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An Empirical Evaluation of a 52-Week Momentum Strategy for Forming a Superior Active Portfolio: Evidence from the Iraqi Stock Exchange

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ABSTRACT

The use of technical analysis methods is considered one of the fundamental pillars of trading in financial markets. These methods vary, and their applications differ among traders. Among the well-known techniques is momentum trading, which allows for a clear view of the strength and movement of prices. This, in turn, provides traders with signals to buy or sell stocks. The momentum strategy has proven successful in the markets, especially when analyzing stock performance over a 52-week period. Investors following this strategy build their portfolios by buying high-performing stocks and selling low-performing ones. When a stock or index surpasses its highest level over the past 52 weeks, it is considered a positive indicator for price movement. The objective of this study is to test the feasibility of momentum strategies based on 52-week returns for stocks listed on the Iraq Stock Exchange, aiming to achieve exceptional profits while considering the ability of winning momentum portfolios to overcome transaction costs in the Iraqi stock market .One of the key findings of the study is that momentum portfolios, following the 52-week strategy, generate returns, but these returns are not statistically significant. These returns diminish with the inclusion of transaction costs. Due to the high transaction costs within the Iraqi stock market, the study advises against using the 52-week high strategy due to the lack of profit coverage for transaction costs within the market.

Keywords: Technical Analysis, Momentum, 52-Week High Strategy, Superior Active Portfolio

INTRODUCTION

Investing in momentum is one of the most prevalent investment strategies among professional and private sector investors. The term "momentum" is borrowed from Newton's First Law of Motion, which states, "An object at rest tends to stay at rest, and an object in motion tends to stay in motion unless acted upon by an external force." This concept can be applied to financial markets, where stocks that have recently increased in value are likely to continue rising, while those that have decreased are likely to continue falling in the short term (Zaher, 2019). Momentum is the phenomenon where securities that have performed well compared to their peers ("winners") are expected to continue outperforming, while securities that have relatively weak performance ("losers") are expected to continue underperforming. In other words, stocks exhibiting a strong upward or downward trend tend to persist in that direction in the near future (Israel et al., 2021).

Applying Newton's Second Law, which states, "The acceleration of an object is directly proportional to the net force acting upon it (the stronger the force, the greater the momentum, and thus, movement is generated)," when it comes to stocks, investors and traders exert buying or selling pressure on stock prices by influencing their supply and demand. For example, when positive earnings are announced for a stock, buyers' demand drives the price higher due to their

purchasing power. At the same time, sellers (short sellers) are forced to buy the stocks to cover their short positions. These initial bursts of momentum in the form of buying/selling or imbalance in supply/demand push the price higher or lower in that direction (Rosenbloom, 2011).

Therefore, the 52-week high momentum strategy is a form of momentum strategies. Investors build their portfolios by buying high-performing stocks and selling low-performing ones. When a stock or index surpasses its highest level over the past 52 weeks, it is considered a positive indicator for price movement. The strategy relies on the movement of stocks or the market, anticipating the continuation of that movement. Investors using the momentum strategy buy stocks when prices rise, hoping for the momentum of the upward movement to continue in the future. They sell stocks when momentum weakens or the trend changes (Kurniawan, 2019).

Considering that the 52-week high is a prominent figure representing the highest traded price in the past year, some investors may compare the current stock price with its 52-week high and conclude that reaching the peak level within 52 weeks is a strong sell signal. This belief reinforces the idea that the price may face difficulty in further increase after reaching its highest level in 52 weeks. Sometimes, investors may react irrationally to price increases during the 52-week period due to biases and framing effects. For example, some irrational investors may take a 52-week high as a sell signal without considering that the current price may undervalue the intrinsic value of the stock. On the other hand, rational investors may hold the stock near its 52-week high and achieve good returns from this investment (Gray & Vogel, 2016; Satchell & Grant, 2020).

