

# Actively Managed Investment Portfolio Dilemmas, 'Lost Returns Approach'

by

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## Abstract

Extending the basic belief on which the investment management business is built upon: Professional managers can beat the market; linking within a practical approach between the academics' views and practitioners' opinions regarding the market beating inability and the reasons from behind; paying some more attention to the returns, managers lose due to their insufficient active strategies; this work analyzes the past performance of the whole stocks that actually traded in the Egyptian market between June, 2007 and June, 2012 in order to measure how fund managers are geniuses by the zero returns they lose. It performs T-test among three types of portfolios, a well-known market index, the funds' portfolios, and the best actively managed portfolio that can be built and used as a restrict criterion. The findings reveal that adopting the simple thought of naïve investors, away from the portfolio optimization possibilities, do generate the active portfolio, which is economically optimized, as the investors initial resources are not only significantly sufficient for accessing its investments, but can be also recovered with no more than 3 months. And which can significantly out-perform the comparable benchmarks, but unfortunately, the fund managers are not geniuses due to the impressive returns they lose.

*JEL classification:* G1; G2

*Keywords:* Capital markets, mutual funds, performance evaluation, market timing ability, stock picking ability

## 1. Introduction

All scholars who evaluated the professional managers' performance have got into a long debate and finally came down on different sides; some of them suggest that truly active and skilled managers can and do generate returns above the market net of fees, and rightly able to add a value through their actively managed strategies, particularly for the long term (see e.g. Mint, 2012; Goldman, 2010). Conversely, some others show that the average active fund manager cannot outperform either the CAPM, or the passive benchmark of stocks (French, 2008), it is a game of losers; a waste of money and time, and investors should simply own the market itself (Ken, 2009). Furthermore, investors who are overly optimistic about their abilities to select active managers or overlook the dynamic elements of investing with active managers may incur significant losses (Warren et al., 2013). Still some other reveal that even for passive funds or trackers, there is no

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guarantee for garnering the performance of the relevant index because trackers may actually use different techniques to track their target indices and, if their strategies are not sufficiently effective, then passive funds can potentially underperform (Meyer, 2012).

Given this debate, this study tries to report that active strategy is the only skill managers need to survive. It answers by new empirical evidence on the following research questions: When to call the fund manager a genius one whatever the goal he is after? In other words, what is the proof that he is talented? And how can we measure this proof in real? In fact, no area has received greater attention in portfolio management research than the mutual funds, but little or nearly none has explored the topic of the best real active portfolio and its rule when assessing the institutional managers' performance. Hence, it is important to extend the recent literature with evidence and information of another model as a basic input to this industry. Concurrently, since the emerging economies provide a prime opportunity for attaining greater profits if compared with the mature ones (Francis, 2012), this study investigates Egypt as one of the most important emerging economies in the Middle East, where studies are still little too. It analyzes the data of 37 mutual funds, two market indexes, in addition to the whole actually traded stocks listed on the Egyptian Stock Exchange between June, 2007 and June, 2012 period. It seeks to build the Guide Portfolio (GP) that can beat the market, and then can be used as an active benchmark for identifying how institutional managers are geniuses in their businesses by the zero returns they lose. The rest of this paper is organized as follows. Section 2 provides a review of the relevant literature followed by Section 3 that displays the methodology, data sources, while, the empirical test's results are presented in Section 4 and the conclusions follow in Section 5.

## 2. Literature Review

### 2.1 The market portfolio as a comparison criterion

Since the mid-seventies Charles (1975) documents that investment management business is built upon the basic belief: Professional managers can beat the market. Ed Rose (2004) supports that belief adding 'it is the industry's contention that their active managers can beat the market, since they are in business to manage your money, how could they claim otherwise? The individual pays dearly for this service'. However, among more than 128 measures, little could clarify the rule of the market portfolio when judging the professionals' performance (see e.g. Markowitz, 1952; Roy, 1952; and Statman, 1987). But, Sharpe (1994) comes to transfer Charles' belief into a practical approach for deciding how institutional managers are professionals in running the investors' resources. He modified his first ratio throughout replacing the riskless asset by a benchmark (market portfolio) to describe the rule of the market when judging the professionals' performance by the excess return they achieve.

