



ASSESSING THE SHARPE RATIO OF EQUITY FUNDS IN THE PHILIPPINES

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ABSTRACT

Adapting the work of Bansal, Kumar, & Gupta (2012), the “reward-to-variability ratio” (Sharpe, 1966, p. 123), commonly known as the Sharpe ratio (Sharpe, 1966), was used to measure the performance of five equity funds in the Philippines for three time periods (one year or 2010, three years or 2008-2010, and five years or 2006-2010). The funds that were used in the research were: ATR – Kim Eng Equity Opportunity Fund (ATRKE), First Metro Save and Learn Equity Fund (FMIC), Philam Strategic Growth Fund (Philam SG), Philequity Fund (Philequity), and Sunlife Prosperity Philippine Equity Fund (Sunlife). There was evidence of consistency when the funds were ranked. Relying on Brown & Reilly (2009), further analysis indicated that most equity funds (four out of five) outperformed the stock market. Thus, (1) investors would be better served by placing their money in actively-managed funds instead of an index fund and (2) the higher fees charged by actively-managed funds, compared to the fees charged by index funds (Mishkin & Eakins, 2009), appear to have merit.

Keywords: mutual fund performance, Sharpe ratio, equity funds

1. INTRODUCTION

1.1. Overview

It is commonly known that mutual funds may be actively-managed (e.g. stock funds) or passively-managed (i.e. index funds). Index funds imitate an index (Mishkin & Eakins, 2009). An example of an index fund in the Philippines is the Philequity PSE Index Fund, Inc. which follows the Philippine Composite Index or PSEi (Philequity Management, Inc., 2007).

The Treynor ratio (Treynor, 1965), the Sharpe ratio (Sharpe, 1966), the information ratio (Goodwin, 1998), etc. are examples of

widely-known approaches in evaluating fund performance. Other methods of assessing fund performance include the Fouse index (Sortino & Price, 1994 (as cited in Le Sourd, 2007)) and the Sortino ratio (Sortino & Van der Meer, 1991 (as cited in Le Sourd, 2007)).

This study was predominantly motivated by the work of Bansal, Kumar, & Gupta (2012) on funds’ Sharpe ratios (Sharpe 1966). This research determined the performance of equity funds in the Philippines via the “reward-to-variability ratio” (Sharpe, 1966, p. 123), popularly known as the Sharpe ratio (Sharpe, 1966). Incidentally, Brown & Reilly (2009, p.943-944) called this the “Sharpe measure”. As mentioned by Brown & Reilly



(2009, p. 943), “. . . this measure indicates the *risk premium return earned per unit of total risk*”. Therefore, consistent with QFinance (<http://www.qfinance.com/contentFiles/QF01/g87ba2m9/10/0/sharpe-ratio.pdf>, n.d.), the interpretation from Brown & Reilly's (2009) statement is that a larger Sharpe ratio (Sharpe, 1966) is preferred because it indicates better performance.

There were two main objectives of this paper. The first objective was to compute for the Sharpe ratios (Sharpe, 1966) of the funds by utilizing the equation provided by Brown & Reilly (2009, p.943). The second purpose, following Brown & Reilly (2009), was to compare each fund's performance against that of the market's.

Modelling after Almonte (2012a), a background with regards to the number of funds and their breakdown according to type was researched. As of November 12, 2012, the Philippine Investment Funds Association (<http://www.pifa.com.ph/factsfignavps.asp>, November 12, 2012) listed 47 mutual funds in the country. There were 10 equity (including index) funds, 12 balanced funds, 21 bond funds, and 4 money market funds (Philippine Investment Funds Association, <http://www.pifa.com.ph/factsfignavps.asp>, November 12, 2012).

1.2. Literature

Markowitz (1952) suggested that investors consider both risk and return when evaluating assets.

An early study on the performance of more than 30 mutual funds was conducted by Sharpe (1966). According to Sharpe (1966), mutual funds exhibited the widely-known trade-off between risk and return (Sharpe, 1964).

Contemporary studies on mutual fund performance include the following: Redman, Gullett, & Manakyan (2000), T. Jagric, Podobnik, Strasek, & V. Jagric (2007), Debasish (2009), Gohar, Ahmed, & Niazi (2011), and Bansal, et al. (2012). In the research of Redman, et al. (2000), it was mentioned that funds that geographically expanded their resources did

better than funds that concentrated on the U.S. financial markets. As per T. Jagric, et al. (2007), funds based in Slovenia practically had identical ranks in terms of several methods of measuring fund performance. The research of Debasish (2009) mentioned that, in India, there were two stock funds that had outstanding outcomes while there were three stock funds that did badly. Gohar, et al. (2011) noted that, in their sample, fund managers are skilled with regards to when to execute their transactions. Bansal, et al. (2012) reported that most funds in their study generated negative Sharpe ratios (Sharpe, 1966).