Interestingly, earnings in the 52-week high momentum technique are independent of the traditional momentum effect. In other words, these two strategies, despite their apparent similarities, seem to emerge from different underlying economic mechanisms. Therefore, in practice, both strategies can be efficiently combined to enhance momentum performance (Zaremba et al., 2018).

In the midst of the multitude of existing stocks, the high levels of return volatility, and the substantial risks faced by financial markets, especially after the global COVID-19 pandemic-induced financial market disruptions, this study aims to examine the feasibility of relying on the 52-week momentum strategy. It seeks to build an active portfolio that outperforms the market, achieving exceptional profits. The study also explores whether transaction costs have an impact on the profitability of the 52-week momentum strategy.

LITERATURE REVIEW

In 2004, George and Hwang published their study titled "52-Week High and Momentum Investing," introducing the 52-week high momentum theory, which was tested in the U.S. market. The paper suggested that the returns for the strategy based on approaching the 52-week high outperform a strategy evaluating the impact of news through returns over a specified time period in the past. The study indicated that the 52-week measure has predictive power, whether individual stocks have exhibited prior returns or not, implying that the price level plays a influential role and aligns with anchoring bias and adjustment. Traders have utilized the 52-week high as a reference point to assess the potential impact of news. Their results also demonstrated that returns from the 52-week strategy dominate those from individual and industry momentum strategies (George & Hwang, 2004).

Following the study conducted by George and Hwang, several studies have emerged regarding the 52-week high strategy. The New York Stock Exchange (NYSE), American Stock Exchange (AMEX), and NASDAQ have shown significantly positive momentum returns for the 52-week strategy, particularly during periods following positive sentiments. Additionally,

it has been documented that substantial profits from the strategy persisted up to five years after portfolio formation (Hao et al., 2018).

In 2013, Bhootra and Hur proposed a new momentum strategy based on timing the highest stock price within 52 weeks. They found that stocks reaching their 52-week high in the recent past significantly outperform those reaching their 52-week high in the distant past. The adjustment to the recent high price within 52 weeks substantially enhances the profitability of the momentum strategy based on the proximity of the current price to the 52-week high (Bhootra & Hur, 2013).

On the international level, Liu et al. (2011) conducted a study across various stock markets, including Austria, Belgium, Denmark, France, Germany, Hong Kong, Italy, Japan, the Netherlands, Norway, Russia, Spain, Sweden, Switzerland, Taiwan, and the United Kingdom. Their findings indicated strong momentum profits for the 52-week high strategy in global stock markets, presenting evidence that the 52-week high strategy is profitable in ten out of sixteen markets in the sample (Abdoun & Hasan, 2023). The profitability of the 52-week high strategy increases after risk adjustments. Moreover, they demonstrated that high momentum returns within 52 weeks do not reflect in the long term (Cavaliere et al., 2021).

Gupta et al. (2010) conducted a comparative performance study of industry momentum and 52-week strategies against traditional strategies using a large sample of stocks from various countries. The results showed a positive return on the industry level within 52 weeks for all countries except Japan and the United States. However, the returns from this strategy were not the most profitable when compared to other available momentum strategies.

Du (2008) also demonstrated, through a study of the 52-week high in international stock indices, that international momentum strategies are profitable even after risk adjustments and transaction costs.

In the Australian, Asian, and emerging markets, Marshall and Cahan (2005) found that George and Hwang's 52-week high strategy outperforms industry momentum strategies in the Australian stock market. A more in-depth study focused on the 52-week high trading strategy in the Australian stock market, specifically examining the impact of liquidity and transaction costs. The study revealed that the 52-week high strategy is limited to highly liquid stocks, producing initial positive returns. However, when applied to illiquid stocks, it results in significant negative returns (Bettman et al., 2010).

