Investment style of Jordanian mutual funds

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Abstract

The study investigates the mutual funds investment style in the Jordanian context. It uses monthly returns of five mutual funds from July 2000 to December 2009. To do so, it employs the 4-factors model with explanatory variables the market portfolio return, a small minus large capitalization indicator variable, a high minus low book-to-market indicator variable, and a variable that account for momentum effect. These factors are used as benchmarks to investigate the investment style. The results indicate that mutual funds returns tend to follow those of the market portfolio. In terms of investment style, mutual funds managers tend to favor small capitalization stocks, past winners stocks, and low book-to-market ratio stocks, respectively.

Keywords: Mutual funds, 4-factors Model, Investment Style, Market portfolio, Size, Book-to-Market, Momentum

JEL Classification: C33, G11, G23

1. Introduction

The last decades have witnessed tremendous growth of the mutual funds industry regarding to their basic investment roles in pooling money from different investors and invest them in financial securities. The explosion of assets under management by mutual funds has intensified the focus on their investment strategies. The fund's managers state the fund's investment strategies by following certain investment styles systematically. These styles help managers to select rewarded securities that deliver a positive risk-adjusted fund's performance. Carhart (1997) revealed that high ranked mutual funds tend to hold more small stocks than low ranked funds. The high ranked funds' returns are strongly

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positively correlated with the one-year momentum factor, while the low ranked funds' returns are strongly negatively correlated with the momentum factor. Chan, Chen & Lakomishoks (2002) found that most of the mutual funds adopt styles that bunch around an overall market index. In aggregate, they have concluded that funds tend to invest in small stocks, stocks with low book-to-market ratio (BMR), and past winners stocks. In addition, they have indicated that managers who hold growth stocks do better than the managers that hold value stocks on style-adjusted basis. Contrary, Zhangpeng, & Rahman (2005) found that Chinese funds strongly invest in large-cap stocks and slightly prefer growth (low BMR) stocks. On the other hand, Stotz (2007) found that Germany's funds invest in small stocks and stocks with low BMR, while they do not adopt the momentum as investment style. In addition, he has indicated that the investment style of a fund influence its performance, where funds' managers who primarily invest in small-cap growth stocks with high momentum are able to achieve a positive risk-adjusted performance. Generally, most studies focused on size, BMR, and past stock return (momentum) to analyze the funds' equity investment styles.

In the Jordanian context, the appearance of mutual funds goes back to the law of the securities commission in 1997 that restructured the Jordanian financial market and authorized the establishment of mutual funds. Thus, the first mutual fund was established in 2000. In 2003 many amendments were included to organize and restrict the mutual funds' activities.

In 2005, benefitting from the economic growth, reflected in 92.9% growth in the ASE's general index, the total assets of Jordanian mutual funds reached 100 million JD and achieved 28 million JD as profit, which represented 28% of their assets.

Building on the aforementioned, the study seeks to determine the investment style of mutual funds in Jordan from July 2000 to December 2009.

The mutual funds industry in Arab market received less attention in terms of academic studies. Therefore, this study is one of the first comprehensive empirical studies that investigate the investment style of mutual funds in Jordan. It represents a guide for foreign investors to discover this field of investment and understand the investment strategies of the mutual funds in the Jordanian market.

The study also helps investors to rationalize their investment decisions before pouring their money in these funds through the analysis of the funds' investment abilities to select premium stocks.

The paper is structured as follows: the following section defines the concept of investment style and describes the 4-factors model of Carhart (1997). It also exhibits the evolution of the Jordanian stock market and mutual fund market. The third section discusses the variables of the study. The fourth section describes the study's data and methodology, which includes the funds profile, data source, period of the study, and the data treatment. The fifth section reports the descriptive statistics of the variables, Unit root and Granger-Causality tests, and the investment style results. The last section presents the conclusion.

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2.   Investment style analysis

Investment style is any set of characteristics that comprises a large part of an investment discipline. Investors can devise disparate investment styles using a multitude of stocks characteristics in many different ways (Hu, 2005).

