FOREX STRATEGY FOR THE RETAIL TRADER

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Abstract

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Daily time series for the Euro and United States Dollar (EURUSD) currency pair were examined for the presence of higher than average occurrences of continuation moves after excessive price volatility. The goal was to assess the presence of high probability for extracting consistent positive returns from the spot foreign exchange market, Forex. Short assessments of the market players, analytical approaches, and trading strategies were conducted from the viewpoint of a small independent Forex speculator. Both, upward and downward momentum bias and positive returns were found for some of the discretionary time periods. Differences between upward and downward momentum bias and returns were observed. Without considering risk and trade management, the results represent first step in designing a comprehensive trading routine.

Key words: momentum, spot foreign exchange market, Forex, volatility, momentum bias.
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Introduction

Assessing the playing field

When it comes to participating as an independent retail trader in the spot foreign exchange market, Forex, finding a profitable trading strategy might prove to be rather a difficult task. According to The Bank of International Settlements’ (BIS) Triennial Survey “trading in foreign exchange markets averaged $5.3 trillion per day in April 2013” (BIS, 2013). Retail trader activities represent a tiny increment of this daily turnover. Nevertheless, with the widespread availability of retail Forex brokers offering inexpensive access to “one-click” computer trading, the number of retail traders is steadily growing, and thus the demand for robust and sustainable trading approaches.

Unfortunately, the ease of access to trading in the Forex market, along with around the clock market activities, and 50:1 account leverage does not automatically translate into positive financial performance. On the contrary, a study performed by the French financial markets regulatory body (Autorité des marchés financiers, AMF) found that between 2009 and 2013 89% of all the individual investors trading in Forex did not make money (AMF, 2014).

There are many seemingly unresolvable disadvantages the small independent trader has to face in the complex Forex world. Unlike large banks, the retail trader does not have access to the direct interbank exchange rate quotes and spreads. Instead, she has to rely on the accuracy and the integrity of the retail brokers. Unfortunately, in many cases the retail brokers are dealing against their own customer. They are also known to
manipulate the exchange rates and spreads. Because of liquidity issues retail traders suffer from re-quotes and execution slippage. In addition they are charged fees and commissions regardless of the quality and the accuracy of broker’s services. Furthermore, the retail trader does not have the luxury of banks, funds, and other large traders of having unlimited time, financial resources, expert advice, and access to processing power.

Nevertheless, the large institutional traders and private funds have their own challenges. Even in the most liquid markets, large market participants have to break their trades into smaller packages so they don’t dramatically affect the price volatility. Chan and Lakonishok (1995, Table I) show that “only 20% of the market value of these packages are completed within a day and that over 53% are spread over four trading days or more”. Meanwhile, the small retail trader is less likely to have problems with instant market execution in a liquid market.

Furthermore, big market participants not only are struggling with anticipating the market behavior but also have difficulties assessing their own market impact. Fama (1991), and Chevalier and Ellison (1999) suggest that the bulk of the institutional traders do not outperform the market based on their unlimited access to information. Additionally, Holthausen and Verrecchia (1990), Keim and Madhavan (1996), and Hong and Rady (2002) suggest that despite their efforts, institutional traders have little or no idea of what will be the impact of their trading activities on the market.

In this light, we will investigate the chances of an independent, small retail trader of extracting positive returns from the Forex market by finding and utilizing a simple and
robust market approach. To answer this question, the introduction will offer a quick overview of the different schools for analyzing the market and the associated challenges. Further, we offer a basic idea of volatility and momentum to shed light on the elements of a trading strategy. We describe our methodology in order to tackle the results and the associated discussion. Finally, we offer a brief limitation overview and recommendations for further research.

Analyzing the market

In order to capitalize on the market price fluctuations, the retail trader have to decide on the level of discretion in his trading activity.

At first, he might try to guess the market direction by flipping a coin. He will soon realize that in the best case scenario over a relatively long period he might break even not considering the cost of trading (e.g., broker’s commissions, slippage, spread, taxes, etc.). Later, he might try to use some of the inexpensive trading products ranging from “holy grail” indicators, to “bullet proofed” trading systems, to black boxes. There is a general lack of data showing a consistent profitability for any of these trading approaches. Instead, the internet forums are filled with negative feedback about the profitability and functionality of these bargain, “no-brainer” systems.

