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# How Persistent Is Equity Style Performance Among Malaysian Fund Managers?<sup>§</sup>

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## Abstract

The knowledge of equity style of mutual funds has benefited investors by mitigating the issue of asymmetric information between fund managers and investors. However, the investors also need to know whether the equity style performance persists throughout different time periods. In this study, style analysis by Sharpe (1988, 1992) is used to decompose the funds into style and selection components, and reclassify the funds into growth and value styles in order to mitigate the misclassification of fund objectives. Performances are measured by selection return and risk-adjusted return against MSCI style benchmarks and Bursa Malaysia Composite Index (BMCI). The measurement of risk-adjusted return is also extended to the next period in order to investigate the persistence of performance. Our results show that under self-defined fund objectives, there is no persistence of performance either by style or market benchmarks. However, after controlling for equity style effect, there are positive and significant correlation for style alpha and BMCI alpha between period one and two for growth style funds, implying that there is persistence of performance between two periods. This study highlights the importance of equity style management in the context of Malaysian fund management industry.

Keywords: style analysis, mutual fund, equity style, performance measurement,  
persistence of performance

JEL classification numbers: G11, G18, G23

## 1. Introduction

With the advent of the concept of a fund's 'effective asset mix' and 'attribution analysis' by Sharpe (1988, 1992), there have been a number of proponents for style analysis with each of them demonstrated the usefulness of this analysis with respect to equity style classification (Tierney and Winston, 1991; Bailey, 1992; Bailey and Tierney, 1993; Coggin, 1998). This analysis has also been used to link the investment returns and asset allocation policies in some of the recent research (Brinson et al., 1991; Ibbotson and Kaplan, 2000).

In addition, the concept of equity style has evolved to become performance measurements. Tierney and Winston (1991) supported the use of return-based style analysis to analyze the asset mix of a

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portfolio manager. Using a four equity style portfolios produced by Wilshire Asset Management as generic portfolio for style–point analysis, they concluded that creation of a custom benchmark is the best way to address the style issue. Christopherson (1995) linked the crucial relationship among past return patterns, portfolio characteristics and future returns and pointed out that the reason for studying investment style was not so much concerned with the past returns, but to anticipate future returns.

TerHorst, Nijman and DeRoos (2004) stated that while the estimated portfolio may indeed differs from actual portfolio holdings, but “. . . if the aim is to predict future fund returns, factors exposures seem to be more relevant than actual portfolio holdings, and return–style based style analysis performs better than holding–based style–analysis”.<sup>1</sup> However, some researchers argued that good performance in one particular period could be due to pure luck. Henceforth, the persistency of fund managers has become the question of a number of researchers.

Based on the framework of Coggin and Trzcinka (2000), this paper intends to investigate the fund persistence in different time periods and under different groups of classification, especially the measurement of equity style performance based on the perspective of growth and value styles. This paper has used the Malaysian Growth and Malaysian Value Indices developed by Morgan Stanley Capital International (MSCI). The contribution of this paper is twofold. First, this study is first of its kind to apply growth and value style indices to Malaysian funds. The fund persistence of risk–adjusted performance is examined under two regimes. One being the self–defined fund objectives by asset management companies/fund managers, and two being the new investment styles classified by growth and value style perspectives. Second, this study will attempt to unravel the behavior of fund managers’ with respect to value and growth style investing.

The paper is organized as follows. The second section briefly reviews the literature on equity style classification and Malaysian mutual funds. The third, four and fifth sections are on data, methodology and results respectively. In final section, with respect to findings obtained from this study, this paper concludes on the application of equity style management, economic implication and behavior of Malaysian fund managers in the context of value and growth style investing.

## 2. Literature Review

Kahn and Rudd (1995) investigated the fund persistence of 300 equity funds from October 1988 to September 1994, and 195 bond funds from October 1991 to September 1994. They reported that evidence supported persistence only for fixed–income fund performance. But the persistence was insufficient to overcome the average underperformance of fixed income due to fees and expenses. In Kahn and Rudd (2003), they extended their study in 1995 and focused on managers’ persistence. They found no significant persistence for growth funds and concluded that historical analysis of returns alone cannot consistently separate the persistent winners from the lucky. According to them, it appears that roughly three percent of all funds might be persistent winners, but it is difficult to separate them

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1. Refer TerHorst et al.(2004), p. 30, para 4.

out from the rest of the samples.

While persistence of performance has been investigated by many researchers throughout different periods of time with different kinds of asset classes, the studies on persistence of funds can mainly be divided into two groups. While the first group found no persistency of performance [Jensen (1968), Kritzman (1983), Dunn and Theisen (1983), Elton and Gruber (1990)], the other group found performance of funds does exist [Grinblatt and Titman (1988), Lehman and Modest (1987), Hendricks, Patel and Zeckhauser (1993), Goetzmann and Ibbotson (1994)].

It is inevitable for the problem of asymmetric information between fund manager and investors to exist as timely mutual fund holdings are not readily updated even in the developed market as discussed by Lucas and Reipe (1996). Furthermore, they identified style analysis to be a useful tool for investors to comprehend a trust fund's investment policy and objective.

In a number of subsequent studies, in the course of identifying a system of classification for equity trust funds, the researchers have also presented the evidence of mis-classifications if self-reported investment objectives were to be compared to the estimated styles (diBartolomeo and Witkowski, 1997; Brown and Goetzmann, 1997; Kim, Shukla and Tomas, 2000).

In one of the recent studies, Amenc Sfeir and Martellini (2002) have proposed an integrated framework for assessing the risk-adjusted performance of mutual fund managers. This methodology is designed to be consistent with modern portfolio theory and constraints imposed by practical implementation of investment management where a variety of styles have to be accounted for.

### *Mutual Funds in Malaysia*

Chua (1985) with exclusive samples of 12 Malaysian mutual funds between 1974 to 1984, concluded that funds outperformed the market proxy and performance was fairly consistent over time. High performance funds tend to relate to those with low expense ratio, low asset size and low portfolio turnover.