Zhou et al. (2022) investigated the 52-week high momentum strategy, considering the state of economic policy uncertainty (EPU) as a robust outlier. No momentum was found in the Chinese stock market using the 52-week strategy, but strong momentum was observed during 52 weeks in periods of declining EPU. In the Taiwan market, the 52-week high strategy yielded modest momentum returns due to significantly large negative returns in January under the study sample (Hao et al., 2016).

In Arab markets, the results regarding the 52-week high price contradicted George and Hwang's empirical findings. For the Saudi Arabian stock market, the results indicated a reversal in stocks reaching their 52-week high (Alsubaie & Najand, 2008). Furthermore, it was evident that the 52-week high strategy is not profitable when applied to Arab market indices, unlike the momentum strategy, which consistently shows higher profits than the 52-week strategy (Gharaibeh & Al-Eitan, 2015).

A study by Chaffai and Medhioub (2020) emphasized the importance of the 52-week high price in the returns of Islamic Gulf stock markets in the Gulf Cooperation Council countries. The study concluded that the 52-week high price can serve as a good anchoring point used to predict future returns based on new information. Analysts in the Gulf Islamic market exhibit anchoring bias and are more pessimistic in their expectations.

DATA AND METHODOLOGY

The current study involved constructing an outperforming active portfolio based on 52-week momentum strategies and monitoring portfolio performance during the COVID-19 pandemic. It aimed to investigate whether transaction costs impact the profitability of the 52-week momentum strategy. Daily closing prices were utilized for the market index and stocks of companies listed on the Iraq Stock Exchange from February 2020 to November 2023. Additionally, the risk-free return rate, represented by the interest rate for Iraqi treasury transfers for the same period, was considered.

The study sample consisted of stocks of companies continuously traded on the Iraq Stock Exchange during the observation period. Newly listed and delisted companies were excluded as they do not represent the entire observation period. The sample comprised 31 companies, as illustrated in Table 1, categorized by sectors. Stock returns were calculated using Equation (1) as follows:

$$R_{i,t} = \text{Ln}\left(\frac{p_{i,t}}{P_{i,t-1}}\right) \quad (1)$$

Where pit: The stock's closing price for the current month;

$Pi, t{-}1$: The stock's closing price for the previous month.

To determine the stocks that are close to their 52-week high price at the end of each month, equation (2) was adopted, as follows:

$$R = \frac{p_{i,t-1}}{high_{i,t-1}} \quad (2)$$

Where $\text{Pi, t} - 1$: The stock′s closing price for the previous month

$high_{i,t-1}$: The highest price in the past 52 weeks.

Table 1: Study sample companies

Company symbol	Company Name	Sector
BBOB	Bank of Baghdad	**Banking sector**
BIBI	Iraqi Investment Bank	
BNOI	National Bank of Iraq	
BROI	Credit Bank of Iraq	
BCOI	Commercial Bank of Iraq	
BGUC	Gulf Commercial Bank	
BIME	Middle East Investment Bank	
BIIB	Iraqi Islamic Bank	
BUND	United Investment Bank	
BMNS	Al-Mansour Investment Bank	
BMFI	Mosul Bank for Development and Investment	
BASH	Ashur International Investment Bank	
BSUC	Sumer Commercial Bank	
IMOS	Modern sewing	**Industry sector**
IIDP	Iraqi Dates Manufacturing and Marketing Company	
IITC	Iraqi Carpets and Furniture	
IKLV	Canadian company for producing veterinary vaccines	
IMAP	Al Mansour Pharmaceutical Industries	
IHLI	Al Hilal Industrial	
HNTI	National Tourism Investments and Projects	
INCP	National Chemical and Plastic Industries	
IRMC	Production of ready-made clothes	
IBSD	Baghdad for soft drinks	

HBAY	Babylon Hotel	
HBAG	Baghdad Hotel	
SMRI	Al Maamoura Real Estate Investments	Services sector
SBPT	Baghdad Iraq Public Transport	
SKTA	Al-Karkh Tourist Games City	
AISP	Iraqi seed production	Agriculture sector
AIPM	Iraqi meat production and marketing company	
TASC	Asia Cell Communications	Telecommunications sector

Source: Iraq Stock Exchange reports

Table 2 elucidated the strategies' ability during the COVID-19 pandemic to generate returns. Out of the six strategies, four demonstrated momentum over the 52-week period before transaction costs. The (J12/K Week) strategy showed the highest return at 0.1194%, but it was not statistically significant. The strategy with the lowest return was (J12/K 6) at 0.0009%, and it was not statistically significant.

