CHAPTER IV

RESEARCH RESULTS

4.1 INVESTMENT PERFORMANCE

Table 4.1 and Table 4.2 below shows the overall risk adjusted performance measures mean monthly return, beta value, coefficient of determination, Adjusted Sharpe Index, Treynor Index and Adjusted Jensen's Alpha of the funds as a whole and those of the market portfolio using KLSE Composite Index and Emas Index as a benchmark respectively.

Table 4.1:

Unit Trust Fund Overall Results Using KLSE Composite Index as Benchmark

Investment Type	Mean Monthly Return	Beta	Coefficient of Determination	Adjusted Sharpe Index	Treynor Index	Adjusted Jensen's Alpha
Unit Trust Funds	0.007963147	0.55769571	0.516690536	0.117081937	0.011748288	-0.003399872
Market Portfolio (KLSE CI)	0.020137742	1.0	1.0	0.260477389	0.015316974	0.0

Table 4.2 :

Unit Trust Fund Overall Results Using KLSE Emas Index as Benchmark

Investment Type	Mean Monthly Return	Beta	Coefficient of Determination	Adjusted Sharpe Index	Treynor Index	Adjusted Jensen's Alpha
Unit Trust Funds	0.007963147	0.507285562	0.546100175	0.117081937	0.097956734	0.125682330
Market Portfolio (KLSE EI)	0.016034527	1.0	1.0	0.011213759	0.011159760	0.0

As can be seen from Table 4.1, the unit trust funds as a whole performed worse than the market portfolio (using benchmark KLSE Composite Index) as the performance measures of the unit trust funds such as the Adjusted Sharpe Index, Treynor Index and the Adjusted Jensen's Alpha are all lower than those of the market portfolio. Even the mean monthly return of the funds of 0.7963 % is less than that of the market portfolio of 2.014%. If using KLSE Emas Index as benchmark, the results is different as shown in Table 4.2. Although the mean monthly return of the funds of 0.7963% is less than the market portfolio of 1.603%, the unit trust fund performs better than the market portfolio as the performance measures of the unit trust funds such as the Adjusted Sharpe Index, Treynor Index and the Adjusted Jensen's Alpha are all higher than those of the market portfolio.

Table 4.3 and Table 4.4 shows the results of the individual unit trust funds using KLSE Composite Index and KLSE Emas Index as benchmark respectively. Using KLSE Composite Index as benchmark, when the funds are ranked according to the Treynor Index (Table 4.5), the best performer is Kuala Lumpur Balanced Fund with a value of 0.07023 while the worst performer is Malaysia Commerce Fund with a value of -0.01009. When ranked using the Adjusted Jensen's Alpha (Table 4.5),

TABLE 4.3 : SUMMARY OF RESULTS FOR ALL THE SAMPLE OF UNIT TRUST FUNDS (BENCHMARK : KLSE COMPOSITE INDEX)

