Research Journal of Finance and Accounting
ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online)
Vol.6, No.16, 2015

Long-Term Contrarian Profits in the Middle East Market Indices

Omar Gharaibeh, Al al-Bayt University

Abstract
This paper examines whether there is an existence of a long-term contrarian profits at the Middle East (ME) market indices. This paper shows strong evidence for the long-term contrarian strategy in the Middle East indices. The result of this study demonstrates that the long-term contrarian profits for the Middle East markets can't be explained by two-factor model. In spite of whether winners are smaller or larger than losers, there are long-term abnormal profits. Finally, the findings in this paper suggest that the long-term contrarian profits may be stronger and more enveloping than is usually understood.
Keywords: long-term contrarian, Middle East (ME), market indices, two-factor model.

1. Introduction

In their international indices study of long-term contrarian strategy, Malin and Bornholt (2013) comprehensively examine the performances of the long-term abnormal returns to contrarian investment strategies. They reveal empirical evidence on the long-term contrarian profits in the international market indices. Their study shows that the developed markets results provide statistically significant long-term contrarian profits for all holding months, while the developing markets results produce economically important.

By employing the Malin and Bornholt (2013) methodology, this study aims to investigate whether there is a long-term contrarian strategy applied to the Middle East market indices. Within the context, the role of two-factor model will be investigated.

The remainder of the paper is arranged as follows. Next section reviews the previous results in the literature while Section 3 presents the sources of the data and discusses the empirical methodology. Section 4 provides the results for both raw and risk-adjusted returns to the zero investment contrarian strategy, the two-factor model is also applied as part to the analysis of long-run profitability. Finally, Section 5 concludes the paper.

2. Literature Review

Following DeBondt and Thaler (1985) who documented the long-term contrarian effect, using the same data, DeBondt and Thaler (1987) re-examined stocks that earned extreme long-term gains or losses. They constructed portfolios of the 50 most extreme losers and 50 most extreme winners. Their finding confirmed the evidence documented by DeBondt and Thaler (1985) that the overreaction hypothesis plays an important role in long-term return reversals after controlling for both risk and size. Thus, the differences in risk and firm size cannot explain the winner-loser effect. The results also showed that the portfolios of losers outperformed the portfolios of winners by about 30% over the following five years. DeBondt and Thaler (1987) examined the seasonal pattern of return as well showing a January effect which was related to the reversal effect. In addition, there was a negative relationship between the excess returns for the winners and the excess returns prior to December, result which was related to the capital gains tax "lock-in" impact.

At country index level, Richards (1997) investigated the comparable winners-losers reversal in 16 national markets for the period 1970-1995. Two primary methodologies have been used to assess the risk of a contrarian strategy. The first is to measure the covariance of risk and return exposures of the winners and losers portfolio. The second is to measure whether loser's portfolios tend to underperform the winner's portfolios either in recession periods or during large declines in the world index. The analysis confirms the finding of DeBondt and Thaler (1985; 1987) that reversals are strongly significant around the 3-year horizon. Consequently, abnormal returns have averaged at least 6% annually during the period from 1970-1995. However, the important result is that the reversals do not reflect risk differentials. In other words, the difference between test-period returns of prior winners and losers are statistically insignificant either in their performance in adverse states of the world or in terms of their standard deviations. In addition, the results show that smaller markets are more affected by reversals than are larger markets.

Exploring the source of contrarian profits, Barberis, Shleifer and Vishny (1998) provide an economic model of investor sentiment simulated by psychological evidence of how investors form beliefs and expectation of future earnings. This model is consistent with Griffin and Tversky's (1992) idea that concentrates on making forecasts. This model produces an underreaction and overreaction to a wide range of parameter values. They point out that the three-factor model can explain the overreaction, but not underreaction evidence. In addition, Barberis, et al. (1998) presented evidence that the investors can achieve abnormal returns during the underreaction and overreaction periods without bearing extra risk, and this is considered a major challenge to the efficient market theory. Barberis, et al. (1998) confirmed the finding of DeBondt and Thaler (1985) that long-

term reversals can be attributed to traders that finally do overreact. Barberis, et al. (1998) and other studies such as DeLong, Shleifer, Summers and Waldmann (1993) and Daniel, Hirshleifer and Subrahmanyam (1998) assume that this long-term return reversal can be explained by long-term correction after investor overreaction. This model relates to both the important behavioral heuristics, known as representativeness bias and conservatism bias.