Style analysis is a powerful technique that was developed by Sharpe (1992) for determining the exposure of a fund's portfolio to various assets classes that are included in the portfolio. It helps analyst to obtain a clear idea of the fund portfolio components.

Regarding a strong relationship between investment style and fund performance, the fund's portfolio should be compared to appropriate benchmark portfolios that reflect the fund's investment style to enable the analyst to distinguish between the skills of fund's manager from the investment style. This is especially when a fund manager has no control over style selection.

Chan, et al. (2002) cited that, rather than analyzing individual portfolio holdings, the style analysis allows to analyze the fund's return by looking how the fund's historical returns are related to various benchmarks, because if a fund's manager follows a certain style, the fund's return should track its style-specific benchmark.

For example, a fund's managers who invested primarily in small-cap stocks and growth stocks would be said that they follow a small-cap growth investment style, while Large-cap value style is the style of managers that invest in large-cap and value stocks.

Generally, the studies (e.g. Davis, 2001; Chan et al., 2002; Hu, 2005; Stotz, 2007) consider that the factors: market portfolio, size, BMR, and momentum are appropriate benchmarks to analyze the investment styles of the mutual funds.

Fama & French (1993) used firm characteristics such as size and BMR in addition to the market index to explain the cross-section of stock returns. They conducted several tests and concluded that the three-factor risk-return model captures the cross-sectional variation in average stock returns better than the market index.

Carhart (1997) extended the Fama & French 3 factors-model by including a fourth common factor that captures the tendency for stocks with positive (negative) past returns to produce positive (negative) future returns. This factor is known momentum (MOM). Formally, he has proposed the model as follows:

$$R_t - R_{f,t} = \beta_0 + \beta_1 (R_{m,t} - R_{f,t}) + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 MOM_t + \varepsilon_t \qquad (1)$$

where

$R_t - R_{f,t}$: excess return of mutual fund

$R_{m,t} - R_f$: excess return of market portfolio

SMB_t: size factor.

HML_t: book-to-market ratio factor.

MOM_t: momentum factor.

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Hu (2005) found that these factors: market, size, BMR, and momentum explain strongly the cross-sectional stocks return in international context and in different periods, while Stotz (2007) mentioned that these four benchmarks have two advantages:

a) The model overcomes the problem of benchmarks bias because the power to explain the fund's return is higher than Fama & French 3-factors model.

b) The model permits to identify the investments style of the mutual funds. Positive significant β_2, β_3 and/or β_4 indicate that the manager follows small, value and/or winner stocks style, while negative significant β_2, β_3 and/or β_4 indicate that manager pursues large, growth and/or loser stocks style.

The Jordanian stock market is one of the oldest stock exchanges in the region. In 1978, Amman Financial Market (AFM) was established, making the first organized and official Jordanian stock exchange. In 1999, a series of reforms, adopted by the government that aimed at amplifying the role of the private sector in the Jordanian economy, gave birth to three institutions that collectively form Jordanian capital market: Amman Stock Exchange (ASE), Securities Depository Center (SDC), and Jordan Securities Commission (JSC).

Bolstered by a strong and liberal regulatory framework, the 1999 reforms, for the first time, brought the laws and instructions related to investment companies. Just after, in 2000, the first Jordanian mutual fund was established. In 2003, some amendments were included to restrict and organize mutual funds activities. In 2009, the Jordanian mutual funds have reached five funds, which reveals that mutual funds in Jordan are still in the infancy stage.

ASE realized enticing performance comparing to the markets of the region. During the period of 2003-2006, the average growth rate of ASE general index was estimated at 42%, exceeding the markets of regions of Middle East and North Africa that realized average growth rates 36% and 37%, respectively. In 2007, ASE realized 36.3% of average growth rate while the average growth rate of Arabian markets reached 38.3%.

