Bank Fund Management Challenges and Opportunities

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Abstract

With financial deregulation gaining momentum in the Asia Pacific countries, local banks in small economies need to withstand erosion of business from foreign competitors. Banks, in order to increase profits, compete with local as well as foreign insurance and investment companies by offering mutual fund products. To remain competitive, banks should shed their reputation as incapable of generating impressive fund returns, as customers may not be informed that bank funds are comparable in performance to non-bank counterparts. Banks need to differentiate their fund characteristics and reduce portfolio management costs to gain a competitive advantage.

Keywords: Bank-managed Funds; Fund Performance; Wealth Management.

With financial deregulation increasing competition between local and foreign banks, insurance companies as well as investment firms, the fund management industry has become critical for banks, whose profitability can be improved by offering competitive mutual fund products (Gallo, Apilado and Kolari, 1996). In order to compete in the fund management industry, banks have to offer products that do not under-perform their counterparts from insurance and investment companies. With financial deregulation in the Asia Pacific countries easing entry of foreign competitors, local financial institutions in small economies have to withstand erosion of investor monies by foreign competitors. Besides offering competitive funds, banks need to shed their image of being under-performers in the asset management industry.

In the popular press, performance of bank-managed funds has been perceived as inferior to their non-bank counterparts, even in the most developed economy. In the United States, McTague (1994) claimed bank funds were non-aggressive and incapable of generating impressive returns. As a result, various investors expecting little returns from bank funds were reluctant to invest in them. However, banks in the USA were relatively new to fund management, previously being prohibited by the Glass-Steagall Act before the Federal Reserve Board allowed them to manage funds (Gallo, Apilado and Kolari, 1996). From 8 per cent of total mutual funds in 1991 to 14 per cent in 1999 worth more than US$255

billion, bank funds' rapid growth questioned their reputation as under-performers compared to non-bank counterparts (Frye, 2001).

Besides the US, banks' under-performing image was also perceived in other developed countries. The chief executive of AMP, a popular wealth management company in Australia and New Zealand, commented that it was difficult for banks to compete with specialist investment companies. As a result, there were few international banks that were very successful in fund management. The comment was made concerning Australian banks' purchases of wealth management companies since 2000 totalling A$19 billion (including Commonwealth Bank of Australia's A$9 billion acquisition of Colonial First State, National Australia Bank's A$5 billion purchase of Mutual Life & Citizens' Assurance, Australia and New Zealand Banking Group's A$4 billion joint venture with Dutch ING Group, and Westpac's A$1 billion acquisition of Bankers Trust and Rothschild) which had mostly delivered unimpressive returns (Moullakis and Patten, 2005).

In reviewing the literature, it was noted that while earlier research indicated underperformance of bank funds compared to non-bank counterparts (Bauman and Miller, 1995; Bogle and Twardowski, 1980), later research did not detect under-performance (Frye, 2001). According to Frye (2001), earlier research reporting relative underperformance of bank-managed funds ignored their differing fiduciary standards. However, she focused only on bond funds as banks in USA had more assets under management in bond funds rather than equity funds. It is not known how bank and non-bank equity funds compare when faced with the same fiduciary standard. Examining domestic equity funds approved by Singapore's Central Provident Fund (CPF) Board for its CPF Investment Scheme facilitates a more direct comparison of funds managed by banks and non-banks than previous studies, as CPF-approved funds face the same standard for managing social security savings.

This study contributes to understanding competitiveness of bank-managed funds by exploring relationship between type of fund management organisation and past performance for Singapore's retail equity funds. The majority of fund management research were conducted using data from the USA and other large developed markets, leaving many small markets unexplored in the literature. Among developed equity markets identified by Ibbotson and Brinson (1993), little research was published on the fund industry in Singapore, one of the smallest economies in the world. Examining Singapore's CPF-approved equity funds offers an opportunity to control for differing fiduciary standards. As all bank-managed CPF-approved equity funds are from domestic banks, this research reveals performance of these banks in Singapore's fund management industry when competing with local as well as foreign insurance and investment companies.

Whether justified or not, banks' reputation for relatively unimpressive fund performance can affect their popularity. Less popular funds attract less investor cash flows, resulting in smaller amounts of net assets under management. Reputation of a fund can therefore affect its size. Small funds are not competitive as economies of scale provide cost advantages to large funds. Large funds can lower brokerage commissions without significant increase in administration and research costs (Indro et al, 1999), resulting in better net returns than small funds with otherwise similar characteristics.