Fund	Mean Monthly Return	Standard Deviation	Beta	Coefficient of Determination	Sharpe Index	Adjusted Sharpe Index	Treynor Index	Jensen's Alpha	Adjusted Jensen's Alpha	Objective of Fund
ASIA UNIT TRUST BERHAD										
Malaysia Investment Fund	0.003522148	0.059358581	0.661104192	0.746987754	-0.014465290	-0.014395630	-0.001298800	-0.007961802	-0.012053400	Balance
Malaysia Progress Fund	0.002769977	0.073909631	0.751002047	0.621757241	-0.021794320	-0.021689370	-0.002144880	-0.009672156	-0.012902260	Growth
Tabung Amanah Bakti Fund	-0.002182184	0.067405322	0.665860028	0.587649248	-0.097365770	-0.096896910	-0.009856380	-0.013712209	-0.020625180	Growth
Malaysia Berjaya Fund	0.003134272	0.080067134	0.919426595	0.794083614	-0.015568370	-0.015493400	-0.001355750	-0.011130350	-0.012109700	Growth
Malaysia Equity Fund	0.001639401	0.078022557	0.774766686	0.593802736	-0.035135810	-0.034966620	-0.003538340	-0.011061158	-0.014296820	Growth
Malaysia Commerce Fund	-0.003186868	0.078371716	0.750385490	0.560107494	-0.096594100	-0.096119820	-0.010088470	-0.016100961	-0.021476650	Income
KL MUTUAL BERHAD										
K. Lumpur Savings Fund	0.008944390	0.056873840	0.657288000	0.804316000	0.080240820	0.079854430	0.006943080	-0.002497120	-0.003803130	Balance
K. Lumpur Growth Fund	0.009586590	0.072750200	0.709136010	0.005443700	0.071383680	0.071011250	0.007323250	-0.003385050	-0.004782330	Income
K. Lumpur Index Fund	0.017855000	0.050400800	0.673934650	0.773427430	0.258413170	0.254998020	0.019325660	0.001973060	0.002927680	Income
K. Lumpur Industry Fund	0.004666080	0.025375930	0.302624120	0.570385850	0.013981980	0.013696640	0.001172430	-0.001344690	-0.004488460	Growth
K. Lumpur Regular Saving Fund	0.014865190	0.025104080	0.357898700	0.512495850	0.410187480	0.400498010	0.028771780	0.005378710	0.015001200	Balance
K. Lumpur Aggressive Growth Fund	0.005367940	0.021543980	0.397963300	0.831666120	0.037139330	0.036262020	0.002010560	0.000185110	0.000465740	Growth
K. Lumpur Balanced Fund	0.010407770	0.019489100	0.075103200	0.021640420	0.270630520	0.259805300	0.070227980	0.004023800	0.053920740	Growth
K. Lumpur Bond Fund	0.006667556	0.005165635	0.051914571	0.163426486	0.254428739	0.226158879	0.025316322	0.000256244	0.004947934	Income
BHLB PACIFIC TRUST MGT BHD										
Double Growth Fund	0.007267480	0.054662200	0.785275490	0.812151710	0.040115560	0.039671480	0.002792400	-0.009767870	-0.012441620	Income
Emerging Company Growth Fund	0.009200020	0.042963630	0.648193630	0.573940120	0.107817070	0.105270210	0.007146340	-0.004249420	-0.006563460	Growth
Savings Fund	0.015131480	0.024512910	0.414900180	0.407447830	0.404887780	0.386758470	0.023921360	0.002138340	0.005148380	Growth
High Growth Fund	0.013676400	0.020337480	0.129723680	0.059787150	0.415012630	0.395250120	0.065063760	0.005784460	0.044646120	Growth
DCB-RHB UNIT TRUST MGT BHD										
Dynamic Fund	0.011693930	0.045508040	0.579243420	0.754910230	0.154426420	0.152188360	0.012132450	-0.004425960	-0.007662630	Balance
Capital Fund	0.009051060	0.028646110	0.536422880	0.617887550	0.138980120	0.133956740	0.007421830	-0.006498830	-0.012119010	Growth
Mudarabah Fund	0.016781480	0.036100560	0.639320360	0.438887750	0.316812320	0.286153060	0.017889470	0.000123860	0.000194200	Balance
MAYBAN MANAGEMENT BHD										
Income Trust Fund	0.011806060	0.039094330	0.439744710	0.538083670	0.177652620	0.175345450	0.015793730	-0.001156230	-0.002630230	Income
Balanced Trust Fund	0.007400150	0.026362940	0.136344440	0.069614490	0.099666220	0.096972540	0.019271010	0.001302790	0.009857130	Balance
ARAB-MALAYASIA U.T. BHD										
First Fund	0.005658390	0.056507250	0.715333500	0.690920350	0.010991190	0.010905100	0.000868240	-0.011016080	-0.015423500	Income
Tabung Ittikal Fund	0.005679650	0.057621300	0.758751870	0.849767490	0.019082160	0.018788590	0.001449140	-0.013640410	-0.017996420	Balance
Capital Growth Fund	0.010258660	0.015654300	0.470322480	0.287606480	0.314234430	0.273247330	0.010459040	-0.011516290	-0.024886620	Growth
BBMB UNIT TRUST MGT BHD										
Unit Trust Fund	0.009525290	0.063649330	0.832549370	0.785573110	0.069962520	0.069371290	0.005348710	-0.008468690	-0.010166170	Income
Prime Fund	0.004288830	0.087353010	0.867904540	0.388468190	-0.008996200	-0.008896610	-0.000905450	-0.013950060	-0.016144110	Income
Dana Putra Fund	0.010362400	0.026802210	0.445006720	0.401720790	0.195094940	0.187291140	0.011750330	-0.002215380	-0.004987010	Balance
SBB UNIT TRUST MGT BHD										
SBB Premium Capital Fund	0.015288280	0.023718390	0.217418980	0.119508540	0.425061340	0.406028740	0.046370250	0.006017430	0.027756550	Growth
MBF UNIT TRUST MGT BHD										
First Fund	0.002392120	0.054728890	0.693683880	0.639694670	-0.048792310	-0.048244080	-0.003849520	-0.013533480	-0.019558260	Balance
Growth Fund	0.005301750	0.042067980	0.787714990	0.510937100	0.004001310	0.003841260	0.000213690	-0.013055880	-0.016544600	Growth
MARKET(KLSE Composite Index)	0.020137742	0.058520306	1.000000000	1.000000000	0.261737763	0.260477389	0.015316974	0.000000000	0.000000000	
RISK-FREE, R_F	0.004820768									