There are encouraging indicators that make investors optimistic about future financial investment in the Jordanian market. The number of listed companies jumped from 163 in 2000 to 262 in 2008 and the market capitalization has moved from 3509.64 JD million in 2000 to 25,406.3 JD million in 2008. The general index grew by 261% during 2001-2008. It was at 1727.0 point in 2001 and reached 6243.1 point in 2008 (ASE, 2009).

The main characteristic of ASE, which may interests the mutual funds, is the dominance of the financial sector on the market capitalization, representing the biggest parts of the market's capitalization with 61.0% in 2008. In addition, in 2008, foreign investors have possessed 49.2% of all the market capitalization, which indicates that Jordanian market provides appropriate investment climate for local and foreign mutual funds.

3.   The study variables

After discussing the study's model, we define the variables of the study.

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1 - Excess Fund's Return: is the excess fund's return from the risk-free rate of return. The fund's return is calculated as the rate of return between the actual and previous fund's Net Asset Value (NAV). NAV changes according to the change of the securities' income and the average price (capital gain) of the securities that are included in the fund's portfolio.

2 - Excess Market's Portfolio Return: is the excess market's portfolio return from the risk-free rate of return. The market portfolio is usually approximated by a value weighted general market index. The market's return is calculated as the rate of return between the actual and previous closed price of the market index. The previous studies revealed that the market's returns have statistically significant effect on the mutual funds returns because the market portfolio's stocks considerably compose the fund's portfolio. For example, Low (2007) and Stotz (2007) found that the market's returns have a positive effect on the funds' returns.

3 - SMB: (Small Minus Big) is a proxy to mimic the risk factor of stocks returns that relates to the firm size. The size is measured by market capitalization. SMB has been formulated as Fama & French (1993) methodology, which is the difference in the returns of portfolios that consists small capitalization stocks and large capitalization stocks, respectively.

Banz (1981) was among the first researchers who investigated the effect of size, measured by market capitalization, on risk-adjusted returns. Banz (1981) found that the size not only adds to the explanation of the risk-adjusted stocks return but there is a significant negative relationship between the firm's capitalization and stocks return. Fama & French (1993) found that SMB has a positive effect on the portfolio return. The same result was found by Carhart (1997) and Chan et al. (2002), which means that mutual fund's managers prefer stocks of small firms over the stocks of big firms.

4 - HML: (High Minus Low) is a proxy to mimic the risk factor of stocks returns related to BMR (value/growth stocks). HML was formulated as Fama & French (1993) methodology, which is the difference in returns of portfolios that consists of high BMR (value) stocks and low BMR (growth) stocks, respectively.

Stattman (1980) was among the first researchers who documented the premium attached to value stocks. He found a significant positive relationship between current value of BMR and future stock returns indicating that stocks with high BMR (value stocks) realize higher returns than stocks with low BMR (growth stocks). In Amman Stock Exchange Saleh & Bitar (2009) affirmed that size and BMR effects explain most of the variation in stocks returns, where the CAPM fails to give powerful explanation. Other studies such as Chan et al. (2002), Zhangpeng & Rahman (2005) and Stotz (2007) found that the BMR factor has a negative effect on the funds' returns, which implies that the funds' managers prefer the stocks with low BMR (growth stocks).

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5 - MOM: momentum means that in the short and intermediary term, stocks prices continue to change in the same direction. Therefore, the stocks that have recently performed relatively well go on to deliver higher returns in the near future, and the stocks that have recently performed relatively bad continue to perform badly in the near future (Bulkley & Nawosah, 2009). MOM was calculated as Carhart (1997) methodology. It is measured as the difference in the returns of portfolios that contains stocks with high returns over the prior year (winners) and stocks with low returns over the prior year (loses).

Jedgadeesh & Titman (1993) were the first who observed that over an intermediate horizon of twelve months, past winner's stocks on average continue to outperform past loser's stocks. After that, Carhart (1997) demonstrated that past returns can be used to predict future returns and labeled this behavior as Momentum effect.