### 2.2. Studies results, experts' views and reasons of market beating inability

Actually, most of the previous studies that investigated Charles' belief report that the market cannot be persistently beaten, and that this belief cannot be acceptable any more. Even Charles (2010) himself shows that the premise of beating the market appears to be false; he adds: Gambling in a casino where the house takes 20 percent of every pot is obviously a Loser's Game, so money management has become a Loser's Game; (John, 2010), many other academics supports that referring that the reason of the

market beating inability might be: The transaction costs (Sharpe, 2010), the risk (Fama, 2010), the cost of the adopted strategies such as the cost of time wasted in timing into and out of the funds (Dalbar, 2008), the market efficiency (Hopkins, 2011), the investors thoughts: By misunderstanding the mystery behind the evaluating process (Keynes, 2010), the professional themselves: By their impatience and relying on short – term strategies instead of the long – term ones (Jesse, 2010), and finally, the market, under which, professionals are competing because the professionals are the market and then they cannot, as a group, outperform themselves, (Charles, 1975; and Ed Rose, 2004). Bearing in mind all or one of the previous reasons: If professionals cannot beat the market; why actively managed funds are still existed. Why all of those investors are still following them. And why they all did not prefer sleeping well by indexing. Does it mean that these investors are ill-informed; it certainly cannot be true. The only thing that can be accepted is that many of the earlier studies were based on a small universe of actively managed funds, hardly enough to be a meaningful sample (Ken, 2009). However, if the reason was the transaction costs; it might be an accuse more than an excuse; the professionals know from the beginning that the fund investors had to charge these costs in order to reach the fund shares, so they also must be known that they should reward those investors, otherwise why did professionals accept that field of work? In addition, if professional managers cannot beat the market because they became the market; it either means that there is no exceptions among professionals and experts or means that they all became exceptions or geniuses and will not be beaten. Unfortunately, it is the same meaning: there are no exceptions or geniuses among professionals. If there are losers, it must be a game, and if it was (investment business already is), there are losers and winners, but no losers all along the way. If managers could have the same information content, they cannot have the same talent in real. Finally, if they all as a market became professionals; the point will not be the difficulty of differentiating between them because they all became professionals; it will be the criteria which is used for comparing them with; it will be the market itself. It is well-known, improper benchmark may destroy the purposes of performance evaluation by misidentifying the better performing managers (Brown and Reilly, 2009), so if all institutional managers became professionals and we want to compare between them, we should search and build a more restrict or a tougher criterion to compare them with. We should build the best actively managed or efficient portfolio to use as a benchmark or as a guide when assessing them. It means comparing their performance at any time with that of the best actively managed or efficient portfolio that can be built at the same time; in such a way, we can measure how professionals' expectations well-matched these of the best real market.

### 2.3 Academics' practices and experts' opinions into a practical approach

Recalling Charles' belief: professional manager can beat the market; we can establish these two points: 1): Professional' performance (risk adjusted return) is expected to be equal or higher than that of the market performance. It can be formulated as follow:

**Professionals' performance  $\geq$  Market portfolio's performance (1 - 1)**

2): Such an excess return is nothing but a reward or a premium for those managers, who embodied all of their capabilities to capture a rate of return exceeding that, which can possibly be made by the whole investors on their owns. Thus it is possibly to say:

**Professionals' performance = Market portfolio's performance + Management premium (1 - 2)**

Reformulating the limits of the formula (1 - 2) we can get:

**Management premium = Professionals' performance - Market portfolio's performance (1 - 3)**

Actually, this is the alpha that Sharpe (1994) describes in his generalized ratio. It illustrates that in order to evaluate the professionals' performance, there should be a trade-off between two returns; the first is that one, adjusted by the risk, made by such a manager against his actual investments. The second is that one adjusted by the risk too, but it is the one that should have been made by him in terms of investments he himself selected to build his own portfolio. The difference between these two rates in such a case is the difference between what already is and what could be; it is an efficiency proof for the manager; it also is that value added to the investor's wealth made by his being depending on a professional management for running his investments. But, given the inability of beating the market because the professionals cannot beat themselves, then, the market portfolio should be replaced by the best actively managed one as a guide portfolio (GP) as follows:

**Management premium = Professionals' performance - Guide portfolio's performance (1 - 4)**

However, since we are talking about the performance of the best managed portfolio, there will not be any management premium except for genius managers only, which rarely happens; if it is difficult to defeat the market's passive strategy, how they can beat the best active one. Unfortunately, it leads to a negative value for the equation (1 - 4). In effect, to avoid that; the content of this equation can be adjusted by rearranging its limits as follows:

**Lost performance = Guide portfolio's performance - Professionals' performance (1 - 5)**

Implying that in order to assess the institutional managers' performance we should measure how far they are from the real active strategies and what is the return, they lose due to their insufficient approaches, addressing that investment management business can be built upon a new belief: Genius managers can persistently beat the market.

In brief, the purpose of the previous debate is the desire to investigate these propositions: The guide portfolio can significantly beat the market portfolio, and then the whole fund managers; it can always be accessed by the investors' limited resources.

### **3. Methodology**

#### **3.1. Timeline and data sources**

This paper conducts the empirical analysis by employing data for nearly 5 years. It initiates the investigation period at the beginning of June, 2007 and ended it up at the end of June, 2012. For evaluating the performance of the Egypt fund managers, a database is constructed, containing the selected sample of the mutual funds, listed on the Egyptian Capital Market. All returns are calculated from monthly net asset value (NAV) of funds resulting in returns that are inclusive of any distributions. Furthermore, all returns of the whole actually listed and traded stocks have been analyzed on a monthly base in order to select the proper stocks for building the GP. Meanwhile, because of the importance of insuring that GP is inappropriate criterion for assessing the funds' performance, the risk adjusted return of GP is tested against two of the market indexes

(EGX 30 and EGX100) as relevant market portfolios. The Egyptian Gross National Income GNI Per Capita announced by the World Bank is used to measure how investors' resources are sufficient for accessing the GP investments; it has been adjusted according to the historical prices of the formally announced exchange rates. Finally, the return of 3-month Egyptian treasury-bill is used as the minimum acceptable rate of return MAR.

### 3.2. Sample selection

The investigation sample contains 37 out of 87 diversified funds that were publicly listed in the Egyptian market at the beginning of June, 2007. The following criteria have been used to compile this sample. First: the sample has been restricted to diversified funds that were publicly traded by the mid of 2012, and guided by the Egyptian Capital Market Authority. This results in 87 diversified funds. Second: Since the standard procedures in mutual funds research required covering 36 monthly observations at least, (Elton et al., 2007), hence, to preserve the accuracy of data, the sample has been restricted to funds that their life-time is equal or greater than five years (60 monthly observations) by the mid of 2012 in order. This results in 37 diversified funds only. Table 1 summarizes the sample selection process.

**Table 1:** Sample selection

	N of funds dropped	Remaining funds
Population of mutual funds		87
Less		
Funds that their life-time is less than five years	50	
Final Sample		37

Source: Egypt for Information Dissemination (EGID) – Monthly report, June 2012.

### 3.3. Performance measures

#### 3.3.1. Constructing the guide portfolio (GP)

Two main questions may arise when building the GP: What is the weight that should be assigned for each single asset? And how many assets it should contain in order to be a well-diversified portfolio? The answer for these questions is to consider two key factors: the simple naïve diversification and the lower level of return, investors can accept for their investments. Many articles in corporate finance and investment textbooks refer to the ability of benefiting completely from the naïve diversification in eliminating the diversifiable risk without giving up the expected returns by holding a portfolio of randomly selected 8 to nearly 40 stocks, or from 10 : 15 stocks on average, even if they were equally weighted, (Gordon, 2004; Moyer et al., 1998). Accordingly, the GP can be created by selecting any number between 8 and 40 (let us say from 8 :20 stocks on average) of the highest profitable stocks that their returns are greater than the rate of T-bills as a minimum acceptable return (MAR), otherwise choosing the T-bills itself for completing the intended number. It means excluding 3 types of stocks at the end of each analyzed period (month): the stocks that their returns are lower than this of the T-bills, the stocks that gain zero returns, and normally these that yield negative returns. Hence, the managers' real skills or activity can be shown on their continuous

