EGYPTIAN MUTUAL FUNDS ANALYSIS: HISTORY, PERFORMANCE, OBJECTIVES, RISK AND RETURN

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Abstract

The present research aims to overview the mutual fund in Egypt. The establishment of the first mutual funds was achieved in 1994. Nowadays, the total mutual funds reached 90 funds , approximately. The income funds represent the largest share of the Egyptian mutual funds (40%), growth funds (25%) and the private equity funds is at least (1%). The total population of the Egyptian mutual funds reached 22. Finally, the study proved that the Egyptian mutual funds have an impact on fund return , total risk and systemic; when analysis relationship between risk and return. The study found influencing for mutual fund's objectives on Sharpe and Terynor ratios.

Key words: *mutual funds, mutual funds classification, performance of mutual funds, Egypt, Egyptian mutual funds*

INTRODUCTION

Most of the researches in finance examine fund performance issues, broadly addressing the question: Do mutual funds "beat the market"? More recently, there has been a growing stream of research on institutional and structural aspects of mutual fund services and providers (Sirri and Tufano, 1998).
However, in this study , the researcher analyzed return and risk of mutual funds.
The main objective of the research is to analyze the relationship between risk and return of Egyptian mutual funds, and analyze the impact of mutual funds and their objectives on this relationship.
Mutual fund: An investment company that pools money from shareholders and invests in a variety of securities, including stocks, bonds, and money market securities. A mutual fund ordinarily stands ready to buy back (redeem) its shares at their current net asset value, which depends on the market value of the fund's portfolio of securities at the time. Mutual funds generally continuously offer new shares to investors (Reilly and Brown 2003).

Mutual funds history

Historians are uncertain of the origins of investment funds; some cite the closed-end investment companies launched in the Netherlands in 1822 by King William 1st of the Netherlands. He was credited with starting such a fund in 1822 and yet some even say that the King got the idea from a Dutch merchant named Adriaan van Ketwich whose investment trust was created in 1774. Similar pooled fund investment vehicles were started in Switzerland in mid-1849, followed by Scotland in the 1880s.(Citation needed)?
The first modern mutual fund came up in the US in 1924 and there were more than 700 funds that existed in the US just before the Great Depression (Kale and Panchapagesan 2012). Nowadays, many mutual funds are established in the United States, Europe and many emerging markets in Asia, Africa and South America.(Citation needed)?
In Egypt, the establishment of the first mutual fund was achieved in the last decade of the past century.

Mutual fund classification

Mutual fund classification criteria are the factors used to categorize mutual fund. There

are many criteria that are commonly used to classify the various types of mutual portfolios by what is generally referred to as type or category. These include six types:

a.Trading shares (Closed - end fund and open-end fund)

b. Components (Stock funds , bond funds and money market funds)

c. Style (objectives) (see that later)

d.Capitalization (size)(large-cap, mid-cap and micro-cap).

e. Sector or industry

f. Geographic coverage (local, international and emerging market)

Objectives of mutual fund

A mutual fund has many objectives which include:

a.Growth funds seek high rates of return from capital gains where they undertake significant risks in order to earn these gain

b.Income funds seek both cash dividend income and, capital gains and, as a result, are less risky than growth funds.

c.Income and growth funds want to earn primarily cash dividends and, to a lesser extent, capital gains

d.Balanced funds claim to be in pursuit of income, growth and stability.

Risk of mutual fund

The sources of mutual fund risk are:

a.Business risk; b.Financial risk; c.Liquidity risk; c.Exchange rate risk; d.Country risk.

However, a mutual fund has two types of risks:

a.Systemic risk: The variability of returns that is due to macroeconomic factors that affect all risky assets. Because it affects all risky assets, it cannot be eliminated by diversification (Reilly and Brown, 2003).

b. Unsystematic risk: Risk that is unique to an asset, derived from its particular characteristics. It can be eliminated in a diversified portfolio (Reilly and Brown, 2003).