The studies like those of Carhart (1997), Daniel, Grinblatt, Titman, & Wermers (1997) and Eser (2007) found that momentum has a positive effect on the funds' returns, which means that the funds' managers select the winners stocks and neglect the losers stocks.

4. Data and Methodology

The study investigates the investment style of all mutual funds that are registered by JSC, which are five mutual funds, from July 2000 to December 2009. The information on mutual funds in Jordan is very limited because this industry is not yet developed. The study has relied on different sources to provide general view about these funds as Table 1 reveals.

The funds should have regular monthly NAVs observations from their inception date, and each fund should have at least 30 months of observations.

The study uses the mutual funds monthly NAVs that are collected from the funds' reports to estimate the monthly funds' returns. The study investigates the investment style for each fund separately and then investigates them as a group by using the panel regression approach that blends the characteristics of both cross-sectional and time series data. Based on this approach the model of the study becomes as follows:

$$R_{i,t} - R_{f,t} = \beta_0 + \beta_1 (R_{m,t} - R_{f,t}) + \beta_2 SMB_t + \beta_3 HML_t + \beta_4 MOM_t + \varepsilon_{i,t} \qquad (2)$$

where

i = Number of mutual funds.

t = Fund's monthly return over time.

The study uses the Value Weighted General Index (VWGI) of Amman Stock Exchange (ASE) as proxy for market portfolio, whereby the monthly closing prices of VWGI are used to calculate the monthly returns of the market portfolio. The monthly returns of 3-months treasury bills are used as risk-free rate return to calculate the excess funds returns and the excess market returns.

To formulate the SMB, HML, and MOM variables, the study uses the monthly closing price of the stocks of companies that formulate VWGI of ASE. The SMB and HML

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Table 1: Mutual funds profile

	Jordan Securities Fund(JSF)	First Trust Fund(FTF)	Horizon Fund (HF)	Growth Fund (GF)	Global Jordan Fund (GJF)
Administrator	Housing Bank for Trade & Finance	Arab Banking Corporation/Jordan	Capital Bank of Jordan.	Arab Jordan Investment Bank.	Gulf Clearing Company
Description	Open-end, Asset Allocation fund invests in diversified portfolio; listed companies, T-bills, Corp bonds, CDs and other mutual funds.	Open-end balanced fund invests in a balanced portfolio of listed equities, corporate fixed income securities, and money market instruments.	Open-end balanced fund invests in T-bills, company bonds, equities and other mutual funds.	Open-end fund.	Open-ended equity fund, invest at least 60% in listed equities, may invest in fixed income, money market instruments
Objective	Achieving a medium to long term capital appreciation in the NAV.	Achieving medium to long-term capital appreciation in NAV.	Achieving long term capital appreciation of NAV.	Preservation of capital with the above average returns compared to deposits.	Achieving capital appreciation with optimum returns, within controlled levels of risk, over the medium to long term.
Currency	Jordanian Dinar	Jordanian Dinar	Jordanian Dinar	US Dollar	US Dollar
Inception date	October 2001	June 2000	Mars 2005	February 2001	May 2007
Minimum Investment	JD 500	JD 1000	JD 1000	USD 50,000	USD 50,000
Total Assets in 2005	JD 77,726,859	JD 9,983,538	JD 10,352,476	JD 1,364,886	N.A

Source: Developed by Hacini. I (2010) from the mutual funds' reports.

are constructed according to Fama & French (1993) methodology. The companies sample are sorted from big to small companies based on their market capitalization at the end of each month, beginning from July 2000 to December 2009. The companies are divided to five equal groups; each group contains 20% of the sample [1].

The study formulates two portfolios; small portfolio and big portfolio. The small portfolio contains stocks of companies group with lowest market capitalization, and big portfolio contains stocks of companies group with largest market capitalization. The weighted monthly returns of small and big portfolios are calculated, where the weight of each stock in small and big portfolios is proportional to their market capitalization. The weighted returns of small and big portfolios are calculated according to the following formula:

$$PR_{S/B} = \sum_{i=1}^{n} SRi * Wi \qquad (3)$$

Where $PR_{S/B}$ is the weighted returns of small and big portfolios, SR is the stock's return, and W is the stock's weight in the portfolio. SMB is small portfolio's return minus big portfolio's return. The sorting procedure to obtain the small and big portfolios is repeated at the end of each month. As a result, monthly time series of returns of the SMB are obtained.