ability for selecting and replacing their stocks by the highest positive or profitable ones only. Ease of this idea can be attributed to the naïve investor’s thoughts; he wants nothing, but to perpetually have the best active portfolio he can afford buy or hold. It is a safe one; it is a downside risk free portfolio, as long as managers are continuously able to select the highest profitable (positive) stocks alone. That is the point; it is the portfolio that should be stimulated, as it helps managers maximize the investors’ wealth, but can they access it? The professional manager task resembles this of the physician: the doctor who could not precisely diagnose the ailment costs the patient his money, his time, and may be his life. The active manager should be a bird, flies from one stock to the other once he reached his gains. In such a way, where GP as the best active portfolio, is mainly built upon the existence of a minimum rate of as an investment substitute, the downside deviation will be the proper measure for its risk. It avoids the drawback of the standard deviation, which considers that returns, which spine heavily above the mean are bad from one hand, and helps advisers make better investment decisions from the other hand, where above-average returns do not increase risk, as outperformance is beneficial to the investor(Washer et al., 2013).

Unfortunately, since using the downside deviations in the denominator of the equation (1 – 5) may results into an infinity or negative vales, it would be better if the GP average rate of return has multiplied by (1- downside deviation) when measuring its risk adjusted return. Equation (1 – 6) shows that as follows:

$$LP_t = R_{Gpt} (1 - D_{Gpt}) - R_{mpt} (1 - D_{mpt}) \quad (1 - 6)$$

Where:  $LP_t$ : the Lost Performance in period  $t$ .

$R_{gpt}$ : the average rate of return for the highest 8 : 20 profitable stocks in period  $t$ .

$D_{Gpt}$ : the downside deviation for the guide portfolio in period  $t$ .It equals zero.

$R_{mpt}$ : the return on the market index portfolio in period  $t$ .

$D_{mpt}$ : the downside deviation for the market index portfolio in period  $t$ .

While:  $R_{Gpt} = \{ [\sum_{i=1}^n (R_i)] / n \} (1 - 7)$

Where:  $R_{Gpt}$ : the average return on the guide portfolio in period  $t$ .

$n$ : the number of stocks (from 8 : 20 on average).

$R_i$ : the return on the stock  $i$  in period  $t$ .

And,

$$D_{Gpt} = \sqrt{\frac{\sum_{i=1}^n (MIN(R_{it} - MAR))}{n}} \quad (1 - 8)$$

Where: MAR: is the minimum acceptable rate of return (T-bill for 3 months rate).

It has been calculated on a monthly base by using the following (1 – 9) equation of the Effective Annual Rates EAR (Wikipedia, 2014).

$$rt = (1 + i_t / n)^n - 1 \quad (1 - 9)$$

Where:  $r_t$ : is the effective annual rate on T-bills in period  $t$ .

$i_t$ : is the nominal rate on T-bills in period  $t$ .

$n$ : is the number of compounding periods per year (12 months).

**3.3.2. Insuring that GP is a relevant benchmark**

To quantitatively measure how GP is a relevant criterion for evaluating the fund managers’ performance, GP performance will be tested against that of EGX 30 and EGX 100 indexes. Equation (1 – 10) illustrates that as follows:

$$LP_t = R_{Gpt} (1 - 0) - R_{mpt} (1 - D_{mpt}) \quad (1 - 10)$$

Where:  $D_{mpt}$ : the downside deviation for the market index portfolio in period  $t$ .

T-test will be used for measuring the significance of differences between these portfolios’ performances. Simultaneously, to clarify how results may differ if the risk measure has been changed, T-test will be re-estimated after replacing the downside deviation by the standard deviation. Equation (1 – 11) shows that as follows:

$$LPt = \frac{R_{Gpt}}{\alpha_{gpt}} - \frac{R_{mpt}}{\alpha_{mpt}} \quad (1 - 11)$$

Where:  $\alpha_{gpt}$ : is the standard deviation for the guide portfolio in period  $t$ .

$\alpha_{mpt}$ : is the standard deviation for the market index portfolio in period  $t$ .

**3.3.3. Measuring how fund managers are geniuses**

For judging how fund managers are geniuses in selecting the stocks that enable them beating the market and then maximizing the investors’ wealth, the equation (1 – 6) will be used; T-test will also be used for measuring the significance of differences between the portfolios’ performances.