Comparison of Bank and Non-bank Fund Performance

Comparing performance of funds managed by banks and non-banks reveals the quality of funds offered by these institutions and verifies results of previous studies. Quality of funds is an indication of their competitiveness.

Bank funds have grown rapidly over the years. This was confirmed in USA (Frye, 2001). In Singapore, the average bank-managed CPF-approved domestic equity fund grew from around S$40 million during 1999 to 2002 to more than S$60 million in 2003 to 2004 (Tng, 2005). If investors chase past performance and bank fund performance were inferior to their non-bank counterparts, bank funds will not experience growth among rational investors. Inferior performance of bank funds coupled with rapid growth in sise can imply irrational or unsophisticated investors.

Capital Asset Pricing Model for Singapore's Equity Funds

To examine the performance of equity funds, their quarterly returns were modelled in Equation 1 using Sharpe's (1964) capital asset pricing model (CAPM).

Equation 1: Single-index Model for Returns of Singapore's Domestic Equity Funds

$$RET_{ft} = RER_t + \beta_f (STI_t - RET_t) + \varepsilon_{ft}$$

where

RET_{ft} = return from fund f at time t;

β_f = $\text{Cov}_{f,STI} / \sigma^2_{STI}$, covariance between returns for fund f and local stock index (STI) divided by variance of returns for the STI;

RFR_t = risk-free rate of return at time t;

STI_t = return from the STI at time t; and

ε_{ft} = error term for fund f at time t.

Source: Adapted from Sharpe (1964).

Equation 1 models behaviour of fund returns according to beta, market risk premium and risk-free return. While there may be leads or lags in market returns in relation to fund returns, use of quarterly data should negate these effects. Lagging quarterly data imply funds are taking as long as three months to respond to changes in the market, which is not consistent with capital market efficiency (Fama, 1970, 1991).

Studies on Singapore's stock market showed its efficiency strengthened as the time interval that was being considered increased (Wong, 1988). Specifically, even though daily or weekly data revealed market inefficiency (Lim, 1985; Saw and Tan, 1986), Ariff (1986) used monthly data to show that Singapore's market was comparable to New York, London, and Australian stock markets in adjusting prices efficiently to reflect new information. Testing Singapore's stock market efficiency using more recent monthly or quarterly returns can be carried out for further research. When using quarterly returns data, this research considers Singapore's market to be comparable in terms of efficiency to other developed markets and therefore satisfy at least a minimum level of information efficiency—weak form efficiency. As weak-form efficiency implies past and future fund performances are independent (Fama 1970, 1991), this research assumes quarterly fund returns are not related.

Fund Performance Evaluation Measures

To compare fund performance, four risk-adjusted portfolio performance measures were used, unlike financial periodicals emphasising raw returns. Among these measures, Goodwin's (1998) information ratio (IR) was developed more recently while measures developed by Jensen (1968), Sharpe (1966) and Treynor (1965) were based on CAPM.

IR of an equity fund is computed as an arithmetic average of fund's excess return divided by standard deviation of excess return (Goodwin, 1998). This ratio measures mean excess return per unit of unsystematic risk. As for its relation with other evaluation measures, IR can be expressed in terms of Jensen alpha (raw fund return less return predicted by CAPM) when excess returns are estimated with historical data using the single-factor regression equation mentioned in the previous section, while Sharpe ratio (fund risk premium divided by standard deviation of fund return) is a special case of IR (Goodwin, 1998). While the Sharpe ratio uses standard deviation measure of total risk (comprising systematic and non-systematic components), the Treynor ratio uses CAPM's beta as relative measure of systematic risk to divide fund risk premium.

Even though these performance measures improve upon comparison of raw returns, some researchers identified bias in these measures. For example, Friend

and Blume (1970) reported risk-adjusted performance measures of low-risk portfolios better than high-risk counterparts. While these performance measures are not without problems, in the absence of alternative measures, all four measures were used for this research to minimise errors from relying solely on one measure, as each measure ranks individual fund performance differently (Reilly and Brown, 2003) and can yield substantially different performance rankings (Corrado and Jordan, 2005).

Data and Methodology

Secondary Data Collection

To carry out this research, five years of quarterly returns from 1999 to 2004 for 19 retail funds approved for Singapore's CPF Investment Scheme were examined. These funds were invested in shares from the Singapore Stock Exchange. Table 1 identifies funds used for this research.