In a subsequent study, Ewe (1994) with sample of 37 funds and a period between 1988–1992, with test of performance by Jensen's Alpha Measure and Sharpe Index Measure, reported that while risk adjusted returns overall were less than those of stock market implying that the managers had low forecasting ability. Shamsher and Annuar (1995) found a similar result with Ewe (1994), where the returns on investment in 54 funds for the period 1988–1992 were below risk-free and market returns. Besides the performance is inconsistent over time, the degree of diversification of the portfolios was below expectation.

In addition, the studies conducted with respect to the performance measurement of Malaysian unit trust funds have utilized market benchmarks such as Kuala Lumpur Composite Index (KLCI) and EMAS Index (Leong and Aw, 1997; Ch'ng and Kok, 1998). These researchers have advocated for more than one kind of market benchmarks for performance measurement. All the prior studies before 1997 have concentrated on using the broad market index i.e. KLCI as the single yardstick.

In another study by Shamsher and Annuar (2001), with a sample size of 41 non-government based

mutual funds from 1995 to 1999, they reported that based on risk-adjusted returns basis, both active and passive funds performed equally well, but underperformed the market portfolio. They concluded that choice of active or passive funds was irrelevant given equal performance, but growth funds should be prioritized over income if investors preferred actively managed funds over passive funds and vice versa.

Using the return-based style analysis with a sample size of 42 funds from February 1996 to January 2001, Lau (2002) noted that, in addition to the usual market benchmark comparison, the performance of funds can also be compared against their respective peer groups. It was also noted that the level of passive management for index funds were indistinguishable from other types of fund.

### 3. Data

#### *Data Selection*

The data comprises of 72 month-end net asset value (NAV) of the equity funds listed on daily newspapers. The sample period starts from May 1997 to May 2003. It is further divided into two sub-periods as shown in table 1. The sample period is chosen with the purpose to match the commencement of MSCI Malaysian Growth and Value Indices, which started in May 1997. NAV is selected as the measure of a unit trust fund's value as it reflects the actual amount fund managers have to invest with.

A total of 41 funds from growth, income and balance categories are chosen for this study. While the asset management companies ("AMC") define their own fund objectives, the general consensus of criteria of fund classification can be found in the financial magazine such as the one used in table 2. A more detailed break-down of these funds into different sub-types such index funds, small company funds and others can be seen in table 6.

#### *Data Description*

As the methodology of style analysis requires at least sixty consecutive monthly returns of funds, a sample period from May 1997 through May 2002 is chosen.

Table 1 Study Periods

Asset Category	In-Sample	Period 1	Period 2
Income Funds	May 1, 1997–	June 1, 1997–	June 1, 2000–
Growth Funds	May 31, 2003	May 31, 2000	May 31, 2003
Balance Funds			

Table 2 Criteria of Fund Classification

Fund Classification	Description
Income Funds	Malaysian–domiciled unit trust funds which mainly invest in Malaysian equities and on regular basis, approximately half of the total returns are distributed to unitholders in the form of income
Growth Funds	Malaysian–domiciled unit trust funds which mainly invest in Malaysian equities and on regular basis, more than half of the total returns are in the from of capital gain (increased unit price or bonus units)
Balanced Funds	Malaysian–domiciled unit trust funds which only invest up to a maximum of 60 percent in Malaysian equities, and the balance in fixed interest securities
Source: The Edge Daily, dated on 1 April 2002	

### *Dependent Variables*

The continuous compounding return for the fund is used as the dependent variable. It is calculated as

$$R_{j,t} = \ln \left( \frac{P_{j,t}}{P_{j,t-1}} \right)$$

$$R_{m,t} = \ln \left( \frac{I_{m,t}}{I_{m,t-1}} \right)$$

$$R_{f,t} = \ln(1 + r_{f,t})$$

Where:

$R_{j,t}$  = the continuous compounded return for j unit trust fund at time t

$R_{m,t}$  = the continuous compounded return for m benchmark portfolio for the month t

$R_{f,t}$  = the continuous compounding risk free rate of interest for month t

$P_{j,t}$  = the net asset value for j unit trust fund at time t

$I_{m,t}$  = the asset class index at the end of month t

$r_{f,t}$  = the discount rate of the 90–day T–Bill for month t as the proxy for the risk free rate of interest

$\ln$  = the natural logarithm

### *Independent Variables*

Independent variables are returns series of asset classes invested by fund managers. The asset classes that represent the investment universe are shown in table 3. These asset classes are chosen after careful examination on literatures such as Choong (2001) and fund prospectuses. Out of 41 funds in our sample, three funds that also invest in foreign stocks have six asset classes as their independent

Table 3 Asset Class Indices

Asset Class	Description
Growth Stocks	Represented by MSCI Malaysian Growth Index* quoted in local currency.
Value Stocks	Represented by MSCI Malaysian Value Index* quoted in local currency.
Cash	A proxy for short-term Ringgit money market instruments. Represented by Kuala Lumpur Inter-bank Offer Rate (KLIBOR). KLIBOR 1-month deposit rate is used.
Government Bonds	Represented by MGS-bond all tenure Index <sup>#</sup> , which account for MGS with value above RM100 million on issues for maturity greater than one year.
Corporate Bonds	Represented by RAM Listed Bond Index <sup>#</sup> , which account for all bonds and loan stocks listed on KLSE a term to maturity of more than one year. A proxy for listed private debt securities.
International Stocks	Represented by MSCI World Index*. A proxy for all international stocks index.

# Source of data: Rating Agency Malaysia (RAM)—Quantsop, 2004

\* Available from <http://www.msci.com> [cited 5 May 2005]

Table 4 Descriptive Statistics of Returns of Asset Classes

Variable	Observation	Mean	Std. Dev.	Minimum	Maximum
MSCI Growth Index	60	-0.76	12.42	-29.23	35.81
MSCI Value Index	60	1.00	13.46	-23.23	41.81
KLIBOR	60	0.41	0.23	0.23	0.88
MGS Index	60	0.75	1.31	-2.68	6.55
LBI Index	60	2.07	13.83	-12.40	38.62
MSCI World Index	60	0.35	4.72	-14.49	8.11

variables.