Risk management of mutual fund

Diversification is one of two general techniques for reducing fund risk. The other is hedging.

Diversification relies on the lack of a tight positive relationship among the assets, returns, and works even when correlations are

near zero or somewhat positive. Hedging relies on negative correlation among assets, or shorting assets with positive correlation.

A hedge is an investment position intended to offset potential losses that may be incurred by a companion investment. A hedge can be constructed from many types of financial instruments, including forward contracts, swaps, options and insurance.
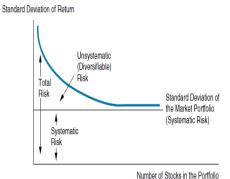

Fig.1.Risk of mutual fund.

Performance measures of mutual fund

Evaluating the performance of mutual funds in general, mainly related to the determination of the success of the portfolio manager to achieve balance between the different rates of return and acceptable levels of risk.

Thus, evaluating the performance of mutual funds does not mean only measure return on these funds, but also means measuring the levels of risk associated with those returns during a certain time.

There are many methodologies to measure the performance of mutual funds[1], Since 1965 Treynor, Sharpe were the first researchers whom evaluate fund performance (Treynor, 1965 and Sharpe, 1966).

Treynor ratio:

Treynor (1965) developed a method for measuring performance[2] and evaluating the fund by using Treynor's ratio. This ratio estimates return generated by the fund over and above risk free rate of return (generally taken to be the return on securities backed by the government, as there is no credit risk associated), during a given period and systematic risk associated with it (Beta). The equation form is shown as follows:

$$TR = (R_P - R_F) / \beta_P \dots\dots\dots\dots 1$$

where: TR- Treynor ratio, R_P -Average fund return, R_F-Average risk free rate (3-month T-Bill) and β_P - Beta of the fund.

Sharpe ratio:

In this ratio, performance of a fund is evaluated on the basis of Sharpe ratio, which is a ratio of returns generated by the portfolio over and above risk free rate of return and the total risk associated with it. According to Sharpe(1966), it is the total risk of the portfolio that the investors are concerned about.

So, the model evaluates portfolios on the basis of reward per unit of total risk, as shown in equation 2:

$$SR= (R_P - R_F) / \sigma_P \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 2$$

where: SR- Sharpe ratio, R_P - Average fund return, RF-Average risk free rate (3-month T-Bill) and σ_P-Standard deviation of returns of the fund.

MATERIALS AND METHODS

The authors used the survey method to describe and analyze the relationship between risk and return of Egyptian mutual funds.

The authors collected data from the Egyptian Stock Exchange, The Egyptian Investment Management Association (EIMA) and Central Bank of Egypt.

RESULTS AND DISCUSSIONS

The Egyptian Funds

In 1994, the first Egyptian mutual funds were established in industry field and in 2012, 7 mutual funds were established. During the period of 1994 till 2013, the established mutual funds reached approximately 90 funds in Egypt (Fig.2).

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[1] See also:
- Jensen's alpha.
- The Modigliani and Modigliani. Measure (MM).
- The Information Ratio (IR).
- The TT measure (TT).
- Snail Trail Method.

[2] The Fama's Performance Measure.

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Egyptian mutual funds had three currencies as a basis for issuing as follows:

    a. Egyptian Pound(L.E.)*
      (57,782,453,128 L.E. at 31/12/2012)
    b.U.S. Dollar
      (93,024,125 $ at 31/12/2012)
    c.Euro
      (24,475,953 € at 31/12/2012)

*One American dollar = 6.95 Egyptian pound (L.E.) according to prices of 2013
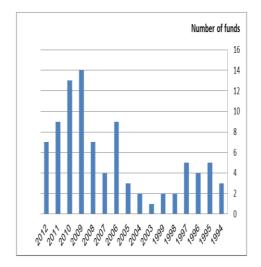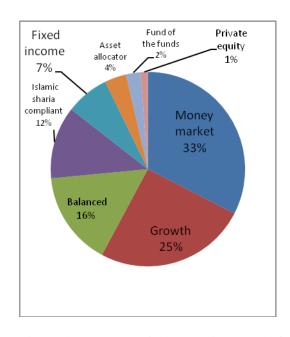

Fig. 2: Number of funds issued each year.