**3.3.4. Measuring how investors’ resources are sufficient for accessing GP**

In order to verify how investors’ resources are enough for reaching the GP investments, the market value of the GP will be estimated at the beginning of each period (month) as the sum of its assets’ market values. Equation (1 – 12) shows how it can be estimated:

$$v(GPt) = \sum_{n=1}^k (v(S1t) + v(S2t) + \dots + v(Skt)) \quad (1 - 12)$$

Where:  $v_{(Gpt)}$ : is the market value for the guide portfolio at the beginning of period  $t$ .

$n = 1 \dots k$ : number of the guide portfolio assets.

$v_{(S1t)}$ : is the market value for the asset 1 at the beginning of period  $t$ .

$v_{(Skt)}$ : is the market value for the last asset at the beginning of period  $t$ .

T-test will be used for measuring the significance of differences between the mean of the GP market value and the mean of the average income of the Egyptians’ investors (monthly Gross National Income GNI Per Capita).

**4. Results**

**4.1 The Relevance of GP**

To test the relevance of GP as a benchmark, equations (1 – 10) and (1 – 11) have been calculated; T-test has also been conducted for measuring the significance of difference in performances between GP and both of EGX30, and EGX100. The results are displayed in Table 2. Panel A of this table presents the results of relying on the downside deviation. It shows that the average rate of return for GP is significantly



positive for the overall period; it reaches 33.2 % against (-0.27%) and (-0.32%) for EGX30 and EGX100 respectively. Meanwhile, Panel B of the same table reports the results of using the standard deviation. When running T-test for the previous equations, the results remained the same, where the GP performance found to be significantly positive for the overall period too, implying that there are impressive returns, market index portfolios would not lose if they were well constructed. The same table reveals that GP performance runs to 427.26 % against -0.02 % and - 4.66 % for the two benchmarks. Despite these results are consistently with each other, implying that these market indexes are not the proper benchmarks that can be used as a restrict criteria for assessing the fund managers, but the comparison between the results of Panel A and Panel B especially for both of the mean and standard deviation strengthens the importance of choosing the right risk measure as it was mentioned previously.

#### **4.2 How the Egyptian Fund managers are Geniuses**

Relying on the equation (1 – 6), T-statistics has been calculated for measuring the returns, managers lose due to their inadequate active strategies; results are reported in Table 3. It indicates that on average, the risk adjusted return of GP is positive and highly significant if compared with that of the overall mutual funds on average, where it reached 33.2% as opposed to (-0.74%) for the whole funds. It also documents that the high returns of GP have matched by equivalent high levels of risk, where its standard deviation has amounted (16.9%) against (1.8%) only for the average funds, but this unreal investment risk of the GP is attributed to the statistics scale (T-test), that depends in its calculation on the mean and the standard deviation, which measure both of the up and down values around its mean as it was also formerly mentioned, at a time, GP has no any downside deviation. Concurrently, Table 3 also clarifies that no fund managers was able to beat the GP performance. It actually means that there is no genius between the Egyptian fund managers, where there are impressive returns they all lost. This result is agreed with these of French, (2008), who concluded that the average active fund manager cannot beat either the CAPM, or the passive strategy of the benchmark. It is a normal result; if they are not able to prove that they are professional, they will never prove that they are geniuses.

#### **4.3 Investors' Resources are Sufficient**

Finally, by calculating the equation (1 – 12) and comparing it with the monthly GNI Per Capita for the Egyptians; estimated values are offered in Table 4. Panels A, B, and C describe how much investors' average incomes are enough for holding GP. Panels A illustrates that all investors on average are significantly able to hold the GP assets, where GP costs £.P 1132 on average, while the investors' available resources are £.P 2922.5 on average too. Not only this, but Panel B of the same Table shows that investors are still significantly able to buy the GP assets even if its price has risen by 50%, on the contrary of Panel C which explains that investors cannot statistically afford hold this assets if it has been double priced. It implies that investors' resources are always sufficient for reaching the GP; it is economically optimized, but it certainly needs talented managers. Three other facts can be realized if Tables 4 and 5 are read together: Firstly, column 4 of Table 5 states that the average turnover rate for GP investments per a month reaches 85.4%; it equals an annual rate of 1024.8% on average. If it compared with the 48% rate of the asset-weighted annual turnover rate, experienced by equity fund