As stated by Sharpe (1992) “. . . while not strictly necessary, it is desirable that such asset classes should be 1) mutually exclusive, 2) exhaustive and 3) have returns that ‘differ’, . . . and the asset classes returns should either have low correlations with one another or, in cases in which correlations are high, different level of standard deviations”. While style analysis in equation (2) has attempted to capture the investment universe i.e. to include all possible investment products in the model, careful consideration has been taken to ensure that asset classes chosen are not correlated to one another. As shown in table 5, it is found that one pair of correlation coefficients i.e. the MSCI Value and MSCI Growth Indices, has high correlation of 0.89. However, as shown in table 4, the standard deviations of these indices are different i.e. MSCI Growth Index  $s$  is 12.42 percent while MSCI Value is 13.46 percent respectively. As such, this fulfills the above requirement. Table 4 shows the summary statistics of returns of asset classes used for style analysis in equation (2).

Table 5 Mean, Standard Deviation, Correlation Coefficients between The Returns of Asset Classes

	MSCI Growth	MSCI Value	KLIBOR	MGS	LBI	MSCI World
MSCI Growth	1.00					
MSCI Value	0.89	1.00				
KLIBOR	-0.24	-0.20	1.00			
MGS	0.16	0.16	-0.07	1.00		
LBI	0.17	0.11	-0.14	-0.07	1.00	
MSCI World	0.43	0.43	0.13	-0.19	0.21	1.00

#### 4. Methodology

##### *Style Analysis*

As in Sharpe (1992), this study initially introduces the generic factor model in equation (1) before adapting it into style analysis in equation (2).

$$\tilde{R}_i = [b_{i1}\tilde{F}_1 + b_{i2}\tilde{F}_2 + b_{ik}\tilde{F}_k + \dots + b_{in}\tilde{F}_n] + \tilde{e}_i \quad (1)$$

Where

$\tilde{R}_i$  = return of fund  $i$

$\tilde{F}_k$  = return of factor  $k$  for fund  $i$

$b_{ik}$  = sensitivity of fund  $i$  to factor  $k$

$\tilde{e}_i$  = non-factor return of asset  $i$  of mean zero with the assumption that the non-factor returns are uncorrelated  $\sigma_{eiej} = 0$

Style Analysis is the use of constrained quadratic programming for solving the asset allocation problem. This approach incorporates two specific constraints: first, the coefficients must sum to 100 percent and second, coefficients must be positive. Negative coefficients can be interpreted as short positions in asset classes. This type of strategy is rarely used by the funds examined, and prohibiting these coefficients provides better, more usable results.<sup>2</sup>

The factor is rewritten as

$$\tilde{e}_i = \tilde{R}_i - [b_{i1}\tilde{F}_1 + b_{i2}\tilde{F}_2 + b_{ik}\tilde{F}_k + \dots + b_{in}\tilde{F}_n] \quad (2)$$

Where

$\tilde{e}_i$  = selection

$\tilde{R}_i$  = return of fund  $i$

$\tilde{F}_k$  = return of factor  $k$  for fund  $i$

$b_{ik}$  = sensitivity of fund  $i$  to factor  $k$

2. The positivity constraint of style analysis here appears to have no contradiction to the application to Malaysian mutual fund industry as short-selling is not an approved practice.



To obtain the style, minimize variance of residual return  $\tilde{e}_i$

Subject to Constraints

$$\sum_{j=1}^n b_{ik} = 1 \text{ for any fund } i \text{ and asset class } k$$

$$\text{and } 0 < b_{ik} < 1$$

With the two specific constraints, the coefficients tabulated in equation (2) will resemble the weights within a portfolio and conveniently displayed as part of the portfolio. The asset class indices in table 3 which represent the factors in equation (1) and the sensitivity of each of the fund's return series to each of the asset class index factors is used to construct a passive benchmark portfolio return series for performance measurement. In other words, the return of funds will be measured against the style-based, passive benchmark contained as second, bracketed terms in the right hand side of equation (2).

Upon obtaining results from the quadratic programming in equation (2), the proportion of variance 'explained' by the selected asset classes, for fund  $i$  can be obtained as below:

$$R^2 = 1 - \frac{Var(\tilde{e})}{Var(\tilde{R})} \quad (3)$$

The second term of the right-hand side of the above equation represents the proportion of variance 'unexplained' or due to active management (selection). In other words, the return of unit trust fund is decomposed into return on a set of asset classes and residual return. The former is attributed to *style* and represented by the R-square while the latter is attributed to *selection*.

In order to take into account the added (or subtracted) value provided by a fund i.e. its benchmark and the added risk, the monthly mean selection returns is divided by the standard deviation of monthly selection returns. This calculation gives a Monthly Selection Sharpe Ratio as stated in equation(4).

$$\text{Monthly Selection Sharpe Ratio} = \frac{E(\tilde{e}_i)}{\sigma_{\tilde{e}_i}} \quad (4)$$

The monthly mean selection returns can be measured for its statistical significance using a t-statistic. The null hypothesis is stated as selection return equals to zero.

$$t = \frac{(r_s - \mu)}{s/\sqrt{n}} \quad (5)$$

Where

- $r_s$  = the monthly mean selection returns
- $\mu$  = zero, the null hypothesis
- $s$  = the standard deviation of monthly selection return
- $n$  = the number of observations

### *Performance Measurement*

The performance measurement is by means of risk-adjusted return measured against two types of benchmark portfolios. The first type of benchmark portfolio is Bursa Malaysia Composite Index (BMCI) used for every fund. The second type of benchmark portfolios are the MSCI style benchmarks i.e. the MSCI Malaysian Value Index for value style funds, and MSCI Malaysian Growth Index for growth style funds. The risk-adjusted performance measurement is the alpha as shown in equation (6).

$$R_p - r_f = \alpha_p + \beta(R_B - r_f) + \varepsilon_t \quad (6)$$

Where

$R_p$  = the monthly equity funds return

$r_f$  = the monthly risk free rate (three-month T-bill return)

$\alpha_p$  = the risk-adjusted excess return on the fund

$R_B$  = the monthly benchmark return

$\varepsilon_t$  = residual term with mean zero

## **5. Results**

The results of style analysis are shown in table 6. Across the different fund types, it could be observed as the name implied, growth funds have the most substantial holdings of growth stocks of 33.90 percent, while income funds have the most substantial holdings of value stocks of 37.9 percent. It can be observed that value style index is able to explain the holdings of value stocks asset class in income funds. The fact that income funds have large holdings of value stocks implies that income fund may have characteristics similar to the value style index, although both are defined differently. Growth style index is found to explain growth stocks better. On average, balanced funds also have 30.76 percent of growth stocks and 18.04 percent of value stocks, however each balance fund varies in its holdings of value and growth stocks.