2. METHODOLOGY

As mentioned earlier, this research came about after reading Bansal, et al. (2012).

Five equity funds were included in the study. These funds were the following: ATR – Kim Eng Equity Opportunity Fund (ATRKE), First Metro Save and Learn Equity Fund (FMIC), Philam Strategic Growth Fund (Philam SG), Philequity Fund (Philequity), and Sunlife Prosperity Philippine Equity Fund (Sunlife). The research covered the years 2006-2010.

Jagric, et al. (2007) and Arugaslan, Edwards, & Samant (2008) used equity indices as points of reference. Thus, in this study, the PSEi was used to represent the stock market.

Akin to Almonte (2012a), the information for the five mutual funds (each fund's daily closing net asset value per share) was gathered from Technistock (Philippines) Inc. (commonly known as Technistock). For the remainder of this paper, the term Technistock was used to refer to Technistock (Philippines) Inc. Again, modelling after Almonte (2012b; 2012c), the PSEi's daily closing values were gathered from Technistock. On the other hand, the rates for the risk-free security were taken from the Bangko Sentral ng Pilipinas (BSP) website (<http://www.bsp.gov.ph>). Keeping up with Almonte (2012b), the research was limited to the year 2010 because after 2010 there were modifications in the trading hours of securities listed in the Philippine Stock Exchange (The Philippine Stock Exchange, Inc., <http://www.pse.com.ph/stockMarket/announcem>



ents.html, September 26, 2011). The modification in the trading hours came in two stages: stage one occurred during the fourth quarter of 2011 while stage two was implemented beginning the year 2012 (The Philippine Stock Exchange, Inc., <http://www.pse.com.ph/stockMarket/announcements.html>, September 26, 2011).

The Philippine Investment Funds Association (<http://www.pifa.com.ph/factsfignavps.asp>, November 12, 2012) reports fund-related values for the one, three, and five-year periods. Hence, three periods were considered for this study: one-year (2010), three-years (2008-2010), and five years (2006-2010).

Arugaslan, et al. (2008) made use of the three-month Treasury bill (T-bill) in the United States as the risk-free security. Therefore, following Arugaslan, et al. (2008), the 91-day T-bill rates in the Philippines were used: for 2010, the year's risk-free rate was used; for the years 2008-2010, the average of the risk-free rates for 2008, 2009, and 2010 were computed; for the period 2006-2010, the average of the risk-free rates for 2006, 2007, 2008, 2009, and 2010 were calculated.

To reiterate, the funds' Sharpe ratios (Sharpe, 1966) were computed by using the formula found in Brown & Reilly (2009, p. 943).

The portfolios' average return and standard deviation of return were annualized given that daily data was used. The computations were done using Microsoft Excel 2007. Unrounded values from Microsoft Excel 2007 were used for this paper; but, for purposes

of showing the data in tables (Tables 1, 2, and 3), the values were rounded-off to two decimal places.

Drawing inspiration from Jagric, et al. (2007), the funds' Sharpe ratios (Sharpe, 1966; Brown & Reilly, 2009) were ranked.

The researcher replicated Brown & Reilly's (2009) graph of the standard deviations and returns of the portfolios, market, and the risk-free security to determine how the funds' performance compared against the market's (the x-axes represented the standard deviations while the y-axes referred to the returns).

3. RESULTS AND DISCUSSION

As can be seen from Tables 1, 2, and 3, all of the funds in all time periods covered in the study generated positive Sharpe ratios (Sharpe, 1966; Brown & Reilly, 2009). The results disagreed with Bansal, et al. (2012) since their study revealed that a lot of funds had negative Sharpe ratios (Sharpe, 1966).

For the year 2010 (Table 1), FMIC was ranked 1 (best), Philequity was ranked 2, ATRKE was ranked 3, Sunlife was ranked 4, and Philam SG was ranked 5 (worst). This ranking holds for the years 2008-2010 (Table 2). For the years 2006-2010 (Table 3), FMIC was ranked 1, Philequity was ranked 2, Sunlife was ranked 3, ATRKE was ranked 4, and Philam SG was ranked 5. Thus, the funds' rankings were consistent except for a switch in places between Sunlife and ATRKE during the 2006-2010 period (Table 4).