Representative bias means that investors become too pessimistic (optimistic) about companies with a series of bad (good) news. Concentrating on industry news rather than firm-specific news leads investors to extrapolate performance too far for the industry as a whole producing long-run reversals in industry returns thus supporting Tversky and Kahneman's (1974) findings. The conservatism bias is also present when investors are more conservative in renewing their previous ideas when new industry information arrives, thus, generating under-reaction in industry prices to public information. This confirms the phenomenon documented by Edwards (1968) that conservatism supports the underreaction evidence.

Using Conrad and Kaul's methodology to measure the overreaction hypothesis in seven industrialized countries, Baytas and Cakici (1999) assessed the performance of arbitrage portfolios depending on three components: size, price and past performance. Baytas and Cakici (1999) supported the finding of Conrad and Kaul that the overreaction is not pronounced in the U.S. and that portfolios with (low) high price (outperform) underperform the market. On the other hand, their findings showed evidence of overreaction in the majority of the countries, except for Canada, where the impact was relatively weak. In general, returns to long-term contrarian strategies were significant in other countries. They suggested that some of the long-term price reversals observed in loser and winner stocks might be explained by price and size effects. This is because long-term investment strategies related to size and price provide returns larger than those coupled with past performance, and because winners (losers) tend to be high (low) market value firms with high (low) stock price.

In the Spanish stock market, Forner and Marhuenda (2000) analyzed the performance of contrarian strategies. The study used techniques suggested by Conrad and Kaul (1993), Ball and Kothari (1989), Chan (1988) and DeBondt and Thaler (1985) to assess the returns and the buy-and-hold measures. These techniques take into consideration measurement errors. Forner and Marhuenda (2000) showed that the contrarian strategy does not produce significant profits thus, providing no evidence of reversal of long-term returns in the Spanish market.

Gaunt (2000) documented the test period performance of all intermediate portfolios on the Australian market. He found no reversal performance in the loser portfolios even after adjusting for risk and the difference between the test period performance of loser and winner portfolios is not considerable. Gaunt (2000) also finds that the price reversal appears when employing monthly portfolio rebalancing and it disappears when using a buy and hold strategy, result which is consistent with Brailsford (1992). He shows that abnormal returns in the Australian equity market are not based on the lack of liquidity of small firms or the transaction costs related to monthly portfolio rebalancing. Most previous studies in the U.S. disagree with this proposition because the different research time periods between Australia and U.S. have played an important role in explaining the differences between the two countries. Notably, Gaunt's study extends from 1974 to 1997 while most of the U.S. research goes back to 1926.

Following the DeBondt and Thaler (1985) contrarian method, Balvers, Wu and Gilliland (2000) investigated the presence of mean reversion in the indices of 18 countries under different investment strategies. Using annual data and a parametric contrarian strategy, they confirmed the finding of Richards (1997) at country index level and found that the contrarian strategy provides a 6.1% per year profit. Balvers and Wu (2006) used monthly index data and the same a parametric method and confirmed the Balvers, Wu and Gilliland's (2000) finding by showing positive contrarian profits.

Using monthly returns for NYSE and AMEX firms only from August 1963 to December 1999, Grinblatt and Moskowitz (2004) investigated the importance of consistency in contrarian strategies with various past formation periods. They found that winner consistency is important because the cross-section of returns is substantially influenced by the consistency of past winning stocks. This finding is consistent with theories proposed by Grinblatt and Han (2001).

Using Istanbul Stock Exchange data from 1991 to 2000, Bildik and Gulay (2002) investigated the momentum and contrarian effects on expected returns based on Jegadeesh and Titman's (1993) methodology. Bildik and Gulay (2002) findings support the overreaction hypothesis that past losers outperform past winners, as the average top-losers portfolio returns are higher than the average top-winners portfolio returns by about 1.14% per month during a 10-year period. Furthermore, they also find that there is a positive relationship between the holding period and the difference between the average abnormal return of losers and winners. In other words, increasing the holding period leads to an increase in the loser minus winner portfolio average abnormal return per month. Their study shows that the month of January influence significantly the contrarian profits compared with non-January months concluding that the January effect has a more influence on contrarian profits than the length of holding period. Finally, Bildik and Gulay (2002) reveal that the Istanbul Stock

Exchange is considered to have a weak-form efficiency because future returns and reversals in prices can be predicted by past return data.