investors in 2012 or with the 62% rate over the 1980 – 2012 period (Investment company fact book, 2013) it might show how much fund managers should be over active if they want to attain the desired returns. This result might differ from this of Prestbo, (2012) who reports that indexes, which do turn over their holdings frequently can cause eat into the returns of mutual funds based on them, referring that ETF investors, for example, do not need to be particularly concerned about high turnover leading to taxable capital gains. But when realizing the second fact, which states that the monthly rate of return for such high turnover rates can reach 33.27%, implying that investors' capitals can be recovered in nearly 3 months, no one will care about the portfolios turnover costs or the taxes resulting on its gains. In the same time, this result differs from these of Agrawal, (2007) who suggests that the portfolios' past performance can predict the future one, whereas the up-normal turnover rate of the GP holdings, that reaches 100% in some particular months implies the difficulty of predicting its future assets in accordance with its past ones. It should mean that if GP was active and it already is, the money managers should be equitably active. Thirdly, column 10 of Table 5 illustrates that, on average, the manager has a monthly 83.9 possible opportunities for choosing a profitable stock before using T-bills; when considering that the portfolio holdings does not exceed 20 stocks, it illustrates that managers almost have more than 4 alternatives to choose from, and then had not to choose the stocks of zero or negative returns. In short, investor's resources are always enough for accessing the GP holdings, but managers are not geniuses

## Conclusion

This work proposes the lost returns approach, which better assess the contribution, professional managers can add to the mutual funds investors. It depends on extending the basic belief on which the investment management business is built upon: Professional managers can beat the market. All scholars who verified the idea of beating the market state that it cannot be acceptable anymore; most of them reveal that the reasons behind is that they are the market and then they cannot beat themselves. Considering the investors' scarce resources (gross national income per capita GNI), the simple naïve diversification, and the downside deviation as a measure for the GP risk, this study adjusts the market portfolio to a best actively managed done (GP) as a tougher benchmark when evaluating the professionals' performance. To investigate how GP is relevant; it has been tested against two of the most famous Egyptian indexes (EGX30 and EGX100). Relying on T-test for three different portfolios across the period from June, 2007 to June, 2012, the findings reveal that GP can truly and significantly outperform both of the market and the mutual funds, so investors may be happier if their managers could build and manage such portfolio, which their available resources are significantly sufficient for holding its instruments, and where their capitals can also be recovered in nearly 3 months. The findings also add a new approach that can be considered when optimizing the portfolio performance, and a new type of active portfolios that can be stimulated.

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**Table 2** Differences in performances between GP and both of EGX30 and EGX100 indexes depending on two different measures of risk (downside deviation and standard deviation).

	Investment Portfolio	Mean	Std. deviation	Std. error	t-stat	Sig
<b>Panel A</b> <b>Downside Deviation</b> <b>As a risk measure</b>	(GP)	0.3320	0.16995	0.03800	8.186	0.000
	EGX 30	-0.0027	0.06589	0.01473	8.186	0.000
	EGX 100	-0.0032	0.06796	0.01520	8.166	0.000
<b>Panel B</b> <b>Standard Deviation</b> <b>As a risk measure</b>	(GP)	4.2726	4.28165	0.95741	4.268	0.000
	EGX 30	-0.0002	1.30831	0.29255	4.268	0.000
	EGX 100	-0.0466	2.20291	0.49259	4.012	0.000