For this research, only CPF-approved funds were considered to control for differing fiduciary responsibilities, as these funds followed the same fiduciary standard for managing social security savings. Failure to control for such standards may lead to biased test results (Frye, 2001). Among these funds, only those investing in the local stock market were selected. As each benchmark index has a unique market cycle, funds based on benchmarks other than the Singapore Straits Times Index (STI) were excluded. These CPF-approved domestic equity funds were classified according to the type of organisation managing the fund: (1) insurance-linked investment products managed by insurance companies; (2) unit trusts managed by investment firms; or (3) bank-managed funds. Organisation types differ in terms of operational structure, priorities and benefits for fund managers, which may influence resulting portfolio returns (Bauman and Miller, 1995).

This research incorporates consideration for survivorship bias. As funds that did not survive are usually the worst performing ones, when data for non-survivors are not considered, resulting average performance of each fund group can be overstated. To control for survival bias, this study collected data for surviving and non-surviving funds using quarterly reports for all CPF-approved unit trusts. However, for performing regression analysis, only funds with at least three quarters of data were included.

Regression Analysis

For each fund, linear regression was performed using its quarterly risk premium $(RET_{ft} - RFR_t)$ as dependent variable and the STI quarterly risk premium $(STI_t - RFR_t)$ as independent variable. As there are two risk-free rates: RFR_o =

Table 1: Research Sample

Organisation type	Fund	Symbol	1999–2002	2002–2004
Bank	DBS Horizon Singapore Equity Fund	DHSE	√	√
	DBS Shenton Thrift Fund	DST	√	√
	OCBC Savers Singapore Trust Fund	OSST	√	√
	OUB Union Singapore Equity Fund	OUSE	√	
	UOB Optimix Singapore Equity Fund	UOSE	√	√
	UOB Unifund	UU	√	
	UOB United Growth Fund	UUG	√	√
Insurance Company (Ins)	AXA Life-Fortress Fund	ALF	√	√
	AXA Life-Fortress Fund A	ALFA		√
	GE Greatlink Singapore Equities Fund	GGSE		√
	Keppel Managed Fund	KM	√	
	NTUC Income Singapore Equity Fund	NISE		√
	OUB Manulife Golden Singapore Growth Fund	OMGSG	√	
	UOB Life FOF-Unifund	ULFU	√	
	UOB Life FOF-United Growth Fund	ULFUG	√	√
	UOB Lifelink Growth Fund	ULG	√	
Investment Company (Inv)	Aberdeen Singapore Equity Fund	ASE	√	√
	CMG First State Singapore Growth Fund	CFSSG	√	
	Schroder Singapore Trust	SST	√	√

Source: Funds identified from Mercer (1999–2002) and S&P (2003–2004) data.

0.625 per cent per quarter and RFR_s = 1 per cent per quarter for guaranteed interest rates of CPF Ordinary and Special accounts respectively, as well as two holding periods corresponding to data collected from Mercer (1999 to 2002) and S&P (2003 to 2004), four sets of linear regression were performed for each fund using a combination of risk-free rate and holding period.

For residual analysis, linear trends on normal probability plots were obtained to confirm normality assumption for linear regression was satisfied (Mendenhall and Sincich, 1996). Hypothesis testing was carried out after regression analysis.

Hypothesis Testing

To test hypotheses for no significant performance differences between domestic equity funds managed by banks and non-banks, two-tailed pooled-variance *t*-test for difference in two means was conducted for returns as well as evaluation measures for bank and non-bank funds during both time periods 1999 to 2002 and 2003 to 2004 at an alpha level of 0.05. According to Berkowitz and Qiu (2003), technology usage in the fund management industry was quite homogenous across companies, which may lead to no overall performance difference between bank and non-bank funds. Relatively uniform human and information resources in developed markets can make it difficult for specialist investment firms to outperform their bank counterparts.

Results and Interpretation

Table 2 shows the summary characteristics computed for funds in the research sample.

Bank and Non-bank Fund Returns

Referring to Table 2, during 1999 to 2002, when the STI posted an average quarterly return of 2.94 per cent, the average bank equity fund under-performed the market at 1.37 per cent, while the average non-bank fund outperformed the market at 3.6 per cent. For 2003 to 2004, with STI average quarterly return of 5.97 per cent, the reverse seemed to be true as bank funds outperformed the market at 7.68 per cent while non-bank funds under-performed the market at 5.84 per cent.