Similarly, to formulate HML, The companies sample of VWGI are sorted from high to low based on their BMR at the end of each month, beginning from July 2000 to December 2009. Companies are divided to five equal groups; each group contains 20% of the sample. The study formulates two portfolios; value portfolio and growth portfolio, where the value portfolio contains stocks of companies group with highest BMR, and growth portfolio contains stocks of companies group with lowest BMR. The returns of the value and growth portfolios are calculated, which equal the average returns of the portfolios' stocks. HML is value portfolio's return minus growth portfolio's return.

The sorting procedure is repeated at the end of each month to obtain the returns of value and growth portfolios. As a result, a monthly time series of the returns of the HML are obtained.

MOM is formulated according to Carhart (1997) methodology. The companies sample of VWGI are sorted from high to low based on the average returns of their stocks over last 12 months at the end of each month, beginning from July 2000 to December 2009. The ranked companies are divided to five equal groups; each group contains 20% of the sample.

Two portfolios are formulated; winner portfolio contains stocks of companies with highest average stocks' returns over last 12 months, and loser portfolio contains stocks of companies with lowest average stocks' returns over last 12 months. MOM is winner portfolio's return minus loser portfolio's return.

The sorting procedure is repeated at the end of each month to obtain the returns of winner and loser portfolios, providing a monthly time series of returns of MOM.

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[1] The VWGI sample began with 38 companies to reach 60 companies in 1994 and 70 companies in 2001 and finally 100 companies in 2007. Therefore, 20% of the sample represents 12 companies in 2000, 14 companies in 2001, and 20 companies in 2007.

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5. Empirical results

5.1 Descriptive statistics

Descriptive statistics of the variables during the study period are presented in the Table 2:

Table 2: Descriptive statistics of the variables

	$R - R_f$	$R_m - R_f$	SMB	HML	MOM
Mean	0.0025	0.0087	-0.0171	-0.0465	-0.0018
Median	0.0030	0.0010	-0.0134	-0.0401	-0.0062
Maximum	0.1330	0.2326	0.2650	0.0985	0.1256
Minimum	-0.2284	-0.2185	-0.2314	-0.4349	-0.1726
Std. Dev	0.0390	0.0707	0.0835	0.0728	0.0599
Skewness	-1.0526	0.1215	0.3762	-1.6012	-0.1847
Kurtosis	9.8822	4.2829	4.1948	9.6871	2.9183

$R - R_f$: excess return of mutual funds. $R_m - R_f$: excess return of market portfolio (VWI general index). **SMB**, **HML**, and **MOM** are factors that mimic the size, BMR, and one-year return momentum, respectively.

The mutual funds exhibit a positive average excess return $R - R_f$ 0.25%, but it is less than the market $R_m - R_f$ average excess return 0.87%, this confirms that the market outperforms the mutual funds on the raw return basis. Consequently, the funds risk (standard deviation) is less than the market risk. $R - R_f$ exhibits a negative skewness -1.05, which indicates that most of the funds excess returns, during the study period, were negative. In addition, $R - R_f$ are characterized by excess kurtosis 9.86. $R_m - R_f$ is characterized by a positive skewness 0.12, and excess kurtosis 4.28. Generally, these features are common characteristics of the emerging markets. Figure A1 in Appendix exhibits the variation of $R_m - R_f$, SMB, HML, and MOM over the period of the study.

5.2 Unit root test

To test the stationarity of the study variables the study uses three methods; Levin, Lin & Chu, and Im, Pesaran & Shin tests for panel data sets ($R_{i,t} - R_{f,t}$), and Augmented-Duckey-Fuller for single series ($R_{m,t} - R_{f,t}$, SMB_t, HML_t, MOM_t).

