RSI backed momentum in Stock Prices of selected OPEC countries

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Abstract

It is evident from the available literature that technical analysis can be used to create profitable opportunities in comparison to buy and hold strategy. But in many studies differing point of view has been presented by researchers regarding profitability of different techniques of technical analysis. Thus this study is specifically focusing on examining the predictability of the Relative Strength Index. The study is focused on examining the patterns in equity stock indices in selected OPEC markets using the Relative Strength Index with filter rules. The popular technical trading rule of RSI 50 crossover is tested using a 2% filter on Saudi Arabia, Qatar and U.A.E. from the first trading day of 2002 to the last trading day of 2021 for twenty years. It was concluded that RSI can give enough opportunities to the investors to generate more returns as compared to returns of passive Buy-Hold strategy.

I. Introduction

THERE HAS ALWAYS been a great deal of debate over the approach to asset pricing in the financial markets across the world. Of the two schools of thought, the first one uses the fundamental analysis approach to asset pricing which considers different economic factors to ascertain an organization's intrinsic value. Fundamental Analysis follows the notion that investment choices should be decided on the basis of analysis of the intrinsic value of

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Annexure I

Daily Returns

The formula for calculating log return:

$$R_t = In\left(\frac{P_t}{P_{t-1}}\right) \tag{1}$$

where, P_t and P_{t-1} are the value of security on day t and t-1 respectively; R_t signifies the return on day t.

Annexure II

The mathematical formula is calculated as follows:

$$RSI = 100 - \frac{100}{1 + RS} \tag{2}$$

$$RS = \frac{Average\ Gain}{Average\ loss} \tag{3}$$

Average gain   =   (total of gains during past n periods) ÷ n
Average Loss   =   (total of loss during past n periods) ÷ n

where, n represents number of periods

Annexure III

In this study, the researcher will be using RSI 50 crossover rule with 2% filter. For 50 crossover the following methodology is adopted:

Chong and Ng (2008) used RSI indicator with 50 crossover rule however in the present study 2% filter rule is applied to the basic 50 crossover rule, thus buy signal is developed when RSI is more than or equal to 51 and we will hold the position as long as the RSI is more than or equal to 51. A sell signal is developed when RSI is less than or equal to 49. This trading rule is represented as RSI (N, 50), where N is the number of periods. In the present study, RSI (14, 50) will be used with 2% filter. Thus, the decision will be made as under:

      Buy   = When RSI e" 51
      Sell   = When RSI d" 49

The decision of buying and selling is made according to the above mentioned formulae.