**Table 3** Differences in Performances between GP and the mutual funds' portfolios.

	Time period	% Out perform	Mean	Std. deviation	Std. error	t-stat	Sig
	Guide Portfolio (G.P)		0.3320	0.16995	0.03800	8.186	0.000
	Funds on Average		-0.0074	0.01863	0.00417	8.850	0.000
1	Credit Agricole Egypt I		-0.0096	0.03990	0.00892	8.725	0.000
2	Bank of Alexandria I		-0.0159	0.04289	0.00959	8.851	0.000
3	Banque du Caire		-0.0142	0.04223	0.00944	8.815	0.000
4	Credit Agricole Egypt II		-0.0112	0.04170	0.00932	8.744	0.000
5	Egyptian Gulf Bank		-0.0184	0.04482	0.01002	8.815	0.000
6	Al Watany Bank of Egypt		-0.0060	0.03723	0.00833	8.662	0.000
7	Arab Misr Insurance Group		-0.0153	0.06713	0.01501	8.475	0.000
8	Al Rabeh Fund		-0.0038	0.03619	0.00809	8.617	0.000
9	Arab Land Direct		0.0208	0.11444	0.02559	6.770	0.000
10	Societe Arab Int'l Banque I		-0.0004	0.03485	0.00779	8.543	0.000
11	Societe Arab Int'l Banque II		-0.0006	0.03216	0.00719	8.574	0.000
12	Sanabel Fund		-0.0031	0.03434	0.00768	8.616	0.000
13	Export Development Bank I (Al-Khabeer)		-0.0083	0.04458	0.00997	8.635	0.000
14	Suez Canal Bank I		-0.0060	0.04541	0.01015	8.566	0.000
15	Banque Misr III		-0.0061	0.04348	0.00972	8.593	0.000
16	Misr Iran Development Bank I		-0.0074	0.04296	0.00961	8.631	0.000
17	National Bank of Egypt III		0.0063	0.06984	0.01562	8.815	0.000
18	Misr Iran Development Bank II	Zero	-0.0066	0.03163	0.00707	8.733	0.000
19	Banque Misr IV		-0.0071	0.04164	0.00931	8.641	0.000
20	National Bank of Egypt I		-0.0171	0.07505	0.01678	8.379	0.000
21	National Bank of Egypt II		-0.0029	0.02919	0.00653	8.659	0.000
22	National Bank of Egypt V		-0.0002	0.03093	0.00692	8.573	0.000
23	National Bank of Egypt IV		0.0066	0.00258	0.00058	8.534	0.000
24	Egyptian Saudi Finance Bank		-0.0085	0.03218	0.00720	8.777	0.000
25	Faisal Islamic Bank-CIB (Al Amman)		-0.0135	0.04153	0.00929	8.806	0.000
26	Commercial International Bank II		-0.0101	0.04099	0.00917	8.725	0.000
27	Commercial International Bank I (Osoul)		-0.0006	0.03303	0.00739	8.566	0.000
28	Banque Misr I		-0.0029	0.01945	0.00435	8.728	0.000

29	Banque Misr II		-0.0112	0.02985	0.00667	8.868	0.000
30	Faisal Islamic Bank		-0.0108	0.03594	0.00804	8.798	0.000
31	Bank of Alexandria II		-0.0006	0.03303	0.00739	8.564	0.000
32	National Societe Generale Bank		0.0069	0.00158	0.00035	8.528	0.000
33	Shield Fund		-0.0021	0.03015	0.00674	8.629	0.000
34	Credit Agricole Egypt III		-0.0064	0.03301	0.00738	8.714	0.000
35	Export Development Bank II		-0.0004	0.03301	0.00738	8.559	0.000
36	Orient Trust		-0.0011	0.01802	0.00403	8.690	0.000
37	Misr Direct Investment Fund		0.0002	0.00664	0.00148	8.698	0.000

**Table 4** Difference of mean between the investors' monthly average income (Gross National Income GNI Per Capita) and 3 different market values of the Guide Portfolio (100%, 150%, and 200%).

	Portfolio	Mean	Std.Dev	Std. error	t-stat	Sig
<b>Panel A</b> GNI Per Capita Against GP Market Value	(GP) GNI Per Capita	1132.0	1553.98	200.619	-8.825	0.000
		2922.5	233.964	30.2046	-8.825	0.000
<b>Panel B</b> GNI Per Capita Against 150 % of GP Market Value	(GP) GNI Per Capita	1698.0	2330.98	300.928	-4.049	0.000
		2922.5	233.964	30.2046	-4.049	0.000
<b>Panel C</b> GNI Per Capita Against 200 % of GP Market Value	(GP) GNI Per Capita	2264.0	3107.97	401.238	-1.636	0.104
		2922.5	233.964	30.2046	-1.636	0.107