Fund	Port- folio's Avg. Return	Risk- free Rate's Avg. Return	Port- folio's Std. Dev. of Return	Sharpe Ratio
ATRKE	43.51%	3.70%	16.15%	2.47
FMIC	52.03%	3.70%	16.62%	2.91

Philam SG	21.45%	3.70%	25.68%	0.69
Philequity	45.51%	3.70%	16.26%	2.57
Sunlife	36.39%	3.70%	16.83%	1.94

Fund	Port- folio's Avg. Return	Risk- free Rate's Avg.	Port- folio's Std. Dev. of	Sharpe Ratio
ATRKE	43.51%	3.70%	16.15%	2.47
FMIC	52.03%	3.70%	16.62%	2.91



		Return	Return	
ATRKE	30.21%	4.43%	35.82%	0.72
FMIC	58.60%	4.43%	28.65%	1.89
Philam SG	15.38%	4.43%	37.52%	0.29
Philequity	47.26%	4.43%	34.98%	1.22
Sunlife	26.71%	4.43%	33.00%	0.68

Table 3 FIVE-YEAR SHARPE RATIO (2006-2010) Note: Ratio computation was based on Sharpe, 1966 (as cited in Brown & Reilly, 2009)				
Fund	Port- folio's Avg. Return	Risk- free Rate's Avg. Return	Port- folio's Std. Dev. of Return	Sharpe Ratio
ATRKE	83.86%	4.42%	44.08%	1.80
FMIC	131.59%	4.42%	49.23%	2.58

According to Figures 1 and 2, only Philam SG underperformed the market while the four other funds (i.e. ATRKE, FMIC, Philequity, and Sunlife) outperformed the market. Based on Figure 3, it could be said that Philam SG performed at par with the market while the remaining funds performed better than the

Philam SG	73.74%	4.42%	46.98%	1.48
Philequity	109.96%	4.42%	44.44%	2.37
Sunlife	81.56%	4.42%	41.76%	1.85

Table 4 COMPARISON RANKING OF FUNDS'S SHARPE RATIO Note: This ranking was inspired by Jagric, et al. (2007)			
Rank	One-Year (2010)	Three-Year (2008-2010)	Five-Year (2006-2010)
1	FMIC	FMIC	FMIC
2	Philequity	Philequity	Philequity
3	ATRKE	ATRKE	Sunlife
4	Sunlife	Sunlife	ATRKE
5	Philam SG	Philam SG	Philam SG

market. Although Mishkin & Eakins (2009) noted that actively-managed funds charge higher fees compared to index funds, it appeared that, generally, investing in actively-managed funds paid-off. Moreover, the results derived from Figures 1, 2, and 3 contradicted Mishkin & Eakins' (2009) position that index funds will do better than actively-managed funds.

Figure 1
ONE-YEAR PERFORMANCE OF EQUITY FUNDS VERSUS THE PSEi (2010)
 Note: This chart was based on Brown & Reilly (2009)

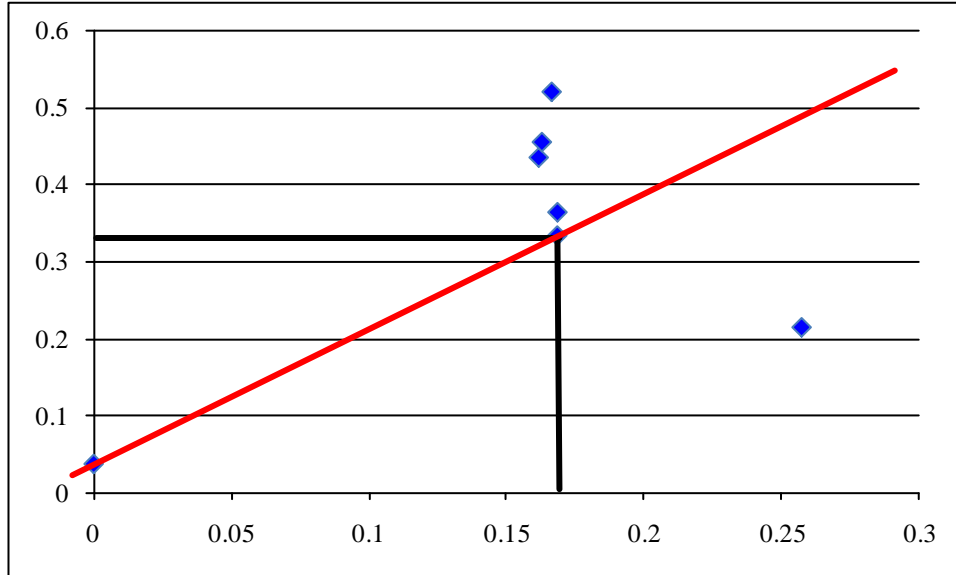


Figure 2
THREE-YEAR PERFORMANCE OF EQUITY FUNDS VERSUS THE PSEi (2008-2010)
Note: This chart was based on Brown & Reilly (2009)