To assess economic significance in the context of the 52-week momentum strategy, transaction costs were taken into account during the COVID-19 pandemic. Table 3 reveals that all strategies were unable to cover the costs of market transactions, even during the COVID-19 pandemic, despite the ability of the strategy to achieve returns before transaction costs. This leads us to reject the hypothesis that transaction costs do not impact the profitability of the strategies.

Table 2: Summary of strategy results during COVID-19 before transaction costs

Before the cost	Winning Portfolio	Losing Portfolio	Momentum Portfolio	K Holding Duration
	Winner	Loser	Momentum	
Return. P	-0.0188%	0.0005%	-0.0193%	
Risk. P	0.0242	0.0242	0.0005	12 Month
t-statistic	-1.136	0.066	-1.4	
P-Value	0.282	0.949	0.192	
	Winner	Loser	Momentum	
Return. P	-0.0265%	-0.0065%	-0.0200%	
Risk. P	0.0276	0.0276	0.0006	9 Month
t-statistic	-1.991	-0.707	-1.306	
P-Value	0.068	0.492	0.214	
	Winner	Loser	Momentum	
Return. P	-0.0142%	-0.0151%	0.0009%	
Risk. P	0.0299	0.0298	0.0009	6 Month
t-statistic	-0.693	-1.347	0.04	
P-Value	0.498	0.197	0.968	
	Winner	Loser	Momentum	
Return. P	0.0147%	-0.0186%	0.0333%	
Risk. P	0.0385	0.0384	0.0012	3 Month
t-statistic	0.583	-0.928	1.279	
P-Value	0.567	0.365	0.216	
	Winner	Loser	Momentum	
Return. P	0.0216%	-0.0343%	0.0559%	
Risk. P	0.0368	0.0367	0.0018	Month
t-statistic	0.492	-0.873	1.473	
P-Value	0.628	0.393	0.156	

	Winner	Loser	Momentum	
Return. P	0.0149%	-0.1045%	0.1194%	Week
Risk. P	0.0290	0.0289	0.0085	
t-statistic	0.104	-0.576	0.663	
P-Value	0.918	0.571	0.515	

Table 3: Summary of strategy results during COVID-19 after transaction cost

After the cost	Winning Portfolio	Losing Portfolio	Momentum Portfolio	K Holding Duration
	Winner	Loser	Momentum	
Return. P	-2.0188%	-1.9995%	-4.0184%	12 Month
Risk. P	0.0242	0.0242	0.0005	
t-statistic	-121.736	-279.091	-186.866	
P-Value	<.001	<.001	<.001	
	Winner	Loser	Momentum	
Return. P	-2.0265%	-2.0065%	-4.0329%	9 Month
Risk. P	0.0276	0.0276	0.0006	
t-statistic	-152.443	-219.221	-238.275	
P-Value	<.001	<.001	<.001	
	Winner	Loser	Momentum	
Return. P	-2.0142%	-2.0151%	-4.0293%	6 Month
Risk. P	0.0299	0.0298	0.0009	
t-statistic	-98.386	-180.073	-163.42	
P-Value	<.001	<.001	<.001	
	Winner	Loser	Momentum	
Return. P	-1.9853%	-2.0186%	-4.0038%	3 Month
Risk. P	0.0385	0.0384	0.0012	
t-statistic	-78.52	-100.812	-106.931	
P-Value	<.001	<.001	<.001	
	Winner	Loser	Momentum	
Return. P	-1.9784%	-2.0343%	-4.0127%	Month
Risk. P	0.0368	0.0367	0.0018	
t-statistic	-45.15	-51.766	-54.152	
P-Value	<.001	<.001	<.001	
	Winner	Loser	Momentum	
Return. P	-1.9851%	-2.1045%	-4.0895%	Week
Risk. P	0.0290	0.0289	0.0085	
t-statistic	-13.799	-11.593	-14.95	
P-Value	<.001	<.001	<.001	