As time goes on, our retail trader might learn more about the different market drivers, and he might attempt to forecast the market direction using some form of fundamental analysis. First, he needs to be aware that each market has its own fundamental drivers, structure, and participants. For example, Meese and Rogoff (1983)
demonstrate that economic fundamentals which are predominant in the stock markets do not drive Forex.

Important data considering Forex can range from central bank interventions and economic policy changes, to inflation rate, to changes in import and export, and various correlations between them (Neely and Weller, 2011), (LeBaron, 1999), and (Kawakami, 2013). For example, the retail trader might recognize that the ongoing U.S. Federal Reserve “Quantitative Easing” program, combined with aggressive intervention of the Japanese Central Bank in order to weaken the Japanese Yen, have arguably created a long-term up-trending environment for the United States Dollar/Japanese Yen (USD/JPY) currency pair. Furthermore, one can venture to speculate on how the recent Swiss Central bank decision to unpeg the Swiss Franc from the Euro will cause an instant, large drop in the Euro/Swiss Franc (EUR/CHF) exchange rate.

Lastly, the retail trader has to be aware of the relationships between stocks, futures, and Forex. For example, Engel and West (2004) suggest that changes in exchange rates influence macroeconomic fundamental variables. After extended review, Clements and Fry (2008) conclude that “currencies are indeed driven by commodities, or that commodities are driven by currencies, over the period 1975–2005.” (e.g., the Canadian dollar is assumed to weaken as the price of oil falls).

In order to analyze fundamental economic data, the retail trader has to be aware not only of the relevant relationships between major fundamental drivers and markets but also she needs to accurately anticipate the magnitude of their impacts on each of the traded currencies. General lack of resources or their timely access makes this process
challenging. For example, the interest rate differential as a time series factor has one of
the biggest and longest predictive powers in the case of the USD/JPY pair (Kawakami,
2013, table 2). But timing its effect on short and mid-term market behavior is
cumbersome and impractical. The notions that news travels slowly (Daniel et al., 1998),
and is not reflected instantaneously by the market prices (Evans and Lyons, 2005) add
more difficulties to trading decision timing.

On the other hand, having unlimited resource access does not guarantee a
successful market performance (Fama, 1991) and (Chevalier and Ellison, 1999). Foster
and Viswanathan (1994) show evidence that the less informed trader “can make sharper
inferences from the order flow than the market maker about the extra information.”

Changing economic dynamics and opposing expert views might further dampen
the results of fundamental forecasting and lead to contradicting assumptions about market
volatility, direction, and timing. This is even truer when it comes to analyzing the impact
on markets by complex cultural, political, social and natural events and processes.

In the last decades the theory of behavioral economics is taking new look at how
human decision making influences financial markets (Mullainathan and Thaler,
2000). Pring (1997) points out that “prices in any freely traded market are determined
more by the attitude of traders to the emerging fundamentals than by the fundamentals
themselves. This means that markets (I.e. price trends) are essentially driven by
psychological forces.” Overexposed rumors might trigger enormous price gyrations while
seemingly important economic news might be ignored by the market participants.
Technical analysis

“Learn from the past, live in the present, hope for the future.” Albert Einstein

Instead of trying to analyze the market effects of complex events and processes, the small retail trader might spend her scarce resources on analyzing the price movement in relation to itself, or perform the so-called technical analysis.

The technical approach to investment is essentially a reflection of the idea that prices move in trends which are determined by the changing attitudes of investors toward a variety of economic, monetary, political and psychological forces. Since the technical approach is based on the theory that the price is a reflection of mass psychology (“the crowd”) in action, it attempts to forecast future price movements on the assumption that crowd psychology moves between panic, fear, and pessimism on one hand and confidence, excessive optimism, and greed on the other. (Pring, 1991, pp. 2-3)

A good example of the effect of “mass psychology” is institutional herding, the fact that “institutional investors' demand for a security this quarter is positively correlated with their demand for the security last quarter” (Sias, 2004). Looking at the phenomenon Dasgupta et al. (2011) suggest that “institutional herding positively predicts short term returns.”