In the UK Arnold and Baker (2005) examined the performance of stocks that have had extreme performance over a previous five year period. Their analysis showed that past losers provide abnormally high yearly returns by an average 8.9 percent while past winners provide low yearly returns. This means that the market generates biased signals for the managers of those firms, which can potentially influence a range of managerial decisions such as the evaluation of the cost of equity and the timing of share issue (Arnold and Baker, 2005). Their results are based on seven risk measures. Surprisingly, they show that the loser stocks are less risky than winner stocks in all the risk measures In addition, the study finds that return reversals continue after separating the size effect, finding that contradicts Clare and Thomas (1995) who show that there is no return reversal in the UK after controlling of firm size. However, Arnold and Baker (2005) support the overreaction hypothesis where investors' overreactions generate systematic valuation errors in the stock market.

In a more recent study, Figelman (2007) investigated the impact of various past stock returns have on their future returns. He identified five effects: the intermediate-term momentum effect documented by Jegadeesh and Titman (1993), the short-term reversal effect investigated by Jegadeesh (1990), the long-term reversal effect reported by De Bond and Thaler (1985) and two new effects (long-term periodicity and intermediate-term quarterly periodicity). Figelman (2007) confirmed the finding of DeBondt and Thaler (1987) and also found that there was a stronger return reversal in January than in other months. His analysis showed that short-term reversal (1-month) was driven by stock-specific phenomenon, not by industries, while intermediate-term momentum seemed to be sourced not only by stock-specific dynamics but also by common factors related to industry. The long-term reversal effect seemed to be weaker than the other two effects and appeared to be driven by both stock-specific dynamics and common industry factors.

Proposing an alternative rational explanation for the contrarian effect on both U.S. and Hong Kong markets, George and Hwang (2007) went further and showed that long-term contrarian can be explained by the tax avoidance effect. To test long-term reversals, they measured two behavioral hypotheses with both the capital gains lock-in effect and the overreaction hypothesis. Hong Kong was selected for the study as investment income is not taxed in this market. George and Hwang (2007) showed that loser reversals are non-existent in January but present outside of January, result which is inconsistent with the overreaction hypothesis. Their finding showed that the lock-in effect measure plays an important role in predicting winner reversals in the U.S. but the tests dependent on the irrational overreaction hypothesis have no predictive power. In Hong Kong, these two hypotheses do not predict reversals, thus, long-term reversals are absent in this market.

In the UK market, Wu and Li (2010) suggested that the long-term return reversals can be explained by value-growth characteristics, past performance and tax. In other words, they investigated whether typical rational behavior or value-growth characteristics can explain long-term reversals better than past performance. The results showed that the value-growth characteristics play a crucial role in explaining long term returns better than past performance. Furthermore, the study showed that the capital gain from winners helped to predict reversals in the cross-sectional comparison and were able to reflect market price corrections for growth stocks. However, the predictive power of winners' capital gains vanished after controlling for the risk factors employed by Fama and French (1996).

Using risk models such as the CAPM and the three-factor model to attempt to explain momentum and contrarian returns, Sehgal and Jain (2011) investigated whether abnormal returns are present in the Indian market. They extended DeBond and Thaler's (1985, 1987) work by having portfolio holding windows which are longer than 12 months and portfolio formation periods based on past 2 to 5 years. To avoid short-term momentum effects they skipped 12 months between holding windows and portfolio formations. Sehgal and Jain (2011) found that the long-run returns cannot be explained by the CAPM and the Fama and French three-factor model.

3. Data and Methodology

This study employs monthly total returns of 11 Morgan Stanley Capital International (MSCI) Middle East indices for the data set. Consistent with the Balvers and Wu (2006), returns are computed from prices converted to U.S. dollar to ease the explanation of findings inter-market and since the diverse strategy profits represent the findings that would be available to the U.S. dallar-based investor. Monthly total return data has been downloaded from Datastream. The study time frame expands from February 1988 to September 2013 with the number of observation for an index varying from 308 to 100.

Table 1 provides descriptive statistics for the monthly return, standard deviation, skewness and kurtosis for each index in the Middle East countries. To better understand the performance of the Middle East indices, the countries in Table 1 are ranked by descending order. Large variation is reported in Table 1 respect to the mean and standard deviation of returns. Turkey has the highest monthly average (over 2% per month), while Bahrain has the smallest average at -1.33. The 11 Middle East market countries have an average monthly return

of 0.53% and the average standard deviation of 9.03%. For the distribution of returns, skewness and kurtosis have a wide range values.