TABLE 4.4 : SUMMARY OF RESULTS FOR ALL THE SAMPLE OF UNIT TRUST FUNDS (BENCHMARK : KLSE EMAS INDEX)

Fund	Mean Monthly Return	Standard Deviation	Beta	Coefficient of Determination	Sharpe Index	Adjusted Sharpe Index	Treynor Index	Jensen's Alpha	Adjusted Jensen's Alpha	Objective of Fund
ASIA UNIT TRUST BERHAD										
Malaysia Investment Fund	0.003522150	0.059358580	0.678503880	0.756478730	-0.014465290	-0.014395630	-0.001265490	-0.004406940	-0.006498870	Balance
Malaysia Progress Fund	0.002769980	0.073909630	0.782237420	0.648536120	-0.021794320	-0.021689370	-0.002059230	-0.005698200	-0.007294790	Growth
Tabung Amanah Bakti Fund	-0.002182180	0.067405320	0.699648250	0.623778190	-0.097365770	-0.096896910	-0.009380390	-0.010219637	-0.014624180	Growth
Malaysia Berjaya Fund	0.003134270	0.080067130	0.938799290	0.795968720	-0.015568370	-0.015493400	-0.001327780	-0.006159415	-0.006560290	Growth
Malaysia Equity Fund	0.001639400	0.078022560	0.803704580	0.614343960	-0.035135810	-0.034966620	-0.003410940	-0.006942631	-0.008647040	Growth
Malaysia Commerce Fund	-0.003186870	0.078371720	0.737191830	0.519581792	-0.096594100	-0.096119820	-0.010269030	-0.011871367	-0.016115550	Income
KL MUTUAL BERHAD										
K. Lumpur Savings Fund	0.008944390	0.056873840	0.677524790	0.821645340	0.080240820	0.079854430	0.006735700	0.001021100	0.001508280	Balance
K. Lumpur Growth Fund	0.009586590	0.072750200	0.731681410	0.616782610	0.071383680	0.071011250	0.007097590	-0.002084400	-0.003029550	Income
K. Lumpur Index Fund	0.017855000	0.050400800	0.585964780	0.835181230	0.258413170	0.254998020	0.022226980	0.002636730	0.004514520	Income
K. Lumpur Industry Fund	0.004666080	0.025375930	0.258580320	0.595046940	0.013981980	0.013696640	0.001372130	0.000413940	0.001616870	Growth
K. Lumpur Regular Saving Fund	0.014865190	0.025104080	0.310758400	0.523911720	0.410187480	0.400498010	0.033136290	0.007293130	0.023437880	Balance
K. Lumpur Aggressive Growth Fund	0.005367940	0.021543980	0.320372240	0.756064630	0.037139330	0.036262020	0.002497500	-0.002287310	-0.007152660	Growth
K. Lumpur Balanced Fund	0.010407770	0.019489100	0.001945730	0.000016010	0.270630520	0.259805300	2.710734190	0.005259320	4.257720350	Growth
K. Lumpur Bond Fund	0.006667556	0.005165635	0.059081972	0.203319868	0.254428739	0.226158879	0.022245127	0.000549154	0.009382182	Income
BHLB PACIFIC TRUST MGT BHD										
Double Growth Fund	0.007267480	0.054662200	0.677397530	0.848498632	0.040115560	0.039671480	0.003237100	-0.006403570	-0.008985540	Income