However, performing a two-sample *t*-test assuming unequal variances for returns of bank and non-bank funds in Table 3 showed no significant difference between returns of bank and non-bank domestic equity funds for both holding periods.

This result supported Frye's (2001) finding for bond funds.

Table 2: Summary Characteristics of CPF-approved Domestic Equity Funds

		Second Quarter 1999 to First Quarter 2002					First Quarter 2003 to Third Quarter 2004				
Fund	**Type**	**Ret**	**Info**	**Jensen**	**Sharpe**	**Treynor**	**Ret**	**Info**	**Jensen**	**Sharpe**	**Treynor**
		%	**ratio**	**alpha**	**ratio**	**ratio**	**%**	**ratio**	**alpha**	**ratio**	**ratio**
DHSE	Bank	-0.46	0.12	0.19	-0.07	-1.14	7.28	0.42	0.32	0.75	5.61
DST	Bank	4.33	0.25	1.13	0.17	3.33	12.30	0.76	3.60	0.89	7.72
OSST	Bank	4.53	0.41	1.42	0.19	3.64	7.49	0.32	0.48	0.71	5.75
OUSE	Bank	-6.13	-0.08	-4.73	-1.37	-20.95					
UOSE	Bank	2.57	-0.16	-0.32	0.10	2.48	4.93	-0.43	-1.04	0.57	4.31
UU	Bank	0.23	0.15	0.65	-0.03	-0.47					
UUG	Bank	4.51	0.45	1.55	0.20	3.85	6.39	0.22	1.04	0.87	6.43
ALF	Ins	2.05	0.26	2.14	0.08	1.41	6.11	0.03	3.35	1.70	13.77
KM	Ins	0.12	0.04	0.22	-0.03	-0.49					
OMGSG	Ins	-0.66	0.01	0.25	-0.07	-1.12					
ULFU	Ins	7.00	0.57	4.41	0.45	9.04					
ULFUG	Ins	6.03	0.68	3.00	0.31	6.29	6.11	0.06	0.71	0.81	6.13
ALFA	Ins						4.71	0.27	1.97	1.26	6.65
GGSE	Ins						4.88	-0.59	-0.13	0.71	5.18
NISE	Ins						7.45	0.75	0.40	1.24	6.36
ULG	Ins	-0.64	-0.15	-0.66	-0.09	-1.46					
ASE	Inv	5.84	0.49	2.90	0.26	5.20	5.59	-0.13	1.19	0.92	7.03
CFSSG	Inv	5.36	0.24	2.01	0.20	4.02					
SST	Inv	7.32	0.92	4.05	0.31	5.87	6.01	0.02	0.29	0.76	5.65
Average		2.63	0.26	1.14	0.04	1.22	6.60	0.14	1.01	0.93	6.71
Average bank		1.37	0.16	-0.02	-0.12	-1.32	7.68	0.26	0.88	0.76	5.96
Average non-bank		3.60	0.34	2.04	0.16	3.20	5.84	0.06	1.11	1.06	7.25
STI		2.94	0.00	0.00	0.12	2.31	5.97	0.00	0.00	0.75	5.34
CPF Ordinary a/c		0.63					0.63				
CPF Special a/c		1.00					1.00				

Note: Jensen alphas, Sharpe and Treynor ratios computed using CPF Ordinary account risk-free interest rate.
Source: developed from Mercer (1999–2002) and S & P (2003–2004) data.

Table 3: Two-sample *t*-test for Returns of Bank and Non-bank Funds

$\alpha = 0.05$

1999:Q2–2002:Q1	**Bank**	**Non-bank**
Mean return (%)	1.37	3.60
Variance	15.158	11.257
Observations	7	9
Hypothesised mean difference	0	
Df	12	
t statistic	-1.209	
$P(T \leq t)$ one-tail	0.125	
t critical one-tail	1.782	
$P(T \leq t)$ two-tail	0.250	
t critical two-tail	2.179	
2003:Q1–2004:Q3	**Bank**	**Non-bank**
Mean return (%)	7.68	5.84
Variance	7.692	0.838
Observations	5	7
Hypothesised mean difference	0	
Df	5	
t statistic	1.430	
$P(T \leq t)$ one-tail	0.106	
t critical one-tail	2.015	
$P(T \leq t)$ two-tail	0.212	
t critical two-tail	2.571	

Source: Developed from Mercer (1999–2002) and S & P (2003–2004) data.