From table 6, it can also be observed that growth funds have higher degree of style of 73 percent compared to income funds of 67 percent. Conversely, income funds have higher degree of selection of 33 percent compared to growth funds of 27 percent. This could be implied fund managers are more likely to buy and hold growth stocks, while fund managers are likely to trade value style stocks. As such, whether income funds have higher portfolio turnover rate than growth funds is another issue to be verified in further research.

The main purpose of finding the equity style of mutual funds is to address the issue of asymmetric information between fund managers and investors, and as a way to mitigate misclassification of fund objectives. Based on the result of style analysis, these funds are re-classified into new fund objectives of growth and value, as per the perspective of growth and value style indices. Upon reclassification as shown in table 6, there are 25 value style and 13 growth style funds.

Table 7 shows the descriptive statistics of the market and style benchmarks used in equation (6). It

Table 6 Results of the Estimation: The Degree of Styles and Selection, Asset Classes Holdings by Different Funds, and Selection Return

No	Fund	Fund Objective	Sub-Type	Style	Selection	MSCI Growth	MSCI Value	Cash	Govt Bonds	Corp Bonds	MSCI World	Investment Styles	Monthly Mean Sel Return (%)	t-Statistic Sel Return (%)	Monthly Sel Sharpe Ratio
1	Affin Equity	Income	Equity	84.37	15.63	12.29	68.86	18.30	0.00	0.56		Value	0.13	0.21	0.03
2	AM Total Return	Income	Equity	50.98	49.03	32.09	35.65	0.00	28.23	4.03		Value	0.02	0.02	0.00
3	M Berjaya	Income	Equity	91.02	8.99	32.58	54.43	9.63	0.00	3.35		Value	0.46	0.91	0.12
4	M Investment	Income	Equity	92.21	7.79	40.65	43.82	14.25	0.00	1.29		Value	0.12	0.28	0.04
5	ASM 3	Income	Equity	58.73	41.27	13.22	45.79	10.51	25.58	4.89		Value	-0.84	-2.36**	-0.30
6	ASM 4	Income	Equity	47.94	52.06	0.00	64.05	23.98	5.04	6.92		Value	-0.82	-1.53	-0.20
7	ASM 5	Income	Equity	67.34	32.66	48.40	14.24	0.00	32.35	5.01		Growth	-0.73	-1.94*	-0.25
8	ASM 6	Income	Equity	45.92	54.08	28.03	22.21	18.68	25.19	5.90		Growth	-0.83	-2.09**	-0.27
9	ASM 7	Income	Equity	60.71	39.29	24.36	27.51	0.00	43.31	4.82		Value	-0.81	-2.55**	-0.33
10	ASM 8	Income	Equity	50.81	49.19	58.77	9.53	0.00	28.18	3.52		Growth	-0.88	-2.09**	-0.27
11	ASM 10	Income	Equity	87.28	12.72	17.88	72.90	0.00	3.71	5.50		Value	-0.69	-2.35**	-0.30
12	ASM 11	Income	Equity	69.04	30.96	19.25	63.85	0.00	11.48	5.42		Value	-0.29	-0.39	-0.05
13	ASM fpf	Income	Equity	81.99	18.01	31.35	55.43	0.00	7.92	5.30		Value	-0.57	-1.45	-0.19
14	ASM premier	Income	Equity	75.31	24.69	29.86	35.62	0.00	27.81	6.71		Value	-0.71	-2.34**	-0.30
15	ASM ptmb	Income	Equity	80.36	19.64	41.79	42.13	0.00	12.74	3.34		Value	-0.45	-1.06	-0.14
16	Mayban UT	Income	Equity	72.00	28.00	24.32	26.36	37.87	8.79	2.67		Value	-0.71	-2.77**	-0.36
17	Pacific Premier	Income	Equity	72.35	27.65	16.11	43.92	19.68	16.27	4.03		Value	-0.36	-0.86	-0.11
18	BSN	Income	Equity	71.24	28.76	1.10	74.75	17.92	0.00	6.23		Value	-0.36	-0.54	-0.07
19	Public Savings	Income	Equity	47.78	52.22	19.82	15.01	60.91	0.00	4.26		Growth	-0.60	-1.77*	-0.23
20	Public Growth	Income	Equity	64.20	35.80	32.32	16.34	49.73	0.00	1.62		Growth	-0.67	-1.84*	-0.24
21	Public Industry	Income	Equity	49.82	50.18	6.72	36.60	50.55	1.74	4.39		Value	-0.67	-1.56	-0.20
22	Public Regular Savings	Income	Equity	43.88	56.12	32.24	2.28	64.48	0.68	0.32		Growth	-0.70	-1.92*	-0.25
23	RHB Dynamic	Income	Equity	87.83	12.17	27.71	31.29	35.78	1.99	3.24		Value	-0.22	-0.71	-0.09
24	TA Growth	Income	Equity	64.12	35.89	28.38	31.35	0.00	36.81	3.46		Value	-0.62	-1.48	-0.19
25	ASM 2	Income	Index	49.13	50.87	29.52	30.15	0.00	34.86	5.46		Value	-0.60	-1.62	-0.21
26	Public Index	Income	Index	76.93	23.07	25.58	23.49	30.08	16.61	4.24		Growth	-0.53	-1.74*	-0.23
27	ASN	Income	Federal	76.22	23.78	22.74	35.05	29.53	0.00	12.68		Value	-0.56	-1.45	-0.19
	Income Fund			67.39	32.61	25.82	37.87	18.22	13.68	4.41					
1	ASM dana Growth	Growth	Equity	59.71	40.29	28.87	24.30	41.36	0.00	5.47		Growth	-0.47	-0.99	-0.13
2	SBB Double Growth	Growth	Equity	75.72	24.28	33.39	28.59	21.46	5.60	0.96	10.00	Growth	-0.17	-0.33	-0.04
3	SSB High Growth	Growth	Equity	63.12	36.88	28.89	32.06	28.52	6.83	3.70		Value	-0.09	-0.11	-0.01
4	HLG Growth	Growth	Equity	70.92	29.08	44.87	14.60	27.03	13.24	0.26		Growth	-0.22	-0.44	-0.06
5	MBF Growth	Growth	Equity	79.85	20.15	39.89	46.36	0.00	6.76	6.99		Value	-0.26	-0.49	-0.06
6	Public Aggressive Growth	Growth	Equity	68.24	31.76	36.42	17.27	31.55	12.48	2.28		Growth	-0.52	-1.31	-0.17
7	RHB Capital	Growth	Equity	89.10	10.90	31.52	32.47	12.16	21.44	2.41		Value	-0.33	-1.08	-0.14
8	OSK-UOB Equity	Growth	Equity	79.61	20.39	47.20	16.96	0.00	35.84	0.00		Growth	-0.67	-1.35	-0.17
9	M Progress	Growth	Small Comp	78.83	21.17	25.16	37.07	34.60	0.00	3.17		Value	-0.01	-0.03	0.00
10	SBB ECO Growth	Growth	Small Comp	64.26	35.74	25.97	29.68	21.17	13.18	0.00	10.00	Value	-0.11	-0.16	-0.02
11	SBB Savings Fund	Growth	Balanced	74.27	25.73	30.68	15.72	7.39	33.88	2.33	10.00	Growth	-0.43	-1.09	-0.14
	Growth Fund			73.06	26.94	33.90	26.83	20.48	13.57	2.51	2.73				
1	Mayban Balanced	Balanced		46.12	53.88	25.39	0.00	72.99	0.00	1.62			-0.63	-2.26**	-0.29
2	MBF Balanced	Balanced		80.25	19.75	47.36	38.28	0.00	11.41	2.95			-0.34	-0.68	-0.09
3	Public Balanced	Balanced		61.10	38.90	19.53	15.84	61.15	0.00	3.47			-0.63	-2.20**	-0.28
	Balanced Fund			62.49	37.51	30.76	18.04	44.71	3.80	2.68					