The purpose of this study is to determine whether the long-term contrarian impact is present at index level for Middle East markets. A descriptive of the long-term contrarian strategy is provided next.

3.1 Long-Term Contrarian Strategy

The long-term contrarian strategy is based on DeBondt and Thaler (1985; 1987) as follows: each month t, indices are sorted based on their past J-month returns (J = 36, 48 or 60-month). Every month the long loser (LL) portfolio includes that 25% of indices with the lowest past J-month returns, and the long winner (LW) portfolio includes the of that 25% of indices with the highest past J-month returns. If the long-term contrarian effect applies at the Middle East index level, then indices with returns near to their long-term loser will outperform those indices that are farther from their long-term loser. Therefore, the long-term contrarian strategy shorts the long-term winner portfolio and longs the long-term loser portfolio to form the long-term loser minus long-term winner denoted by (LL-LW) arbitrage portfolio. This study test this holding periods of K = 1, 3, 6, 9 and 12-month).

The long-term contrarian strategy uses skipping a one-year gap after the end of the formation period according to the Fama and French (1996), Grinblatt and Moskowitz (2004) and Figelman (2007) methodology. Fama and French find that skipping one year after the end of formation period generate stronger long-term contrarian profits. This finding is consistent with DeBondt and Thaler (1985).

4. Results

This section examines the results for the long-term contrarian return strategy as well as of raw and risk –adjusted results.

4.1 Long-term contrarian returns results

Table 2 presents results for the selling (LW), buying (LL), and buying-selling (LL-LW) long-term contrarian return portfolios for several (J, k) combinations. Table 2 includes the findings for formation period lengths of J = 36, 48, and 60 months and presents the equal-weighted average monthly portfolio returns for K-month holding periods (K = 1, 3, 6, 9, and 12 months) in columns 3 through 7.

The long-term contrarian results in Table 2 shows clearly that the strategy profits (LL-LW) are statistically significant over all K-month holding periods if J = 48 and 60 months. For example, for the four-year (48-month) formation period and 6-month holding period (K= 6) case past long-term losers produce an average of 2.23 per month whereas past long-term winners provide an average of -0.83% per month over the same period. As a result, the difference between the average monthly returns of the LL portfolio and the LW portfolio is 3.06% per month (t-stat 3.26), which is statistically significant. In summary, the holding period returns over J = 48 and 60 months in Table 2 provide strong evidence of a long-term return contrarian effect at the Middle East indices.

In general, although there are no significant contrarian profits generated for long-formation period of 36 months, the Table 2 shows significant long-term contrarian LL-LW profits for all J = 48 to 60 months and all K. The next section considers the results of the post-holding period long-term contrarian strategy.

4.2 post-holding period returns

As noted earlier, in the research sample the long portfolios of the long-term contrarian strategy provide significant profits over the 48 months leading up to the end of formation period. In this section, this paper uses annual event-time returns to investigate how long such contrarian of past performance continues. In the last five columns of Table 3 presents event-time returns, together with associated t-statistics that incorporate the Newey-West (1987) autocorrelation correction for overlapping returns.

For the long-term contrarian returns strategy in Table 3, all five years have positive LL-LW returns except Year 1 and Year 2 over the 36 months. While most Year 5 are not statistically significant and Year 4 are weakly significant at the 10% level, their profits are still economically large. Overall, except of Year 1 and Year 2 over the 36 months, the universally positive long-term contrarian event-time return propose that contrarian maintains throughout the first five years post-formation.

The post-formation behaviors of the long-term contrarian return strategy is also illustrated in Figure 1. Figure 1 shows the post-formation cumulative profits of the long-term contrarian strategy (LL-LW) with J = 60 for the 60 months following the end of the formation period. The 60 strategy graph shows no signs of slowing down by the end of the first 60 post-formation months.