Table 4 shows a summary of the results of evaluating portfolios during the COVID-19 pandemic without the transaction cost, as the results show that there is a decline in the performance of portfolios during the COVID-19 pandemic, as (3) strategies out of (6) were able to achieve a superior active return in each of the following: The momentum portfolio and the winning portfolio, where the highest return was within the (J12/KWeek) strategy in the momentum portfolio by (0.00174) and the lowest return was within the (J12/K3) strategy in the winning portfolio by (0.00018). The information ratio (IR) also achieved positive amounts in both the strategy (J12/K3) (J12/K1) (J12/KWeek) indicate that both the winning portfolio and the momentum portfolio exploit the information necessary to achieve an active return that outperforms the index (market) portfolio, as shown in Table 4. After consideration More realistically, the transaction cost was included, as Table 5 shows that (3) strategies also out of (6) in the winning portfolio were able to achieve an active return that exceeds the return of the

market portfolio within the (J12/KWeek) strategy by (0.00070), while it did not achieve Any strategy in the momentum portfolio has an active return that outperforms the market portfolio return during the COVID-19 pandemic.), and the information ratio (IR) was able to achieve a positive value in each of the (J12/K3) (J12/K1) (J12/KWeek) strategies in the winning portfolio, and this is an indication of its exploitation of the available information to achieve an active return that exceeds the index portfolio, while it was not able The momentum portfolio exploits information and therefore does not generate any active return.

Table 4: Summary of portfolio evaluation results during the COVID-19 pandemic without cost

Portfolio	(J1/k)	12 Month	9 Month	6 Month	3 Month	Month	Week
Winner	Sharpe	-0.07430	-0.09643	-0.08504	-0.05853	-0.05958	-0.07518
	Treynor	-0.00151	-0.00559	-0.00533	-0.00450	-0.00171	-0.03543
	alpha	-0.00136	-0.00125	-0.00127	-0.00076	-0.00047	**0.00044**
	IR	-0.55988	-0.48741	-0.26316	**0.36374**	**0.14905**	**0.12094**
	Active R.	-0.00027	-0.00026	-0.00019	**0.00018**	**0.00023**	**0.00070**
Loser	Sharpe	-0.09188	-0.08938	-0.08546	-0.06723	-0.07485	-0.12017
	Treynor	-0.00599	-0.00417	-0.00382	-0.00435	-0.00709	**0.01858**
	alpha	-0.00066	-0.00081	-0.00080	-0.00080	-0.00104	-0.00038
	IR	-0.46519	-0.23625	-0.46303	-0.20222	-0.23104	-0.07963
	Active R.	-0.00008	-0.00006	-0.00020	-0.00015	-0.00032	-0.00050
Momentum	Sharpe	-5.66799	-4.53763	-2.64495	-1.77447	-1.03531	-0.14267
	Treynor	-0.02741	**0.01905**	-0.02525	-0.09083	-0.03386	**0.00802**
	alpha	-0.00237	-0.00293	-0.00249	-0.00201	-0.00171	-0.00165
	IR	-0.64875	-0.28256	-0.04979	**0.27663**	**0.27295**	**0.17205**
	Active R.	-0.00028	-0.00019	-0.00004	**0.00037**	**0.00058**	**0.00174**
Market	Sharpe	-11.93152	-6.47201	-5.09471	-3.60577	-2.53117	-1.08112
	Treynor	-0.00423	-0.00433	-0.00450	-0.00458	-0.00458	-0.00424