Note: \*\*\*, \*\* and\* denote level of significance at 1, 5 and 10 percent level respectively.

can noted that the correlation coefficients of 0.02, 0.11 and -0.08 between both periods for the three benchmarks are extremely low. Using the Pearson correlation test, the null hypothesis of no association between period one and period two is accepted. In other words, period one and period two are independent.

### Performance Measurement

Table 8 presents summary statistics of alpha for all funds. All alphas have negative values for both period one and two either measured by MSCI style benchmarks or BMCI. These are qualified results as period one coincided with the commencement of Asian financial crisis, from July 1997 to 1998. The recovery of financial markets could be seen with better performance in period two with both style

Table 7 Descriptive Statistics of Bursa Malaysia Composite Index (BMCi) and MSCI Growth and Value Style Benchmarks (Risk-Adjusted Basis)

Variable	Observation	Mean	Std. Dev.	Minimum	Maximum
BMCi	72	-0.45	10.91	-25.40	33.79
BMCi (Period 1)	36	0.01	14.34	-25.40	33.79
BMCi (Period 2)	36	-0.91	5.94	-10.68	10.96
Correlation between Period 1 and 2	0.02				
MSCI Growth	72	-1.01	11.49	-29.85	35.36
MSCI Growth (Period 1)	36	-0.85	14.83	-29.85	35.36
MSCI Growth (Period 2)	36	-1.17	6.89	-17.68	11.82
Correlation between Period 1 and 2	0.11				
MSCI Value	72	0.37	12.45	-23.86	41.36
MSCI Value (Period 1)	36	1.28	16.39	-23.86	41.36
MSCI Value (Period 2)	36	-0.54	6.67	-15.28	13.09
Correlation between Period 1 and 2	-0.08				

Table 8 Alphas for All Funds

All FUNDS (38 FUNDS)	Alpha from Style Model		Alpha from BMCi Model	
	June-97 May-00	June-00 May-03	June-97 May-00	June-00 May-03
Mean	-1.45	-0.62	-0.58	-0.38
Median	-1.10	-0.66	-0.60	-0.36
Standard Deviation	3.44	0.97	0.74	0.89
Maximum	1.04	3.32	0.94	3.21
Minimum	-21.04	-2.45	-2.66	-2.17
Number Positive	10	3	10	7
Number Negative	28	35	28	31
Alpha Correlation Between Period 1 and 2:				
Pearson Correlation:	0.10		0.20	
Spearman Rank Correlation:	0.37**		0.22	

Note: \*\*\*, \*\* and\* denote level of significance at 1, 5 and 10 percent level respectively.

alpha and BMCi alpha. The style alpha measured by rank correlation is positive and significantly different from zero. There is also positive correlation for BMCi alpha between period one and two.