Emerging Company Growth Fund	0.009200020	0.042963630	0.602724270	0.672878510	0.107817070	0.105270210	0.007685460	-0.001179340	-0.001959240	Growth
Savings Fund	0.015131480	0.024512910	0.320331860	0.308144700	0.404887780	0.386758470	0.030983420	0.005648400	0.017620870	Growth
High Growth Fund	0.013676400	0.020337480	0.136858720	0.082688087	0.415012630	0.395250120	0.061671710	0.006277929	0.045913160	Growth
DCB-RHB UNIT TRUST MGT BHD										
Dynamic Fund	0.011693930	0.045508040	0.485338100	0.758560000	0.154426420	0.152188360	0.014479890	-0.000934960	-0.001839030	Balance
Capital Fund	0.009051060	0.028646110	0.501536140	0.574343622	0.138980120	0.133956740	0.007938090	-0.003625182	-0.007235120	Growth
Mudarabah Fund	0.016781480	0.036100560	0.686112640	0.473647018	0.316812320	0.286153060	0.016669420	0.003518591	0.005139240	Balance
MAYBAN MANAGEMENT BHD										
Income Trust Fund	0.011806060	0.039094330	0.362806960	0.523502890	0.177652620	0.175345450	0.019142990	0.001415373	0.003762680	Income
Balanced Trust Fund	0.007400150	0.026362940	0.101105390	0.050066605	0.099666220	0.096972540	0.025987690	0.002295492	0.023660340	Balance
ARAB-MALAYASIA U.T. BHD										
First Fund	0.005658390	0.056507250	0.654940790	0.708765048	0.010991190	0.010905100	0.000948300	-0.008082900	-0.012007800	Income
Tabung Ittikal Fund	0.005679650	0.057621300	0.635024370	0.850397034	0.019082160	0.018788590	0.001731490	-0.008964036	-0.013378290	Balance
Capital Growth Fund	0.010258660	0.015654300	0.318318740	0.168220278	0.314234430	0.273247330	0.015453440	0.005550080	-0.234029300	Growth
BBMB UNIT TRUST MGT BHD										
Unit Trust Fund	0.009525290	0.063649330	0.774996330	0.836834220	0.069962520	0.069371290	0.005745920	-0.005032560	-0.006487050	Income
Prime Fund	0.004288830	0.087353010	0.705100880	0.359985410	-0.008996200	-0.008896610	-0.001114510	-0.009578690	-0.013140570	Income
Dana Putra Fund	0.010362400	0.026802210	0.047384990	0.502120200	0.195094940	0.187291140	0.110350880	-0.000529020	-0.001118010	Balance
SBB UNIT TRUST MGT BHD										
SBB Premium Capital Fund	0.015288280	0.023718390	0.255134920	0.208791841	0.425061340	0.406028740	0.039515450	0.006685345	0.026260360	Growth
MBF UNIT TRUST MGT BHD										
First Fund	0.002392120	0.054728890	0.612112120	0.699017532	-0.048792310	-0.048244060	-0.004362520	-0.010661577	-0.016648860	Balance
Growth Fund	0.005301750	0.042067980	0.769918340	0.538088115	0.004001310	0.003841260	0.000218630	-0.009216922	-0.011950440	Growth
MARKET (EMAS Index)	0.016034527	0.062526191	1.000000000	1.000000000	0.179344988	0.011213759	0.011159760	0.000000000	0.000000000	
RISK-FREE, R_F	0.004820768									