4.3 Risk adjustments

To decide whether the returns of the long-term contrarian strategy could be considered a reward for bearing risk, the returns of the long-term contrarian strategy is risk-adjusted employing international two-factor model applied by Balvers and Wu (2006) . The two-factor model regression model contains the market factor, and the Value minus Growth factor.

$$R_{pt} - R_{ft} = \alpha_p + \beta_{p,mkt}(R_{mkt,t} - R_{ft}) + v_{p,vmg}\,\mathrm{VMG}_t + \varepsilon_{pt} \qquad (1)$$

The dependent variable $R_{pt} - R_{ft}$ is the monthly excess return of the strategy portfolio p , and R_{ft} indicates to the monthly risk-free rate at time *t*, represented by the one-month U.S. T-Bill return. The independent variables are as follows: $(R_{mkt,t} - R_{ft})$ is the CRSP value-weighted index's monthly excess return for month *t*, while VMGt are the monthly return on the MSCI World Value Index minus the return on the MSCI World Growth Index at time *t*. These Middle East indices are downloaded from Datastream. The Coefficients $\beta_{p,mkt}$ and $v_{p,vmg}$ are the regression loading corresponding to the two factors. α_p or intercept (or simply alpha) refers to the risk-adjusted abnormal profits of the portfolios over the estimation period. If α_p is statistically significant, this means that there is evidence of abnormal profits. The t-values corresponding to the regression coefficients are adjusted for heteroskedasticity employing Whit's (1980) test.

Table 4 reports the estimated regression coefficients of the two-factor model and the corresponding Whit-adjusted *t*-values for the buying, selling and buying minus selling portfolios for the long-term contrarian (*J* = 60) strategy with six-month holding periods (*K* = 6). A column 3 of Table 4 presents the monthly alphas of the two-factor model, while the last column lists the adjusted R^2 .

The Middle East market results in Table 4 refers that the long-term contrarian strategy's profitability maintains the risk-adjustment process. The risk-adjusted return of the arbitrage portfolio (LL-LW) continues significant at 3.4% per year (*t*-stat 3.16). As might be expected from the raw findings for Middle East markets explained in the previous section, the risk-adjusted return of 3.4% for the long-term contrarian is only marginally higher that the long-term contrarian returns of 3.32%. Table 4 also reveals that the buying portfolio assist in general in the profitability of the strategy, demonstrating significant risk-adjusted profits of 1.9% per year (*t*-stat 3.51) while selling portfolio is -1.5% per year (*t*-stat -1.49), respectively.

The important feature is derived from Table 4 is that the long side of long-term contrarian strategy (LL) has a significant alpha but the alpha of the short side of long-term contrarian strategy (LW) is not significant. Clearly, the contrarian of long-term losers is providing much of this strategy abnormal profit. In short, the long-term contrarian result in Table 4 reveals that there is long-term contrarian in Middle East returns that cannot be explained by the two-factor model. The result in this paper raises the possibility that the two-factor model may have difficulty explaining the results of such a study.

5. Conclusion

Malin and Bornholt (2013) have reported evidence of long-term contrarian at the level of international indices, they revealed that there is a statistically significant profit of developed indices and weakly significant profits of emerging market indices. This study differs from prior research by examining the evidence of the long-term contrarian strategy of all 11 Middle East market indices.

Using 13 emerging indices, Malin and Bornholt (2013) show that although all the emerging market's long-term contrarian returns are economically significant, none of those returns are statistically significant. This study documents strong evidence of long-term contrarian strategy of 11 Middle East indices over the formation period lengths (48 and 60 months). For example, the strongest long-term contrarian return using six-month holding periods (*J* = 60, *K* = 6) is 3.32% per month. This profit is very large and it is statistically significant (*t*-stat 3.09). This finding will motivate the researchers and practitioners to ask what are the reasons behind these large profits. Clearly, this long-term contrarian profits presented by this paper regarding the 11 Middle East market indices is considerably larger than the long-term contrarian international profits provided by Malin and Bornholt (2013). The long-term contrarian profits in the MSCI indices are large. For instance, the long-term contrarian strategy generates significant annualized risk-adjusted returns of at least 3.4% in the Middle East market indices.

The results also show that the two-factor model cannot capture the long-term contrarian profits in the Middle East market indices. this finding is consistent with result of Malin and Bornholt (2013) that pure contrarian profits cannot be explained by two-factor model. This paper contributes to the current body of scholarly research that the existence of long-term contrarian profits in Middle East market indices should be of interest to professional investors.

References

Arnold, G. C., & Baker, R. D. (2005). Return reversal in UK shares. *Salford Business School Working Paper*.

Ball, R., & Kothari, S. (1989). Nonstationary expected returns:: Implications for tests of market efficiency and serial correlation in returns. *Journal of Financial Economics, 25*(1), 51-74.

Balvers, R., Wu, Y., & Gilliland, E. (2000). Mean reversion across national stock markets and parametric contrarian investment strategies. *The Journal of Finance, 55*(2), 745-772.