Information Ratio of Bank and Non-bank Funds

Table 2 reported IRs for bank and non-bank funds. When evaluating fund performance, reasonable values for the ratio should range from 0.5 to 1.0 for good to exceptionally good performance (Grinold and Kahn, 1995).

For Singapore's CPF-approved domestic equity funds, mean sample IR was 0.262 during 1999 to 2002 and deteriorated to 0.141 in 2003–2004, well below the 0.5 standard for good performance according to Grinold and Kahn (1995). Agreeing with Goodwin's (1998) findings in USA, the average fund in the sample can add value to its investments, but performance did not qualify as good. In fact, none of the funds can deliver an excellent IR greater than 1.0, even though there were a few good performers from banks and non-banks. Still, good performers during the first period cannot sustain their performance for the second period, confirming lack of performance consistency reported in the literature for funds in USA (Dunn and Theinsen, 1983; Jensen, 1969).

Performing a two-sample *t*-test assuming unequal variances for IRs of bank and non-bank funds in Table 4 showed no significant difference between IRs of bank and non-bank equity funds during each holding period.

Table 4: Two-sample *t*-test for Information Ratios of Bank and Non-bank Funds

α = 0.05

1999:Q2–2002:Q1	Bank	Non-bank
Mean information ratio	0.162	0.339
Variance	0.053	0.123
Observations	7	9
Hypothesised mean difference	0	
Df	14	
t statistic	-1.215	
$P(T \leq t)$ one-tail	0.122	
t critical one-tail	1.761	
$P(T \leq t)$ two-tail	0.245	
t critical two-tail	2.145	

(Con't)

Table 4: Two-sample *t*-test for Information Ratios of Bank and Non-bank Funds *(Con't)*

2003:Q1–2004:Q3	Bank	Non-bank
Mean information ratio	0.256	0.058
Variance	0.188	0.164
Observations	5	7
Hypothesised mean difference	0	
Df	8	
t statistic	0.801	
$P(T \leq t)$ one-tail	0.223	
t critical one-tail	1.860	
$P(T \leq t)$ two-tail	0.446	
t critical two-tail	2.306	

Source: Developed from Mercer (1999–2002) and S&P (2003–2004) data.

This result again supported Frye's (2001) finding for bond funds.

Jensen Alpha of Bank and Non-bank Funds

Insignificance of positive Jensen alpha values in Table 2 downplayed the possibility of average fund beating the market, confirming previous research in USA reporting that mutual funds are unable to beat the market (Carlson, 1970; Jensen, 1968). According to the Jensen alpha criterion, even though majority of funds registered abnormal returns above expectation for both holding periods, only one of them was statistically significant in each period. As the fund registering significant abnormal return during 1999 to 2002 became one of the worst performers in 2003 to 2004, consistency was clearly lacking, confirming the previous observation.

In Table 5, a two-sample *t*-test assuming unequal variances for Jensen alphas of bank and non-bank funds showed bank funds under-performing non-bank funds significantly during 1999 to 2002, but for 2003 to 2004, no significant under-performance of bank funds was detected.

Table 5: Two-sample *t*-test for Jensen Alphas of Bank and Non-bank Funds

$\alpha = 0.05$

1999:Q2–2002:Q1	Bank	Non-bank
Mean Jensen alpha	-0.015	2.035
Variance	4.775	3.141
Observations	7	9
Hypothesised mean difference	0	
Df	11	
t statistic	-2.019	
P($T \leq t$) one-tail	0.034	
t critical one-tail	1.796	
P($T \leq t$) two-tail	0.068	
t critical two-tail	2.201	
2003: Q1–2004:Q3	**Bank**	**Non-bank**
Mean Jensen alpha	0.878	1.111
Variance	2.891	1.444
Observations	5	7
Hypothesised mean difference	0	
Df	7	
t statistic	-0.263	
P($T \leq t$) one-tail	0.400	
t critical one-tail	1.895	
P($T \leq t$) two-tail	0.800	
t critical two-tail	2.365	

Source: Developed from Mercer (1999–2002) and S&P (2003–2004) data.

Thus, bank funds may have improved their performance to be comparable to non-bank counterparts.