### *Self-defined Fund Objectives*

Table 9 presents summary results for all funds based on their self-defined objectives. For income funds in Panel A, all alphas have negative values for period one and two measured by style and market benchmarks. The results can be qualified as period one coincided with the Asian financial crisis, and the recovery of financial markets could be seen with better performance in period two. Notably, there

Table 9 Alphas for All Funds in (Based On Self-Defined Found Objectives)

## Panel A

INCOME FUNDS (27 funds)	Alpha from Style Model		Alpha from BMCI Model	
	June-97 May-00	June-00 May-03	June-97 May-00	June-00 May-03
Mean	-2.24	-0.81	-0.80	-0.48
Median	-1.62	-0.73	-0.90	-0.41
Standard Deviation	3.82	1.04	0.73	0.98
Maximum	0.17	3.32	0.94	3.21
Minimum	-21.04	-2.45	-2.66	-2.17
Number Positive	1	1	5	4
Number Negative	26	26	22	23
Alpha Correlation Between Period 1 and 2:				
Pearson Correlation:	-0.001		0.02	
Spearman Rank Correlation:	0.00		-0.02	

## Panel B

GROWTH FUNDS (11 Funds)	Alpha from Style Model		Alpha from BMCI Model	
	June-97 May-00	June-00 May-03	June-97 May-00	June-00 May-03
Mean	0.48	-0.16	-0.04	-0.13
Median	0.56	-0.31	0.14	-0.29
Standard Deviation	0.38	0.55	0.41	0.54
Maximum	1.04	-0.87	0.57	-0.82
Minimum	-0.14	1.22	-0.79	1.15
Number Positive	9	2	6	3
Number Negative	2	9	5	8
Alpha Correlation Between Period 1 and 2:				
Pearson Correlation:	0.099		-0.08	
Spearman Rank Correlation:	0.009		-0.17	

is zero correlation for style and market benchmark between period one and two for income funds. This implies there is no alpha persistency under self-defined fund objectives.

In Panel B, the growth funds have positive alpha in period one for style benchmark, followed by negative alphas in period two. For BMCI benchmark, growth funds show negative alphas for both periods, with slightly worst result in period two. Notably, there is almost zero or extremely weak correlation for style and market benchmark for both periods. This implies that there is no alpha persistency under self-defined fund objectives.

Table 10 Alphas for All Funds (Based On Growth and Value Style Categories)

Panel A

VALUE STYLE (25 FUNDS )	Alpha from Style Model		Alpha from BMCI Model	
	June-97 May-00	June-00 May-03	June-97 May-00	June-00 May-03
Mean	-1.36	-0.53	-0.57	-0.22
Median	-1.60	-0.66	-0.66	-0.32
Standard Deviation	0.73	1.04	0.73	0.99
Maximum	0.17	3.32	0.94	3.21
Minimum	-0.73	-2.45	-1.88	-2.17
Number Positive	1	2	8	7
Number Negative	24	23	17	18
Alpha Correlation Between Period 1 and 2:				
Pearson Correlation:	-0.01		0.03	
Spearman Rank Correlation:	0.07		0.05	

Panel B

GROWTH STYLE (13 Funds)	Alpha from Style Model		Alpha from BMCI Model	
	June-97 May-00	June-00 May-03	June-97 May-00	June-00 May-03
Mean	-0.16	-0.75	-0.60	-0.68
Median	-0.17	-0.57	-0.55	-0.49
Standard Deviation	0.76	0.60	0.78	0.57
Maximum	0.91	-0.12	0.40	-0.09
Minimum	-2.05	-1.99	-2.66	-1.94
Number Positive	5	0	3	0
Number Negative	8	13	10	13
Alpha Correlation Between Period 1 and 2:				
Pearson Correlation:	0.80***		0.80***	
Spearman Rank Correlation:	0.78***		0.71***	

*Controlling for Equity Style*

In Table 10, Panel A shows that all value style funds have negative alphas for both periods. However, the recovery of financial markets can be seen with better performance in period two. Notably, there is zero correlation for style and market benchmark between both periods for value style funds, implying no persistence of performance.

In Panel B, growth style funds have negative alphas for both periods measured against style and BMCI benchmarks. However, there is positive and significant correlation between both periods in

style alpha as well as benchmark alpha. It can be implied that there is persistency between period one and two once the funds are grouped according to growth style funds.

The persistence of performance can be detected for growth style and not for value style funds. This implies that value style funds have the tendency to improve their economic value within business cycle. As stated by financial literature, value fund managers invest in distressed companies during economic downturn in anticipation of gain during the economic upturn. As such, value style funds have no persistence of performance as the Malaysian economy recover from the Asian financial crisis. On the other hand, growth style funds have more tendencies to persist their performance during and after economic crisis, as there is time lag in between the general economic improvement and ultimate reflection of financial results in their respective funds.

## 6. Conclusion

The discussion of this paper shows the importance of controlling for equity style effect when investigating the alpha persistency. A few results are notable. First, when measuring the alphas for all funds, the correlation of style alpha for period one and two is positive and significant. There is also positive correlation for BMCI alpha.

Second, under self-defined fund objectives, there is zero correlation for style and market benchmark between period one and two for income funds. This implies that there is no persistency for fund managers' performance. Likewise, under self-defined fund objectives for growth funds, there is zero correlation of style alphas between both periods. There is also zero or extremely weak correlation for alpha measured against BMCI for growth funds, implying no persistence of performance.

Third, after controlling for equity style effect, there is zero correlation for alphas measured against style and market benchmarks between period one and two for value style funds. However, there is positive and significant correlation for style alpha and BMCI alpha between period one and two for growth style funds. This implies that there is persistence of performance when the funds are grouped according to growth style, but not value style.

This study suggests three conclusions. First, the choice of benchmark affects the results of alpha. However, it could be qualified that the negative alphas obtained from the majority of the results as the period coincided with the Asian financial crisis. However, it could be observed that alpha improves with economic recovery as shown in period two in all cases except growth style funds.

One may argue the motivation of investigating style and benchmark alphas during economic downturn experienced in period one by all the funds. Nevertheless, as the MSCI style benchmarks were introduced from May 1997, ab initio usage of the style benchmarks is an attempt to discover their usefulness in mutual fund's classification, especially in the context of Malaysian fund management where no previous application of such indices has been found.

Second, growth funds category has been in existence for long time prior to the creation of MSCI style benchmark. It could be concluded that with correct style reclassification as shown in table 6, the persistency of fund managers can be detected. This is not the case when the funds are grouped under

self-defined fund objectives where persistence of performance cannot be detected. This may be due to mis-classification of fund objectives.

Third, the economic reasoning for explaining no persistence of performance for value style funds obviously lies in the definition of value investing itself as stated by finance literature. Value fund managers invest in distressed companies during economic downturn in anticipation of gain during the upturn of economy. Our results show that value style funds also have higher degree of selection implies that value fund managers may realize their gains during economic upturn resulting in better alphas. Better style and BMCI alphas in period two result in no persistence of performance.