Table 3 reports the results of the Unit root test. The results show that all the variables reject the null hypothesis of the existence of Unit root (non-stationarity) at 1% level, which indicates that all variables are stationary at the level during the study period. These results suggest that the returns series display a degree of time dependency[2].

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[2] Time series ($R - R_f$, $R_m - R_f$, SMB, HML, and MOM), which are return series in nature, have a constant mean, constant variance, and constant autocovariances over time.

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Table 3: Unit root test results

Variable	Method	DW	T-Statistic	Probability
$R - R_f$	Levin, Lin & Chu (Common Unit root)	-	-8.51	0.000***
	Im, Pesaran & Shin (Individual Unit root)	-	-8.15	0.000***
$R_m - R_f$	Augmented-Duckey-Fuller (level)	2.09	-7.79	0.000***
SMB	Augmented-Duckey-Fuller (level)	1.93	-8.00	0.000***
HML	Augmented-Duckey-Fuller (level)	1.95	-9.34	0.000***
MOM	Augmented-Duckey-Fuller (level)	2.00	-9.79	0.000***

$R - R_f$**:** excess return of mutual funds (panel data). $R_m - R_f$: excess return of market portfolio (VWI general index). **SMB**, **HML**, and **MOM** are factors that mimic the size, BMR, and one-year return momentum, respectively.

*** Significant at 1% level.

5.3   Granger-Causality test

The study uses the Granger causality test to support the choice of the variables. Granger (1969) revealed that causality is inferred when past values of X can determine the current values of Y. Therefore, if the changes in X precede the changes in Y and the future value of Y can be predicted better by past values of X with a smaller forecast error variance, it could be said that X Granger causes Y. The results are reported in Table 4.

Table 4: Granger Causality test results

Null Hypothesis : H_0	F-statistic	Probability
$R_m - R_f$ does not Granger cause $R - R_f$	2.6167	0.0084***
SMB does not Granger cause $R - R_f$	3.7938	0.0002***
HML does not Granger cause $R - R_f$	5.0976	0.0000***
MOM does not Granger cause $R - R_f$	5.5885	0.0000***

$R - R_f$**:** excess return of mutual funds (panel data). $R_m - R_f$**:** excess return of market portfolio (VWI general index). **SMB**, **HML**, and **MOM** are factors that mimic the size, BMR, and one-year return momentum, respectively.

*** Significant at 1% level.

The results show that all the independent variables R_m - R_f, SMB, HML, and MOM Granger-Cause the dependent variable R - R_f at 1% level. This suggests that the future fluctuations of excess mutual funds returns R - R_f can be determined and predicted to some extent by using a part of the information provided by R_m - R_f, SMB, HML, and MOM. Therefore, these results demonstrate the validity of the model to investigate investment style of Jordanian mutual funds.

5.4 The investment style results

Specifically, to get efficient estimation concerning the investment abilities, the model should be free from Heteroscedasticity, as Lee & Rahman (1990) showed that the test of investment abilities of funds that ignores the Heteroscedasticity lead to biased conclusion. Therefore, the reported results are adjusted, by White's procedures, to avoid the Heteroscedasticity problem for both single and panel estimations.

5.4.1 Single mutual funds

The results of investment style for each single fund are reported in Table 5.

Table 5: Investment style for each fund

	JSF	FTF	HF	GF	GJF
α	0.001	0.001	-0.006	-0.001	-0.001
R_m - R_f	0.592***	0.275***	0.481***	0.408***	0.800***
SMB	0.168***	0.063***	0.157***	-0.002	0.251***
HML	-0.073	-0.023	-0.075	0.011	0.042
MOM	0.034	0.098***	0.009	0.066*	0.117*
Adj-R²	0.79	0.62	0.65	0.53	0.83

*** Significant at 1% level.
*   Significant at 10% level

The results reveal that market return has a positive effect on all mutual funds that is statistically significant at 1% level, which indicates that the funds' managers follow the movements of the market and remain close to the market portfolio return to reduce their investment risks. SMB has a positive effect on four mutual funds, which indicates that most funds prefer to hold small stocks in their portfolios except one fund GF prefers big stocks but it is statistically insignificant. This result is supported by Eser (2007), who found that the highest ranked mutual funds on average hold smaller stocks.