Balvers, R. J., & Wu, Y. (2006). Momentum and mean reversion across national equity markets. *Journal of Empirical Finance, 13*(1), 24-48.

Barberis, N., Shleifer, A., & Vishny, R. (1998). A model of investor sentiment. *Journal of Financial Economics, 49*(3), 307-343.

Baytas, A., & Cakici, N. (1999). Do markets overreact: international evidence. *Journal of Banking & Finance, 23*(7), 1121-1144.

Bildik, R., & Gulay, G. (2002). The Winners and Losers Effect: Evidence from the Istanbul Stock Exchange. *Conference Paper at EFMA 2002 London Meetings*.

Brailsford, T. (1992). A Test for the winner and loser anomaly in the Australian market: 1958–87. *Journal of Business Finance & Accounting, 19*(2), 225-241.

Chan, K. (1988). On the contrarian investment strategy. *Journal of Business*, 147-163.

Clare, A., & Thomas, S. (1995). The overreaction hypothesis and the UK stockmarket. *Journal of Business Finance & Accounting, 22*(7), 961-973.

Conrad, J., & Kaul, G. (1993). Long-Term Market Overreaction or Biases in Computed Returns? *The Journal of Finance, 48*(1), 39-63.

Daniel, K., Hirshleifer, D., & Subrahmanyam, A. (1998). Investor psychology and security market under ‐ and overreactions. *The Journal of Finance, 53*(6), 1839-1885.

DeBondt, W. F. M., & Thaler, R. (1985). Does the stock market overreact? *Journal of Finance, 40*(3), 793-805.

DeBondt, W. F. M., & Thaler, R. H. (1987). Further evidence on investor overreaction and stock market seasonality. *Journal of Finance, 42*(3), 557-581.

DeLong, J. B., Shleifer, A., Summers, L. H., & Waldmann, R. J. (1993). Noise trader risk in financial markets. *Journal of Political Economy 98*, 703-738.

Edwards, W. (1968). Conservatism in human information processing. *Formal representation of human judgment (John Wiley and Sons, New York)*, 17-52.

Fama, E. F., & French, K. R. (1996). Multifactor explanations of asset pricing anomalies. *The Journal of Finance, 51*(1), 55-84.

Figelman, I. (2007). Stock return momentum and reversal. *The Journal of Portfolio Management, 34*(1), 51-67.

Forner, C., & Marhuenda, J. (2000). The contrarian strategy in the Spanish stock market. . *EFMA Athens. doi:10.2139/ssrn.251828 Working paper*

Gaunt, C. (2000). Overreaction in the Australian equity market: 1974-1997. *Pacific-Basin Finance Journal, 8*(3-4), 375-398.

George, T. J., & Hwang, C. Y. (2007). Long-Term Return Reversals: Overreaction or Taxes? *The Journal of Finance, 62*(6), 2865-2896.

Griffin, D., & Tversky, A. (1992). The weighing of evidence and the determinants of confidence. *Cognitive Psychology, 24*(3), 411-435.

Grinblatt, M., & Han, B. (2001). The disposition effect and momentum. *Working paper (University of California, Los Angeles,CA)*.

Grinblatt, M., & Moskowitz, T. (2004). Predicting stock price movements from past returns: The role of consistency and tax-loss selling. *Financial Economics 71*(3), 514-579.

Malin, M., & Bornholt, G. (2013). Long-term return reversal: Evidence from international market indices. *Journal of International Financial Markets, Institutions and Money, 25*, 1-17.

Richards, A. J. (1997). Winner-loser reversal in national stock market indices: Can they be explained? *Journal of Finance 52*(5), 2129-2144.

Sehgal, S., & Jain, S. (2011). Long-term prior return patterns in stock and sectoral returns: evidence from India. *Journal of Advances in Management Research, 8*(1), 99-122.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185*(4157), 1124-1131.

Wu, Y., & Li, Y. (2010). Long-term return reversals--Value and growth or tax? UK evidence. *Journal of International Financial Markets, Institutions and Money*, 3478-3368.