In conclusion, this study presents new evidence and adds on the growing importance of correct classification based on the concept of equity style management. The phenomenon of alpha consistency can be overlooked if the funds are not correctly classified from the first instance.

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Appendix 1: List of Unit Trust Funds in the Sample

No.	Plan Sponsors	Fund	Launch Date	Fund Type	Units (Mil)
1	Affin Trust	Affin Equity	93.04.29	Income	300
2	ASNB	ASN	81.04.20	Federal	2500
3	Arab Malaysian	AM First	89.01.10	Income	500
4	Asia Unit Trust	M Progress	70.06.01	Small Companies	300
5	Asia Unit Trust	M Berjaya	76.05.05	Income	50
6	Asia Unit Trust	M Equity	82.02.20	Small Companies	50
7	Asia Unit Trust	M Investment	96.07.18	Income	300
8	Amanah Saham Mara	ASM 2 Index	69.02.19	Index	20
9	Amanah Saham Mara	ASM 3	69.11.01	Income	20
10	Amanah Saham Mara	ASM 4	70.02.02	Income	20
11	Amanah Saham Mara	ASM 5	71.09.03	Income	20
12	Amanah Saham Mara	ASM 6	72.05.05	Income	20
13	Amanah Saham Mara	ASM 7	72.12.28	Income	20
14	Amanah Saham Mara	ASM Growth	72.12.28	Growth	20
15	Amanah Saham Mara	ASM 8	75.07.17	Income	20
16	Amanah Saham Mara	ASM 11	79.10.28	Income	20
17	Amanah Saham Mara	ASM premier	95.06.12	Income	350
18	Amanah Saham Mara	ASM ptnb	95.08.28	Income	50
19	SBB	Double Growth	91.05.15	Growth	550
20	SBB	Emerging Companies	94.05.10	Small Companies	700
21	SBB	Savings Fund	95.08.05	Balanced	500
22	SBB	High Growth Fund	95.09.28	Growth	1000
23	HLG	HLG Growth	95.09.08	Growth	300
24	Mayban	Mayban Unit Trust	92.03.26	Income	500
25	Mayban	Mayban Balanced	94.09.19	Balanced	1000
26	MBF	MBF Balanced	91.05.01	Balanced	750
27	MBF	MBF Growth	95.06.01	Growth	300
28	Pacific Mutual	Pacific Premier	95.08.10	Income	500
29	BSN	BSN	95.01.12	Income	500
30	Public Mutual	Public Savings	81.03.29	Income	500
31	Public Mutual	Public Growth	84.12.11	Income	1000
32	Public Mutual	Public Index	92.03.02	Index	500
33	Public Mutual	Public Industry	93.11.18	Income	1000
34	Public Mutual	Public Aggressive Growth	94.04.25	Growth	500
35	Public Mutual	Public Regular Savings	94.04.25	Income	1500
36	Public Mutual	Public Balanced	92.09.15	Balanced	1000
37	RHB	RHB Dynamic	92.09.15	Income	750
38	RHB	RHB Capital	95.04.12	Growth	500
39	SBB	Premium Capital	95.08.01	Income	500
40	OSK-UOB	OSK-UOB Equity	96.08.08	Growth	750
41	TA Unit Trust	TA Growth	96.07.01	Income	350

Source: FMUTM. Available from <http://www.fmutm.com.my> [cited 5 March 2004]

## References

- Amenc, N., Sfeir, D. and Martellini, L. (2002), “An Integrated Framework for Style Analysis and Performance Measurement”, EDHEC Risk and Asset Management Research Centre, France.
- Bailey, J.V. (1992), “Are Manager Universes Acceptable Performance Benchmarks?”, *Journal of Portfolio Management*, vol. 18, no. 3, pp. 9–13.
- Bailey, J.V. and Tierney, D. E. (1993), “Gaming Manager Benchmark”, *Journal of Portfolio Management*, vol. 19, no. 4, pp. 37–40.
- Brinson, G. P., Hood L. R. and Beebower, G. P. (1986), “Determinants of Portfolio Performance”, *Financial Analysts Journal*, vol. 42, no. 4, pp. 39–48.
- Brinson, G. P., Singer, B. D. and Beebower, G. P. (1991), “Determinants of Portfolio Performance II: An Update”, *Financial Analysts Journal*, vol. 47, no. 3, pp. 40–48.
- Brown, S.J. and Goetzmann W. N. (1997), “Mutual Fund Styles”, *Journal of Financial Economics*, vol. 43, no. 3, pp. 373–399.
- Ch’ng, T. L. and Kok, K. L. (1998), “Performance of Unit Trusts In An Emerging Market: A Case Study of Malaysia”, *Capital Market Review*, vol. 6, no. 1 & 2, pp. 1–17.
- Choong, D. (2001), *Investor’s Guide To Malaysian Unit Trusts*, Sage Information Services, Kuala Lumpur.
- Chua, C. P. (1985), “The Investment Performance of Unit Trusts In Malaysia”, Unpublished MBA Thesis, School of Management, University Malaya, Kuala Lumpur.
- Christopherson, J.A. (1995), “Equity Style Classification”, *Journal of Portfolio Management*, vol. 21, no. 3, pp. 32–43.
- Coggin, T. D. (1998), “Long-Term Memory in Equity Style Indexes”, *Journal of Portfolio Management*, vol. 24, no. 2, pp. 37–46.
- Coggin, T. D. and Fabozzi, F. J. (ed.) (2003), *The Handbook of Equity Style Management*, 3<sup>rd</sup> edition, John Wiley & Sons, Inc., New York.
- Coggin, T. D. and Trzcinka, C. A. (2000), “A Panel Study of U. S. Equity Pension Fund Manager Style Performance”, *Journal of Investing*, (Summer): 6–12.
- Dhesi, D. (2001), “Unit trust sector targeted to hit 40% KLSE market cap by 2020”, *The Star*, Star Publications Ltd., Kuala Lumpur, 6 December.
- diBartolomeo, D. and Witkowski, E. (1997), “Mutual Fund Mis-classification: Evidence based on Style Analysis”, *Financial Analysts Journal*, vol. 53, no. 5, pp. 32–43.
- Dunn, P. and Theisen, R. (1983), “How Consistently Do Active Managers Win?” *Journal of Portfolio Management*, vol. 9, pp. 47–50
- Elton, E., Gruber, M., and Rentzler, J. (1990), “The Performance of Publicly Offered Commodity Funds”, *Financial Analysis Journal*, vol. 46, pp.23–30.
- Ewe, S. J. (1994), “The Performance of Malayan Unit Trusts In the Period 1988–1992”, Unpublished MBA Thesis, School of Management, University Sains Malaysia, Penang.
- Federation of Malaysian Unit Trust Managers (1998), *Understanding Malaysian Unit Trusts*, 1st

edition, FMUTM, Kuala Lumpur.