On its own right, technical analysis assesses the price behavior separate from the underlying economic and social forces. In order to assess proportions and relations
between time and price changes, this approach might use various tools like Japanese 
candlesticks, Fibonacci numbers, harmonic relations, and fractals to name few. As a 
result, technical approach believes that statistically significant repeatable patterns could 
be used to effectively predict future market movements.

**Technical based trading effectiveness**

Although technical analysis has been used for centuries to anticipate market 
direction, the academic literature on the topic is somewhat split and inconclusive. On one 
hand, predicting markets by looking at historic prices directly contradicts the weak form 
of the efficient market theory (Fama, 1970). On the other hand, it is hard to know in 
advance which set of technical rules or tools would be the most suitable for testing 
different market conditions. This often leads to data snooping bias (Kuang et al., 2014). 
Even when the bias is statistically eliminated the results vary over time and on different 
markets. Levich and Thomas (1993), and Neely et al. (1997) find that although technical 
trading was successful between 1976 and 1990 the returns declined in late 80’s and early 
90’s. Pukthuanthong-Le et al. (2007), and Neely and Weller (2013) find that currently, 
rule based profits are predominantly present in the emerging markets. Furthermore, 
LeBaron (1999) claims that the technical rules are mainly profitable in the presence of an 
active central bank intervention.

As a starting point, many successful traders use some form of technical analysis 
of price and volume but take their trading decisions on “gut feeling”. Due to their highly
discretionary “instinctive” origin, those positive trading results cannot be confirmed and repeated by using the systematical scientific approach (Aronson, 2006).

**Momentum and market efficiency**

The technical trading techniques can be divided into two general groups: momentum and mean-reverse. The momentum strategies rely on price accelerating away from its mean: average price, average return, interest rate differentials, or any other relevant average. On the contrary, the mean-reverse techniques take advantage of the “rubber band effect”, or the tendency of the price to revisit the relevant mean after “stretching away” from it.

The presence of market momentum is a not well understood phenomenon. Ever since the “momentum effect” was “noticed” by De Bondt and Thaler (1985) it has not ceased to challenge the market efficiency theory (Fama, 1970). According to this theory, markets fully reflect any available information and quickly incorporate every relevant news. Thus, the price instantaneously incorporates the underlying factors and, as a result, behaves in random fashion. These market behaviors make any prediction obsolete. Therefore, technical analysis, or looking at previous prices, and fundamental analysis, or looking at the underlying drivers, are deemed useless.

The market efficiency theory has been challenged both, by consequent academic research and by active market participants. For example, here is what Warren Buffet has to say in reference to his value investing approach in a speech he gave in Columbia Business School, May 17, 1984:
There seems to be some perverse human characteristic that likes to make easy things difficult. The academic world, if anything, has actually backed away from the teaching of value investing over the last 30 years. It’s likely to continue that way. Ships will sail around the world but the Flat Earth Society will flourish. There will continue to be wide discrepancies between price and value in the marketplace, and those who read their Graham & Dodd will continue to prosper. (Buffet, 1984, p.13)

Soros (2010), the man who broke the Bank of England, claims that “the crash of 2008 also falsified the Efficient Market Hypothesis because it was generated by internal developments within the financial markets, not by external shocks, as the hypothesis postulates.”

In the last decades, new research finds that certain market behaviors, such as momentum, continue to cause market inefficiencies. More recently, Okunev and White (2003), Miffre and Rallis (2006), Fuertes et al. (2013), Jostova et al. (2013), Munira et al. (2008), and Evans and Lyons (2005) not only suggest the presence of momentum in a variety of markets but also most of them find that the phenomenon provides consistent, positive excess returns.

Investopedia defines market momentum as “the rate of acceleration of a security's price or volume.” Once the direction is defined, the idea is that it will continue as long as
“the force is greater than the resistance”.\footnote{Classical mechanics explains momentum as a result of the mass and velocity of an object. Higher velocity and bigger mass will result in larger momentum. It would take a larger or longer initial force to move a heavy object and it will take equally large or long opposing force to stop the momentum. The larger or longer the push and the larger the object’s mass the bigger the momentum. The law of conservation of momentum is considered to be stated by the English mathematician John Wallis in his 1670 work, Mechanica sive De Motu, Tractatus Geometricus: "the initial state of the body, either of rest or of motion, will persist" and "If the force is greater than the resistance, motion will result". (Scott, J.F. (1981). The Mathematical Work of John Wallis, D.D., F.R.S. Chelsea Publishing Company. p. 111)} The greater and the longer underlying market force is applied, the more persistent the trend will be.