Table 5: Summary of the results of the governor's evaluation during the COVID-19 pandemic in the presence of cost

Portfolio	(J1/k)	12 Month	9 Month	6 Month	3 Month	Month	Week
Winner	Sharpe	-0.93475	-0.81999	-0.75326	-0.57756	-0.60235	-0.76670
	Treynor	-0.17286	-0.68795	-0.15226	-0.07511	-0.05496	-0.09233
	alpha	-0.01967	-0.02193	-0.01923	-0.01561	-0.01314	-0.01672
	IR	-0.55988	-0.48741	-0.26316	**0.36374**	**0.14905**	**0.12094**
	Active R.	-0.00027	-0.00026	-0.00019	**0.00018**	**0.00023**	**0.00070**
Loser	Sharpe	-0.92669	-0.81490	-0.75615	-0.58757	-0.61967	-0.81237
	Treynor	-0.06410	-0.04976	-0.17092	-0.05205	-0.05040	-0.07828
	alpha	-0.01460	-0.01235	-0.01960	-0.00733	-0.01263	**0.00343**
	IR	-0.46519	-0.23625	-0.46303	-0.20222	-0.23104	-0.07963
	Active R.	-0.00008	-0.00006	-0.00020	-0.00015	-0.00032	-0.00050
Momentum	Sharpe	-93.07824	-74.57545	-47.22391	-36.43400	-23.91099	-5.12333
	Treynor	-0.36552	-0.28047	-0.33031	-0.16375	-0.15864	-0.21808
	alpha	-0.03998	-0.03932	-0.03980	-0.03662	-0.03652	-0.03874
	IR	-31.9927	-35.5226	-22.7713	-14.8629	-7.4687	-1.9488
	Active R.	-0.02027	-0.02032	-0.02034	-0.02000	-0.02011	-0.02035
Market	Sharpe	-68.3111	-36.3710	-27.7371	-19.3655	-13.5916	-6.1816
	Treynor	-0.0242	-0.0243	-0.0245	-0.0246	-0.0246	-0.0242

CONCLUSIONS

The study examined the effectiveness of strategies during the COVID-19 pandemic in generating returns. Out of six strategies, four demonstrated momentum over the 52 weeks preceding transaction costs. The strategy J12/K Week yielded the highest return, although it was not statistically significant, meaning it did not differ significantly from zero. Results indicated a clear decline in momentum portfolio performance and its components (winning and losing portfolios) during the COVID-19 pandemic and before transaction costs. Three strategies could achieve superior active returns in both the momentum and winning portfolios. The strategy J12/K Week had the highest return in the momentum portfolio, while J12/K3 had the lowest return in the winning portfolio after considering costs.

In the winning portfolio, five strategies achieved superior active returns before the pandemic, with J12/K12 having the highest return. However, only three strategies managed to achieve superior active returns in the winning portfolio during the pandemic. None of the strategies in the momentum portfolio achieved active returns during both periods. The information ratio (IR) without transaction costs was positive for strategies J12/K3, J12/K1, and J12/KWeek in both the winning and momentum portfolios, indicating the effective utilization of information to achieve superior returns compared to the index. When transaction costs were considered, the positive IR was only observed for J12/K3, J12/K1, and J12/KWeek in the winning portfolio, suggesting their effective use of available information to outperform the index. The study recommends that, given the persistently high transaction costs, investors should avoid adopting a 52-week momentum strategy in the Iraqi stock market due to its inability to cover transaction costs effectively.

Additionally, portfolio managers and investors seeking high-performance stocks and building active portfolios are advised to use a technical approach and rely on the high-price strategy over 52 weeks when trading in global financial markets. This recommendation is based on the superior performance of this strategy in exploiting opportunities, particularly with the increasing momentum in global markets, providing opportunities for substantial profits.

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