Available online at www.sciencedirect.com

ScienceDirect

Procedia Economics and Finance 32 (2015) 50 – 55

Procedia Economics and Finance

www.elsevier.com/locate/procedia

Emerging Markets Queries in Finance and Business

Trading the equity curves

Pavel Kisela[a,]*, Tomáš Virdzek[b], Viliam Vajda[a]

[a]*Technical University of Košice, Faculty of Ecomonics, Košice 040 01, Slovakia*
[b]*Matej Bel University, Faculty of Economics, Banská Bystrica 974 01, Slovakia*

Abstract

Nowadays, financial markets are no longer only for "big players". Also small investors and traders have strong presence. Each of them uses their own strategy and therefore there are countless strategies. Each trading strategy has an equity curve, which gives us very important inside of how good or bad this strategy is. Aim of this paper is to look at the equity curve gained from the one specific trading strategy and find out, if it is possible to improve it (improve the final return, recovery factor, sharp ratio etc.) by applying some most used technical indicators on it. In other words, will we gain better performance by trading the equity curve itself? The used strategy is built on the well known idea of trading the divergences and the rules are applied on various currency pairs. In the results there is comparison of raw equity curves (unmanaged) and managed equity curves of this trading strategy.

Selection and peer-review under responsibility of Asociatia Grupul Roman de Cercetari in Finante Corporatiste

*Keywords:*Equity curve analysis, trading strategies, divergences, FOREX

1. Introduction

Each participant of the financial markets uses some investment strategy or trading system based on various ideas. Many of these trading systems are based on mechanical rules. These systems experience good periods

* Corresponding author. Tel.: +421-55-602-3263;
E-mail address: pavel.kisela@tuke.sk

2212-5671
Selection and peer-review under responsibility of Asociatia Grupul Roman de Cercetari in Finante Corporatiste
doi:10.1016/S2212-5671(15)01363-5

with profits and periods with more losses. And therefore each trader wants to identify profitable periods and holds on them as long as possible; on the other hand he wants to find the points, where the strategy may stop working. Functioning of the trading system can best be assessed just by looking at thes hape of the curve Equity (EC) or by looking at the statistical metrics of these trading systems. Mark Douglas (1990) is saying that if traders were to chart their equity, these charts would look very much like the typical bar charts and charts like these also can have the same predictive value as in the markets. That’s why traders strive to find the way to predict the possible changes in their systems.

The area of the risk management, which tries to solve this problem, is called “Equity curve analysis”. (Vladimir Stepnov, 2002)The most common way of analyzing is to use moving average (MA). Octavio Riano(2012) in his work presents this approach. He analyses one EC with using various MAs and presents results with improved final return and flattened curve. In his work is used just one EC and from this cannot be clear, if this approach work, or does not. Therefore in this paper extended research on this topic will be presented.

Every economic sector is in presents times interconnected with ICT(Gavurová, B., Šoltés, B. &Balloni, A. J ,2014), including Financial sector. In current development of trading system the developers still use TA indicators (Billingsley and Chance, 1996; Taylor, Mark P.; a and Allen, Helen, 1992) and these trading systems are being traded not only by traders, but also by computers. As Cheol-Ho Park and Scott H. Irwin, 2007 mention in their paper, there is wide discrepancy about profitability of these TA indicators. Especially between traders and academics. The usage of the indicators is to apply them to the price of the financial instrument. Other approach presented in this paper is to apply these indicators to the values of the EC, likewise mentioned above with MAs.

From all above one hypothesis is considered: TA indicators can improve EC and statistical metrics of the trading systems.

2. Methodology

2.1. Trading strategy rules

As was said earlier, the input data for equity curve analyses are the data, which represent progress of gains and losses of specific trading strategy in time. The strategy can be built on for example the stock picking based on the valuation of the companies (Užík, M. – Šoltés, V., 2009).For the purpose of this research was used trading strategy based on divergences between the price and the indicator. This trading idea is used among a lot of traders in many possible ways.(Alexander Elder, 1993)The rules of this strategy were very simple, so the amounts of input data were sufficient to test the hypothesis (TomášVirdzek, 2014). Rules were:

- BUY market, if the close price of the previous candle/bar is lower than lowest price of the X period and at the same time the value of the indicator is higher than the lowest value of this indicator of the X period
- SELL, if the price is higher than the Y period exponential moving average
- SHORT, if the close price of the previous candle/bar is higher than highest price of the X period and at the same time the value of the indicator is lower than the highest value of this indicator of the X period
- COVER SHORT, if the price is lower than the Y period exponential moving average

Timeframe for this trading strategy was also chosen in order to get the high amount of input data. Therefore the 30 min timeframe on the period from cca year 2002 till 2014 was chosen (Exact period was variable with each currency pair. The exact period was not important, because the results between currency pairs were not compared against each other). The strategy was applied on 9 most traded currency pairs and their various combinations, where 95% of all speculative trading in FX is accounted. Furthermore one futures market representing stock market for comparison was chosen - e-miny S&P500 (ES). Calculations were made in