- Goodwin, T. H. (1998), “The Information Ratio”, *Financial Analysts Journal*, vol. 54, no. 4, pp. 34–43.
- Grinblatt, M., and Titman, S. (1988), “The Evaluation of Mutual Fund Performance: An Analysis of Monthly Returns”, Working Paper 13–86, John E. Anderson Graduate School of Management, University of California, Los Angeles.
- Goetzmann, W.N., and Ibbotson, R. (1994), “Do Winners Repeat?” *Journal of Portfolio Management*, pp. 9–18
- Hendricks, D., Patel, J. and Zeckhauser, R. (1993), “Hot Hands in Mutual Funds: Short-Run Persistence of Performance in Relative Performance, 1974–1988”, *Journal of Finance*, pp. 93–130.
- Ibbotson, R. G., and Kaplan, P. D. (2000), “Does Asset Allocation Policy explain 40, 90 or 100 Percent of Performance”, *Financial Analysts Journal*, vol.56, no.1, pp. 26–33.
- Jensen, M. (1968), “The Performance of Mutual Funds in the Period 1945–1964”, *Journal of Finance*, vol. 23, pp. 389–416.
- Kahn, R. N. and Rudd, A. (1995), “Does Historical Performance Predict Future Performance?” *Financial Analysis Journal* (November / December), pp. 43–52.
- Kahn, R. N. and Rudd, A. (1997), “The Persistence of Equity Style Performance”, in T. D. Coggin, Fabozzi, F. J. and Arnott, R. D. (eds.), *The Handbook of Equity Style Management*, 2<sup>nd</sup> edition, Frank J. Fabozzi Associates, New Hope, PA.
- Kahn, R. N., and Rudd, A. (2003), “The Persistence of Equity Style Performance: Evidence from Mutual Fund Data” in Coggin, T. D., and Fabozzi, F. J. (ed.), *The Handbook of Equity Style Management*, John Wiley & Sons, Inc., New York, pp. 259–271.
- Kim, M., Shukla, R. and Tomas, M. (2000), “Mutual Fund Objective Misclassification”, *Journal of Economics and Business*, vol. 52, no. 4, pp. 309–323.
- Kritzman, M. (1983), “Can Bond Managers Perform Consistently?” *Journal of Portfolio Management*, vol. 9, pp. 54–56.
- Kuala Lumpur Stock Exchange (2001), *Information Handbook*, Kuala Lumpur.
- Lau, W. Y. (2002), “Does Asset Allocation Explain the Styles and Performance of Unit Trust Funds: A Style Analysis with Evidence from Malaysia”, *Journal of Malaysian Studies*, vol. XX, no. 2, pp. 1–32.
- Lehmann, B., and Modest, D. (1987), “Mutual Fund Performance Evaluation: A Comparison of Benchmarks and Benchmark Comparison”, *Journal of Finance*, vol. 21, pp. 233–265.
- Leong, K. H. and Aw, M. W. (1997), “Measuring Unit Trust Fund Performance Using Different Benchmarks”, *Capital Market Review*, vol. 5, no. 2, pp. 27–44.
- Lehman, B. N., and Modest, D. M. (1987), “Mutual Fund Performance Evaluation: A Comparison of Benchmarks and Benchmarks Comparisons”, *Journal of Finance*, vol. XLII, no. 2, pp. 233–265.
- Lucas, L., and Riepe, M. W. (1996), “The Role of Return-Based Style Analysis: Understanding, Implementing, and Interpreting the Techniques”, Ibbotson Associates, Inc., USA..

- Norashikin, A.H. (2000), *Guide to The Malaysian Bond Market*, Rating Agency Malaysia Berhad, Kuala Lumpur.
- Permodalan Nasional Berhad (2001), *Malaysia Unit Trust Directory 2001*, Kuala Lumpur.
- Kahn, R. N. and Rudd, A. (2003), “The Persistence of Equity Style Performance” In T. D. Coggin, and Fabozzi, F. J. (ed.) (2003), *The Handbook of Equity Style Management*, 3<sup>rd</sup> edition, John Wiley & Sons, Inc., New York, Pp. 259–271
- Shamsher, M. and Annuar, M. N. (1995), “The Performance of Unit Trusts In Malaysia: Some Evidence”, *Capital Market Review*, vol. 3, no. 2 (1995), 51–69.
- Shamsher, M. and Annuar, M. N. (2001), “Investment In Unit Trusts: Choosing Active or Passive Funds”, *The Company Secretary*, MAICSA, Kuala Lumpur, issue no. 3, pp. 16–17.
- Sharpe, W. F. (1988), “Determining a Fund’s Effective Asset Mix”, *Investment Management Review*, pp. 59–69.
- Sharpe, W. F. (1992), “Asset Allocation: Management Style and Performance Measurement”, *Journal of Portfolio Management*, vol. 18, no. 2, pp. 7–19.
- TerHorst, J. R., Nijman, T. E. and DeRoos, F. A. (2004), “Evaluating Style Analysis”, *Journal of Empirical Finance*, vol. 11, no. 1, pp. 29–53.
- The Edge (2003), The Edge Communications Sdn Bhd, Kuala Lumpur, 13 January.
- Tierney, D. and Winston, K. (1991), “Using Generic Benchmarks to Present Manager Styles”, *Journal of Portfolio Management*, vol. 17, no. 4, pp. 33–36.