Market momentum steams from few directions. De Bondt and Thaler (1985) show evidence of the tendency of market participants to buy “winners” and sell “losers” which contributes to the above mentioned “institutional herding”. Furthermore, any type of relevant news can trigger lasting effects on markets. Evans and Lyons (2004) suggest that “currency markets are not responding to news instantaneously.”

News arrivals induce subsequent changes in trading in all of the major end-user segments. These induced changes remain significant for days. Induced trades also have persistent effects on prices. (Evans & Lyons, 2004)

Additionally, volatility, or higher than average price fluctuation, is an important force for setting the market in motion. Chan (2013) finds that the volatility in Forex is
higher than in the stock market, and it has a much higher kurtosis. Long periods of seemingly drifting rates are followed by short seismic moves.

Soros (2010) suggests that trends are the result of positive feedback loops: In a positive feedback a distortion in the participants’ view causes mispricing in financial markets, which in turn affects the so-called fundamentals in a self-reinforcing fashion, driving the participants’ views and the actual state of affairs ever further apart. (Soros, 2010)

Soros (2010) further suggests that the resulting momentum is one of the components of a market bubble in the making.

Finally, Zhang (2010) finds that additional volatility might be induced by the activities of the so-called high-frequency trading. During the active session hours, trading software is placing, cancelling, or executing massive amounts of orders at any given moment.

Designing a Forex technical strategy based on momentum

The effective momentum trading method has to ultimately rely upon simple and robust approaches derived from “objective observation and statistical inference” (Aronson, 2007). The strategy must be intuitively dynamic, adopting the market volatility changes which implies simplicity and sophistication. Since the strategy is aimed for use by the average retail trader, it needs to be easily recognizable and repeatable. The applied rules have to be simple and as objective as possible.
The retail trader can start with a small account which can be actively traded 24 hours, five days a week and is easily accessible through highly leveraged brokerage firm. In order to avoid lack of liquidity they can use the EUR/USD pair.² Furthermore, the strategy test should not require expensive technology, software, specialized economic or technical knowledge. The rules also need to reflect the assumption that the average retail trader does not have unlimited trading time. Even if they did, Miffre and Rallis (2006) and the AMF (2014) found that more frequent trading leads to worse financial outcomes.

² According to the AMF study (AMF, 2014), the EUR/USD was the most traded currency pair with 24.1% daily average turnover in April of 2014.
The Methodology

The focus is to study well established currency pair with high liquidity facilitating market participation and reducing risk of trading. The goal of the study is to assess the direction of the market flow in relation to the 20 day average outliers in the EUR/USD currency pair. The analysis is based on a sample of daily high, low, and closing quotes of the EUR/USD pair over the period from January 2nd, 2004 to January 30th, 2015. The complimentary data was downloaded from www.Global-View.com. The calculations and data analysis were made using Excel spreadsheets. First off, the daily high-low ranges are averaged over a 20 day rolling period. After normalizing these periods, the ranges with two standard deviations and higher are filtered out. Upward momentum is assumed when the closing quote is in the top 25% of the daily range, and vice versa for the downward momentum. The last step is comparing the future price levels with the anticipated directional bias of the daily outliers. Using Fibonacci numbers, different daily forward periods are sampled to detect the highest probability “winners”.³

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³ The use of Fibonacci numbers is based on the belief in their universal importance. Leonardo De Fibonacci de Pisa (b.1170-d.1240) described his number sequence findings in “Liber Abaci” (“Book of Abacus”) He used the sequence to predict a rabbit population reproduction. The Fibonacci ratios of 0.168 and 1.168 are found in the pyramids of Giza dimensions as well as in science and nature.
Results and Discussion

For the period between January 2\textsuperscript{nd}, 2004 and January 30\textsuperscript{th}, 2015 there were 113 days with ranges bigger than two standard deviations. Twenty one of these days had ranges bigger than three standard deviations. Of the total, 49 days closed in the upper 25\% range and 50 days closed in the lower 25\% range. When compared to several future price changes, the following distribution occurred:

Table 1. Upward momentum probability

<table>
<thead>
<tr>
<th>Time Period In Days</th>
<th># of Occurrences</th>
<th>% of Total Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25</td>
<td>51.02%</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
<td>48.98%</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
<td>48.98%</td>
</tr>
<tr>
<td>21</td>
<td>22</td>
<td>44.90%</td>
</tr>
<tr>
<td>55</td>
<td>22</td>
<td>44.90%</td>
</tr>
<tr>
<td>89</td>
<td>27</td>
<td>55.10%</td>
</tr>
<tr>
<td>144</td>
<td>29</td>
<td>59.18%</td>
</tr>
<tr>
<td>233</td>
<td>27</td>
<td>55.10%</td>
</tr>
</tbody>
</table>

The second column of Table 1 and Table 2 displays the total number of times price closed in the momentum direction for the particular time period. The third column of Table 1 and Table 2 shows the “# of Occurrences” data as a fraction of the total number of abnormal volatility occurrences (total of 49 for up momentum and 50 for down momentum). An upward bias, or ratio higher than 50\% (in green), was found in the first, 89\textsuperscript{th}, 144\textsuperscript{th}, and 233\textsuperscript{rd} day following the abnormal volatility. In turn, there was more
than 50% probability of continuing downward momentum for the first, second, fifth, and 21st day after abnormal volatility (Table 2).

Table 2. Downward momentum probability

<table>
<thead>
<tr>
<th>Time Period In Days</th>
<th># of Occurrences</th>
<th>% of Total Occurrences</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>29</td>
<td>58%</td>
</tr>
<tr>
<td>2</td>
<td>30</td>
<td>60%</td>
</tr>
<tr>
<td>5</td>
<td>31</td>
<td>62%</td>
</tr>
<tr>
<td>21</td>
<td>31</td>
<td>62%</td>
</tr>
<tr>
<td>55</td>
<td>19</td>
<td>38%</td>
</tr>
<tr>
<td>89</td>
<td>20</td>
<td>40%</td>
</tr>
<tr>
<td>144</td>
<td>15</td>
<td>30%</td>
</tr>
<tr>
<td>233</td>
<td>14</td>
<td>28%</td>
</tr>
</tbody>
</table>

Higher than 50% ratio, or bias gives some evidence of different than random behavior. Based on the results, there are some noticeable differences between upward and downward momentum bias. The upward bias is short lived and it is segmented. The downward bias is more tenacious and uninterrupted. It also starts right after the outlier day and continues up to the 21st day. The observed differences suggest either the presence of various underlying drivers, or different intensity of the causal forces for upward and downward price movements.

In practice, the observed variances should be considered while choosing how long to hold on a trade. For example, the findings suggest that there is a higher probability of positive return if the long trade is closed either the next day, or sometime between the
89\textsuperscript{th} and the 233\textsuperscript{rd} days. In contrast, the best holding period for the short trade would be between the first and the 21\textsuperscript{st} day.

Table 3 shows the cumulative returns from upward and downward momentum if a trade was initiated in the direction of the momentum bias, and it was held for the given daily periods.

Table 3. Cumulative returns based on momentum bias \(^4\)

<table>
<thead>
<tr>
<th>Days</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>21</th>
<th>55</th>
<th>89</th>
<th>144</th>
<th>233</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up</td>
<td>3.47%</td>
<td>0.94%</td>
<td>-5.20%</td>
<td>45.81%</td>
<td>-36.08%</td>
<td>21.00%</td>
<td>28.03%</td>
<td>-14.14%</td>
</tr>
<tr>
<td>Down</td>
<td>3.84%</td>
<td>4.94%</td>
<td>14.41%</td>
<td>28.92%</td>
<td>-7.98%</td>
<td>-19.12%</td>
<td>-68.95%</td>
<td>-77.07%</td>
</tr>
</tbody>
</table>

It is important to notice the inverted nature of returns from long and short trades. In fact, the highest return (in green) from short trades in day 21 coincides with the lowest return (in red) from long trades for the same holding period. Contrariwise, the second worst short trade return (in red) in day 144 coincides with the highest return (in green) from long trades. It is also important to notice the periods with worst returns for both directions. These statistical results can be further used for studying mean-reversal behaviors.

Next, we attempted to find the best trade periods by combining momentum bias with average trade returns. In order to find higher probability trading results, the positive return needed to coincide with more than 50% momentum occurrences for the same time period.