Fig.3: The structure of the Egyptian mutual funds.

The population

The population of the study is Egyptian mutual funds; this mutual funds classification

criteria objectives (Income funds - Growth funds - Income and growth funds -Balanced funds). The present study has 22 Egyptian mutual funds.

Statistical analysis

1.The relationship among mutual fund objectives and return

Table 1. Regression analysis among mutual fund objectives and return (Model and ANOVA).

A. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.548[a]	.300	.265	1.1530

a. Predictors: (Constant), TY

B. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.418	1	11.418	8.589	.008[a]
	Residual	26.587	20	1.329		
	Total	38.004	21			

a. Predictors: (Constant), TY
b. Dependent Variable: R

Table 1 shows that the objective of Egyptian mutual funds explains (30%) of the fund return at the 5% level of significance.

2.The relationship among mutual fund objectives and total risk

Table 2. Regression analysis among mutual fund objectives and total risk(Model and ANOVA).

A. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.704[a]	.495	.470	4.106E-02

a. Predictors: (Constant), TY

B. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.306E-02	1	3.306E-02	19.610	.000[a]
	Residual	3.372E-02	20	1.686E-03		
	Total	6.678E-02	21			

a. Predictors: (Constant), TY
b. Dependent Variable: TR

Table 2 shows that the objective of Egyptian mutual funds explains (49.5%) of the fund total risk at the 5% level of significance.

* One American dollar = 6.95 Egyptian pound (L.E.) according to prices of 2013.

3.The relationship among mutual fund objectives and systemic risk

Table 3 shows that the objective of mutual funds explains (45.8%) of the fund systemic risk at the 5% level of significance.

Year	Variation coefficient of annual average prices %			
	Field tomatoes	Winter white cabbages	Onions	Green peppers
2004	21	42	21	27
2005	19	27	7	19
2006	42	56	11	36
2007	19	24	7	19
2008	19	39	5	13
2009	28	27	4	27
2010	9	6	11	11

Table 3.Regression analysis among mutual fund objectives and systemic risk(Model and ANOVA).

A. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.677[a]	.458	.431	.1865

a. Predictors: (Constant), TY

B. ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.589	1	.589	16.933	.001[a]
	Residual	.696	20	3.478E-02		
	Total	1.284	21			

a. Predictors: (Constant), TY
b. Dependent Variable: SR

4.Sharpe's ratio and mutual fund objectives

Table 4.Kruskal-Wallis test for Sharpe's ratio.

Test Statistics[a,b]

	S
Chi-Square	15.754
df	2
Asymp. Sig.	.000

a. Kruskal Wallis Test
b. Grouping Variable: TY

From Table 4, it may be noticed that there are differences among Sharpe's ratio for Egyptian mutual fund objectives at the 5% level of significance.

5.Treynor's ratio and mutual fund objectives

Table 5:Kruskal-Wallis test for Terynor's ratio.

Test Statistics[a,b]

	T
Chi-Square	15.754
df	2
Asymp. Sig.	.000

a. Kruskal Wallis Test
b. Grouping Variable: TY

Table 5.Variation coefficient, Average Price (%)

From Table 5, it may be noticed that there are differences among Terynor's ratio for Egyptian mutual fund objectives at the 5% level of significance.

CONCLUSIONS

In Egypt, the establishment of the first mutual funds was achieved in 1994. Nowadays, the total mutual funds reached 90 funds, approximately. The Income funds represent the largest share of the Egyptian mutual funds (40%), growth funds (25%). and the private equity funds is at least (1%).

The objective of the Egyptian mutual funds has a great impact on funds return, total risk and systemic; when analyzing relationship between risk and return. The study was very influential for mutual fund objectives on Sharpe and Terynor ratios.

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