Table 1: Summary Statistics of Middle East Stock Index Returns

Country	Mean %	S.D %	Skewness	Kurtosis
Turkey	2.09	16.38	0.81	2.27
Egypt	1.56	9.95	1.00	4.62
Lebanon	1.18	9.24	1.31	5.54
Qatar	0.84	8.74	-0.13	1.66
Israel	0.68	6.91	-0.19	0.87
Kuwait	0.37	7.06	-0.16	0.76
Jordan	0.33	5.21	-0.1	2.05
Oman	0.19	6.17	-1.31	5.01
UAE	0.09	11	0.19	1.4
Sudia Arabia	-0.14	11.46	-0.08	-0.62
Bahrain	-1.33	7.18	-0.61	2.99
AVERAGE	**0.53**	**9.03**		

Table 1 reports descriptive statistics for the return data of the 11 MSCI Middle East market indices. All data are downloaded from their first available months until September 2013, obtained from datastream. Mean indicates to the average monthly returns, S.D. indicates to the standard deviation of monthly returns, Skewness and Kurtosis refers to the measures of normal distribution.

Table 2: Profitability of Long-Term Contrarian Strategy.

		Holding Month				
Strategy	**Portfolio**	**K =1**	**K =3**	**K =6**	**K =9**	**K =12**
36	**LL**	-0.70%	-0.94%	-0.61%	-0.54%	-0.37%
		(-0.94)	(-1.29)	(-0.89)	(-0.83)	(-0.61)
	LW	0.03%	-0.14%	-0.43%	-0.46%	-0.44%
		(0.03)	(-0.15)	(-0.47)	(-0.54)	(-0.54)
	LL-LW	-0.73%	-0.79%	-0.18%	-0.07%	0.07%
		(-0.59)	(-0.7)	(-0.16)	(-0.07)	(0.07)
48	**LL**	1.92%	2.00%	2.23%	2.36%	2.39%
		(3.94)	(4.05)	(4.55)	(4.78)	(4.68)
	LW	-0.79%	-0.95%	-0.83%	-0.65%	-0.30%
		(-0.76)	(-1.02)	(-0.94)	(-0.78)	(-0.38)
	LL-LW	2.71%	2.95%	3.06%	3.02%	2.69%
		(2.52)	(2.98)	(3.26)	(3.39)	(3.16)
60	**LL**	2.32%	2.08%	2.04%	2.02%	2.01%
		(3.94)	(3.58)	(3.62)	(3.87)	(3.82)
	LW	-2.13%	-1.68%	-1.28%	-0.70%	-0.16%
		(-1.66)	(-1.39)	(-1.23)	(-0.74)	(-0.19)
	LL-LW	4.45%	3.76%	3.32%	2.72%	2.17%
		(3.31)	(2.97)	(3.09)	(2.78)	(2.47)

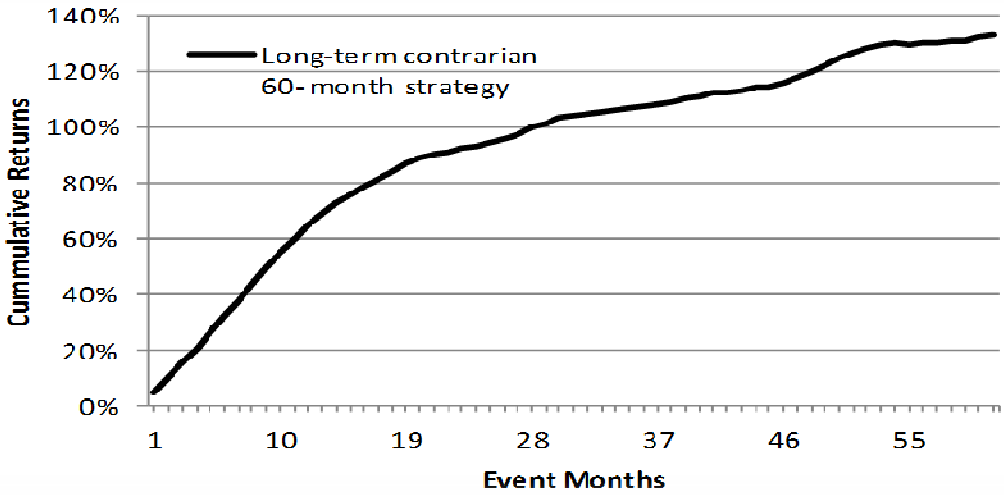
Table 2 provides the average monthly holding period returns of the selling, buying, and arbitrage portfolios of the long-term contrarian strategy for Middle East markets. Portfolios are formed as follows: at the beginning of each month t, Middle East indices are sorted depend on their past J-month formation period returns for J = 36, 48 and 60 months. The long-run loser portfolio (LL) includes the 25 percent of indices that have the lowest returns, while long-run winner portfolio (LW) includes the 25 percent of indices that have the highest returns. The strategy LL-LW is based on buying the long-run loser portfolio and selling the long-run winner portfolio to be held for K = 1, 3, 6, 9, or 12 months. The t-statistics are provided in parentheses.