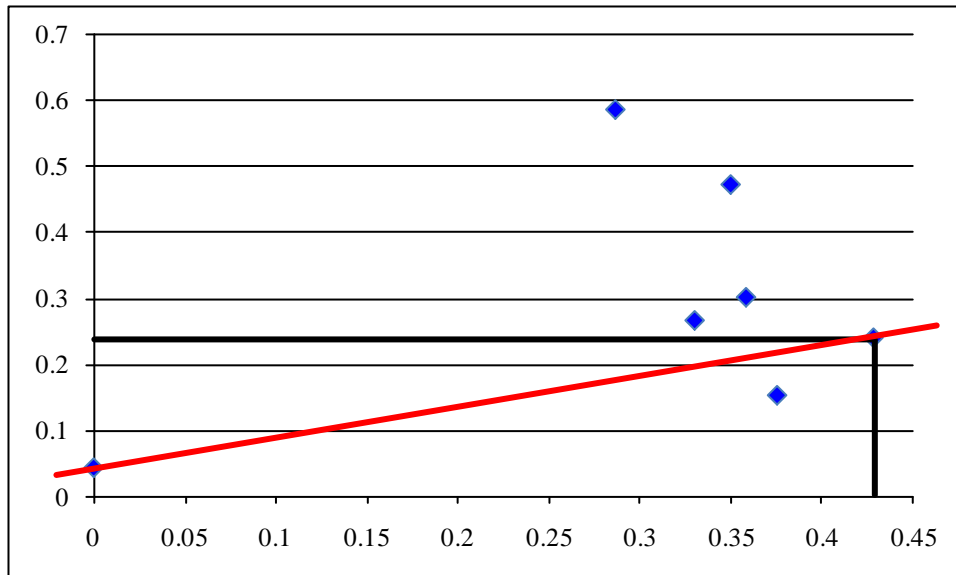
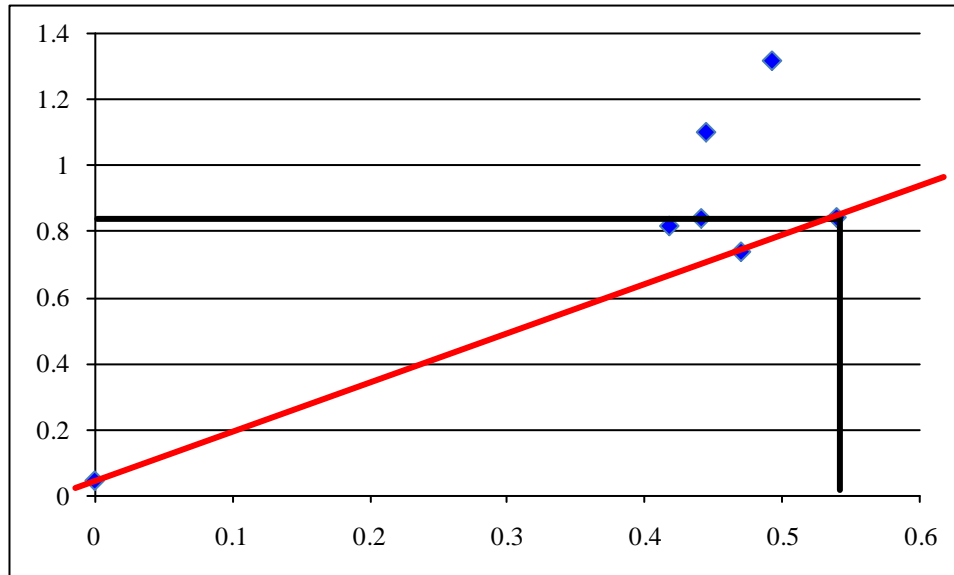




Figure 3
FIVE-YEAR PERFORMANCE OF EQUITY FUNDS VERSUS THE PSEi (2006-2010)
Note: This chart was based on Brown & Reilly (2009)



4. CONCLUSION AND RECOMMENDATIONS

It is evident from Tables 1, 2, and 3 that all funds had positive Sharpe ratios (Sharpe, 1966; Brown & Reilly, 2009) and their rankings (Table 4) were very consistent except for one instance. In all three periods, FMIC, Philequity, and Philam SG were ranked 1st, 2nd, and 5th, respectively.

Furthermore, ATRKE, FMIC, Philequity, and Sunlife funds outperformed the PSEi (Figures 1, 2, and 3). This suggests that investors would benefit from placing their money in actively-managed funds.

Other studies could use monthly data and/or a different or several measures of fund performance.

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