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HML is statistically insignificant in all funds. Some funds JSF, FTF, and HF tilt to invest in growth stocks. Saleh & Bitar (2009) have proved that growth stocks outperform the value stocks in Jordanian market. The rest of funds GF and GJF prefer value stocks over growth stocks.

Finally, MOM has a positive effect on all mutual funds. It is statistically significant just on three funds FTF, GF, and GJF. Therefore, all funds favor winner's stocks that have performed well in the prior year. Chan et al. (2002), Carhart (1997) and Daniel et al. (1997) have also confirmed that past price trend of stocks is used by funds managers as a basis to select stocks.

5.4.2 Mutual funds as group

The study also uses the panel regression approach to confirm the results for investment style obtained from the analysis of each single fund. The results are reported in Table 6.

Table 6: Investment style of funds as group

R-squared : 0.6406 Adj R-squared : 0.6370		F-statistic: 176.95 Probability : 0.000***		DW: 1.693 N. Obs: 402
Variable	**Coefficient**	**Std-Error**	**T-Statistic**	**Probability**
α	-0.0011	0.0012	-0.9145	0.3610
R_m - R_f	0.4714	0.0679	6.9437	0.0000 ***
SMB	0.1050	0.0358	2.9318	0.0036***
HML	-0.0290	0.0175	-1.6567	0.0984*
MOM	0.0581	0.0138	4.2108	0.0000***

*** Significant at the 1% level.

*   Significant at the 10% level.

The results show that R_m - R_f, SMB and MOM have positive effects that are statistically significant at 1% level, while HML has a negative effect that is statistically significant at 10%. The adjusted R^2 is 0.6406, which means that 64.06% of variation in R - R_f is accounted by R_m - R_f, SMB, HML, and MOM. While F-statistic reveals that, the estimated regression is statistically significant at 1% level.

Generally, as investment style, the mutual funds' managers in Jordan primarily follow the market portfolio with a coefficient (β_1) equals 0.4. Secondly, when they deviate from the market portfolio, they favor the small stocks with a coefficient (β_2) equals 0.1, then winner's stocks with a coefficient (β_4) equals 0.06, and lastly growth stocks with a coefficient (β_3) equals 0.029. This strategy consists with the investment conventional wisdoms that mutual funds pick smaller and winners stocks with lower BMR.

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6.   Conclusion

It is clear that mutual funds' managers in Jordan have a conservative investment strategy; therefore, they track the market portfolio as the primary investment style. This strategy is explained by the infancy of this industry in Jordan, where the funds' managers do not bear high risks and ensure rewarding returns to attract risk aversion investors. Furthermore, the funds' managers in Jordan adopt other stocks' characteristics to diversify the fund's portfolio and realize abnormal returns. To do so, they select small, growth, and past winners stocks.

The mutual funds managers prefer small stocks because they are less informationally efficient and are not widely followed by investors, this makes these stocks less efficiently priced in the market. Therefore, the funds' managers exploit these opportunities by investing in these stocks to realize abnormal returns. The priority of growth stocks is explained by low liquidity risk and earning stability associated with this kind of stocks. The funds' managers invest in past winners stocks based on their belief that these stocks keep their increasing trend over the short and intermediate horizon.

The study recommends that the fund managers should reassess the investment styles and maintain comfortable liquidity to adopt the rewarding investment styles in the right time to diversify the fund's portfolio and improve its returns.

Mutual funds, those limited to market portfolio as investment style, should expand their investment style to include the size, BMR, and momentum to diversify their portfolios and benefit from the premiums of these stocks.

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Appendix

Figure A1: The variation of R_m - R_f, SMB, HML and MOM
from July 2000 to December 2009