\(^4\) Total cumulative return was not considered because of the different characteristics for upward and downward momentum bias.
Table 4. Upward momentum bias and average returns

<table>
<thead>
<tr>
<th>Days</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>21</th>
<th>55</th>
<th>89</th>
<th>144</th>
<th>233</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upward Bias</td>
<td>51.02%</td>
<td>48.98%</td>
<td>48.98%</td>
<td>44.90%</td>
<td>44.90%</td>
<td>55.10%</td>
<td>59.18%</td>
<td>55.10%</td>
</tr>
<tr>
<td>Average Returns</td>
<td>0.07%</td>
<td>0.02%</td>
<td>-0.11%</td>
<td>-0.93%</td>
<td>-0.74%</td>
<td>0.43%</td>
<td>0.57%</td>
<td>-0.29%</td>
</tr>
</tbody>
</table>

According to Table 4, the best holding periods for the long trade (in green) were one day, for 51.02% probability of average return of 0.07% per trade, 89 days, for 55.10% probability of average return of 0.43% per trade, and 144 days, for 59.18% probability of average return of 0.57% per trade.

For the exception of day one, the results for the short trade showed different pattern.

Table 5 Downward momentum bias and average returns

<table>
<thead>
<tr>
<th>Days</th>
<th>1</th>
<th>2</th>
<th>5</th>
<th>21</th>
<th>55</th>
<th>89</th>
<th>144</th>
<th>233</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downward Bias</td>
<td>58%</td>
<td>60%</td>
<td>62%</td>
<td>62%</td>
<td>38%</td>
<td>40%</td>
<td>30%</td>
<td>28%</td>
</tr>
<tr>
<td>Average Returns</td>
<td>0.08%</td>
<td>0.10%</td>
<td>0.29%</td>
<td>0.58%</td>
<td>-0.16%</td>
<td>-0.38%</td>
<td>-1.38%</td>
<td>-1.54%</td>
</tr>
</tbody>
</table>

The best holding periods (in green) for the short trade were one day, for a 58% probability of average return of 0.08% per trade, two days, for 60% probability of average return of 0.10% per trade, five days, for 62% probability of average return of 0.29% per trade, and 21 days, for 62% probability of average return of 0.58% per trade.

The findings suggest that, given the momentum bias, there is an uninterrupted higher probability for positive returns if a short trade is held between one and 21 days.
Considering the disadvantages of being a small, retail market player, and in order to minimize the risk of market exposure, it is appropriate to suggest that the retail trader should be on the market for the shortest amount of time. Thus, it is more suitable to trade in the direction of downward momentum because in 62% of all cases the profitable trade would last for no more than 21 days and could extract an average return of up to 0.58%. In contrast, in order to achieve the maximum average return of 0.57% per trade, in 59.18% of all cases, the short trade would be held for up to 144 trading days. In reality, this time period equates to more than seven calendar months.

Limitations and further research

Although the results are encouraging few considerations must be made. First of all, the research should not be seen as a ready-to-trade system. The momentum strategy is only the first step of situating the odds of trading. The statistical relations between excessive volatility and price fluctuation can be used as initial directional bias. In order to capitalize on the findings, more detailed actionable trade and management plan has to be designed. The proposed methodology is only tested in one market and with one currency pair. In order to find broader market application broader market instrument research is necessary.

It is also recommended that more detailed exploration is needed to discover the most profitable trade holding periods. Additionally, a separate study about the impact of daily volatility with three standard deviations from the mean on momentum might give deeper insight and additional practical applications. In order to draw a complete picture,
it is also necessary to investigate the presence of mean-reversal market behaviors and their trading applications.

Further research is needed to investigate the drivers characterizing the upward and the downward momentum behavioral differences. Also, designing and perfecting a trading system with an entry point, a profit target, and a stop loss is crucial ingredient of the systematic approach to trading. On the choice of particular rules, Neely and Weller (2013) find that 90% or more of the technical rules produce the same signal and they switch its direction at approximately the same time.

Finally, this work does not address the exposure to systemic risk, nor any other risk. According to Karbalaee (2012) volatility caused market risk remains the main factor for ruin in retail Forex. Further research is needed to assess the risk reward ratio of momentum based trading system.