Table 3: Profitability of Long-Term Contrarian Strategy.

		Annual Event Time Returns				
Strategy	**Portfolio**	**Year1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
36	**LL**	7.25%	13.07%	30.01%	25.36%	21.60%
		(0.95)	(1.46)	(2.11)	(2.3)	(1.93)
	LW	11.98%	17.94%	9.51%	6.84%	11.61%
		(1.47)	(2.05)	(1.15)	(0.82)	(1.59)
	LL-LW	-4.73%	-4.87%	20.50%	18.52%	9.99%
		(-0.55)	(-0.49)	(2.45)	(1.92)	(1.14)
48	**LL**	14.67%	34.23%	33.89%	30.34%	23.09%
		(1.69)	(2.39)	(2.46)	(2.05)	(1.89)
	LW	14.18%	16.29%	9.78%	8.27%	9.02%
		(1.66)	(1.82)	(1.06)	(1.1)	(1.02)
	LL-LW	0.49%	17.93%	24.11%	22.07%	14.07%
		(0.06)	(2.41)	(3.17)	(1.62)	(1.53)
60	**LL**	29.99%	28.75%	31.29%	23.39%	17.94%
		(2.83)	(2.51)	(2.01)	(1.78)	(1.34)
	LW	14.20%	13.97%	9.70%	1.14%	18.21%
		(1.48)	(1.5)	(1.35)	(0.15)	(1.97)
	LL-LW	20.19%	14.95%	20.36%	18.24%	13.44%
		(2.89)	(2.54)	(2.2)	(1.71)	(1.36)

Table 3 provides the average monthly holding period returns of the selling, buying, and arbitrage portfolios of the long-term contrarian strategy for Middle East markets. Portfolios are formed as follows: at the beginning of each month t, Middle East indices are sorted depend on their past J-month formation period returns for J = 36, 48 and 60 months. The long-run loser portfolio (LL) includes the 25 percent of indices that have the lowest returns, while long-run winner portfolio (LW) includes the 25 percent of indices that have the highest returns. The strategy LL-LW is based on buying the long-run loser portfolio and selling the long-run winner portfolio to be held for the first five years (Year 1, Year 2, Year 3, Year 4, or Year 5) following the portfolio formation date. The *t*-statistics are provided in parentheses. The *t*-statistics in the annual event time depends on the Newey-West (1987) adjustment for autocorrelation up to lag 11.

Figure 1: Cumulative Return of Long-Term Strategy



This graph presents the cumulative returns of the long-term contrarian portfolio LL-LW (with J = 60 months) using non-overlapping portfolio (K = 1) for the 60-month following the end of the formation period.

Table 4: Risk adjusted Long-Term Contrarian Middle East Profits

		Two-Factor Model			
Strategy	**Portfolio**	α	β	**V**	AdjR^2
Contrarian	**LL**	0.019	0.367	-0.657	5.4%
		(3.51)	(3.11)	(-2.96)	
	LW	-0.015	0.638	-0.828	3.6%
		(-1.49)	(3.3)	(-1.53)	
	LL-LW	0.034	-0.271	0.172	-0.6%
		(3.16)	(-1.37)	(0.33)	

Table 4 provides the two-factor regression results for the monthly returns of the long-term contrarian portfolios with J = 60 and K = 6. LW refers to the long-run winner's portfolio and LL refers to the long-run loser's portfolio (as explained in Table 2). LL-LW is the arbitrage portfolio. The two-factor regression is as follows:

$$R_{pt} - R_{ft} = \alpha_p + \beta_{p,mkt}(R_{mkt,t} - R_{ft}) + v_{p,vmg}\,\text{VMG}_t + \varepsilon_{pt}$$

Where $R_{pt} - R_{ft}$ is the excess return on the MSCI World Market portfolio and VMG_t is the value growth factor referred by the return on the MSCI World Value Index minus the return on the MSCI World Growth Index.

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
http://www.iiste.org

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: http://www.iiste.org/journals/ All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: http://www.iiste.org/book/

Academic conference: http://www.iiste.org/conference/upcoming-conferences-call-for-paper/

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digtial Library , NewJour, Google Scholar