious cross confirmation at CB = 2;
(at CB = 1, MySlowK and MySlowD will be the same) }
FastAvg = AverageFC( Price, FastLength ) ;
SlowAvg = AverageFC( Price, SlowLength ) ;

if CurrentBar > 1 and FastAvg crosses over SlowAvg then
{ CB > 1 check used to avoid spurious cross confirmation at CB = 1 }
Buy ( "StochMA2CrossLE" ) next bar at market ;
end;

```

There are some changes I want to make to this obviously, and I have most of them mapped out I just need to work on actually coding them. One thing I want to do is to implement a system that uses the Stochastic cross as a trigger to start a counter, and if the moving averages cross within a certain time frame of this, it will enter a trade. This will prevent the robot from entering a trade in a period of low liquidity. For optimal results I would like to trade in periods of high liquidity. I would also like to add an exit condition, so I will use a trailing stop loss.

I did a lot of reading over break on the coding language that TradeStation uses and have been trying to work on my coding. I am also working with one of my close friends, who is a CS major, to help me make the changes I want to make to the code. Hopefully I can have it all written up in a couple of weeks and put the final work to the test on the real time market.

Fred's Programming Project

For my personal project I made a very simple program which watches two moving averages, the 5 and 26 day. When the 5 day average crosses above the 26 day average the program takes a long position and when it goes below the 26 day average it takes a short position. This was done to model my trading strategy, which at the time was very basic and I was

only using moving averages. The program is not a profitable robot but it still executes trade successfully which is what I was trying to accomplish. The code for the program is shown below.

```
//+-----+
//|                Freds.mq4 |
//|      Copyright © 2011, MetaQuotes Software Corp. |
//|                http://www.metaquotes.net |
//+-----+

#property copyright "Copyright © 2011, MetaQuotes Software Corp."
#property link      "http://www.metaquotes.net"
```

```
//+-----+
//| expert start function          |
//+-----+

int start()
{
    int ticket;
```

```
double ema5 = iMA(Symbol(),5,4,0,MODE_EMA,PRICE_CLOSE,0);
```

```
double ema26 = iMA(Symbol(),26,4,0,MODE_EMA,PRICE_CLOSE,0);

if (ema5>ema26) ticket = OrderSend(Symbol(),OP_BUY,5,Ask,3,15,20,"expert
comment",01010,0,Green);

if (ema5<ema26)ticket = OrderSend(Symbol(), OP_SELL, 5, Ask, 3,15,20, "expert
comment", 01010, 0, Green);

//---
return(0);
}
//+-----+
```

Appendix E – Forex Websites

For more information regarding the forex market, we have also included a list of websites which we have found useful in retrieving information accompanied by a brief description of the website.

<http://www.forexpros.com/>

Forexpros is a good site for experienced traders, or those looking to gain more experience in trading. They have a lot of links at resources on their site. There are links to brokers, forex education, charts, news, and technical and fundamental analysis tools listed across the top of the page. It conveniently states which forex markets are currently open or closed. There is a chart on the main page which has options for indices, forex, commodities, and rates and bonds. It also has overviews of specific stocks which rate how bullish/bearish they are and says whether it is a strong buy or not.

<http://forextrading.about.com/>

This site would be good for someone who is new to forex trading or just simply wants to learn about the forex market. There are links across the top of the page leading to getting started, currency analysis, and forex reviews. There are suggested links for beginners to learn about the market and business and finance videos featured on the main page.

<http://www.forex.com/>

This website seems to be geared toward all levels of trading. Across the top of the page are a lot of links that serve the needs of all levels of experience. For the beginners, there are links such as learn, getting started, open an account, ways to trade, and trade. There are also links to video tutorials and webinars and the option to live chat with a forex rep. The site also has a chart with the current market prices for the main currencies. They have three different options for

progression, starting with learn, then practice, and finally trade. For more experienced traders there are links to research and ideas for strategies and also an explanation of the importance of execution when trading. There are more links at the bottom of the page to serve traders' more specific needs.

<http://www.oanda.com/>

Oanda has a lot of exchange data. They have a convenient chart on their main page which compares USD, GBP, EUR, and JPY simultaneously. They also have a link to a currency converter which can convert both ways between different currencies. They have a link to their forex site – <http://fxtrade.oanda.com/> - which offers some of their forex tools. They have live updates of currency market prices and long/short recommendations for each currency. They also have links to get started with an Oanda account, highlighting the advantages of using Oanda as your broker, in particular, low spreads.

<http://www.forexfactory.com/>

I find this website really useful, because it shows when the news is on in different countries, and it also gives a brief description of a news story and rates its impact on the market. A lot of traders will make the mistake of trading during news hours, whether purposefully or not, and a lot of times this can be bad, because there can be violent swings at these times. Before making a trade I often check this website to make sure that a fluctuation is not due to a breaking news story in another country.