Sharpe and Treynor Ratios of Bank and Non-bank Funds

Table 2 showed the average fund having positive Sharpe and Treynor ratios during both holding periods, implying returns exceeding guaranteed interest rates. However, the average bank fund actually registered negative Sharpe and Treynor ratios during 1999 to 2002, implying earning guaranteed interest rates in Ordinary and Special accounts were better than investing in bank funds for that

period. Overall, returns from CPF-approved equity funds were higher than guaranteed interest rates of Ordinary and Special accounts for both periods, refuting an earlier finding from Koh (1999).

The results of a two-sample *t*-test assuming unequal variances for Sharpe ratios of bank and non-bank funds are shown in Table 6. It showed no significant performance difference during 1999 to 2002, but significant underperformance of bank funds during 2003 to 2004.

Table 6: Two-sample *t*-test for Sharpe Ratios of Bank and Non-bank Funds

$\alpha = 0.05$

1999:Q2–2002:Q1	**Bank**	**Non-bank**
Mean Sharpe ratio	-0.116	0.158
Variance	0.318	0.038
Observations	7	9
Hypothesised mean difference	0	
Df	7	
t statistic	-1.228	
$P(T \leq t)$ one-tail	0.1296	
t critical one-tail	1.895	
$P(T \leq t)$ two-tail	0.259	
t critical two-tail	2.365	
2003:Q1–2004:Q3	**Bank**	**Non-bank**
Mean Sharpe ratio	0.759	1.057
Variance	0.017	0.129
Observations	5	7
Hypothesised mean difference	0	
Df	8	
t statistic	-2.015	
$P(T \leq t)$ one-tail	0.039	
t critical one-tail	1.860	
$P(T \leq t)$ two-tail	0.079	
t critical two-tail	2.306	

Source: Developed from Mercer (1999–2002) and S&P (2003–2004) data.

Table 7 shows the results of a two-sample *t*-test assuming unequal variances for Treynor ratios of bank and non-bank funds. It is found that there is no significant performance difference during both periods.

Table 7: Two-sample *t*-test for Treynor Ratios of Bank and Non-bank Funds

$\alpha = 0.05$

1999:Q2–2002:Q1	**Bank**	**Non-bank**
Mean Treynor ratio	-1.323	3.196
Variance	78.928	14.077
Observations	7	9
Hypothesised mean difference	0	
Df	8	
t statistic	-1.261	
$P(T \leq t)$ one-tail	0.121	
t critical one-tail	1.860	
$P(T \leq t)$ two-tail	0.243	
t critical two-tail	2.306	
2003:Q1–2004:Q3	**Bank**	**Non-bank**
Mean Treynor ratio	5.963	7.252
Variance	1.559	8.630
Observations	5	7
Hypothesised mean difference	0	
Df	9	
t statistic	-1.037	
$P(T \leq t)$ one-tail	0.163	
t critical one-tail	1.833	
$P(T \leq t)$ two-tail	0.327	
t critical two-tail	2.262	

Source: Developed from Mercer (1999–2002) and S&P (2003–2004) data.

These results indicated higher level of non-systematic risk in bank funds than non-bank ones during 2003 to 2004.

Conclusion and Recommendation

Financial deregulation does not make it impossible for domestic banks to earn economic profits, if they depart from perfect competition and gain competitive advantage over local as well as foreign financial institutions. Domestic banks face the challenge of withstanding erosion of investor monies by more competitors. However, there are opportunities for gaining competitive advantage. The key ingredients for competitive advantage identified by Porter (1980, 1985) are industry characteristics, product differentiation and cost advantages. In terms of the fund industry, financial deregulation reduced barriers to entry for foreign institutions. With proliferation of fund products from local and foreign institutions, it is important for investors to be informed about relative performance of bank and non-bank funds. This research, by controlling for differing fiduciary standards, showed domestic banks in Singapore can compete with local as well as foreign specialist wealth management companies, as bank funds were comparable in performance to non-bank counterparts. However, in terms of investment strategy, there was evidence bank fund managers were more risky than non-bank counterparts.

To gain a competitive advantage, local banks should work towards differentiating their financial products by first shedding unjustified reputation as underperformers. Even though technology and human resources are relatively uniform across the fund industry, portfolio management costs can be reduced with economies of scale when banks offer bigger funds. This research showed bank funds were indeed growing steadily. Such growth can only be sustained when banks develop good reputation for fund products. In fact, expenditures and size are characteristics that should be differentiated, as they can be determinants of fund performance. Determination of characteristics that are significant fund performance determinants will open opportunities for further research.

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