the best performer is Kuala Lumpur Balanced Fund with a value of 0.05392 while the worst performer is Capital Growth Fund with a value of -0.02489. In the case of the Adjusted Sharpe Index (Table 4.6), the best performer is SBB Premium Capital Fund with a value of 0.4060 and the worst performer is Tabung Amanah Bakti Fund with a value of -0.09690. As can be observed, about 85% of the funds performed worse than the market portfolio except SBB Premium Capital Fund, Kuala Lumpur Balanced Fund, Kuala Lumpur Regular Savings Fund, BHLB Pacific High Growth Fund, BHLB Pacific Savings Fund and DCB-RHB Mudharabah Fund from the three types of performance measurement. All the six funds managed by Asia Unit Trust Berhad, BBMB Prime Fund and MBF First Fund have negative Adjusted Sharpe Index and Treynor Index. This means that these funds earned lower returns than the risk free rate. It is interesting to note that all the funds manage by Asia Unit Trust Berhad earned lower returns than the risk free rate. The best performing of four funds are Kuala Lumpur Balanced Fund, BHLB Pacific High Growth Fund, SBB Premium Capital Fund and Kuala Lumpur Regular Savings Fund when ranked according to the Treynor Index and Adjusted Jensen's Alpha. Two of the four funds comes from the same management company namely Kuala Lumpur Mutual Berhad. However, the best performing fund using the Adjusted Sharpe Index is SBB Premium Capital Fund which is managed by Southern Bank Unit Trust Management Berhad.

As can be observed, the different ranking methods produced slightly different performance rankings. Spearman Rank Correlation Coefficients were calculated for the different ranking methods namely (1) between Treynor Index and Adjusted Jensen's Alpha as shown in Table 4.5 (2) between Adjusted Sharpe Index and Adjusted Jensen's Alpha as shown in Table 4.6 and (3) between Treynor Index and

TABLE 4.5 : PERFORMANCE RANKING BETWEEN TREYNOR INDEX AND ADJUSTED JENSEN'S ALPHA
(BENCHMARK : KLSE COMPOSITE INDEX)

Fund	Treynor Index	Rank of Fund	Adjusted Jensen's Alpha	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.001298800	26	-0.012053400	19	49
Malaysia Progress Fund	-0.002144880	28	-0.012902260	23	25
Tabung Amanah Bakti Fund	-0.009856380	31	-0.020625180	30	1
Malaysia Berjaya Fund	-0.001355750	27	-0.012109700	20	49
Malaysia Equity Fund	-0.003538340	29	-0.014296820	24	25
Malaysia Commerce Fund	-0.010088470	32	-0.021476650	31	1
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	0.006943080	17	-0.003803130	12	25
K. Lumpur Growth Fund	0.007323250	15	-0.004782330	14	1
K. Lumpur Index Fund	0.019325660	7	0.002927680	8	1
K. Lumpur Industry Fund	0.001172430	22	-0.004488460	13	81
K. Lumpur Regular Saving Fund	0.028771780	4	0.015001200	4	0
K. Lumpur Aggressive Growth Fund	0.002010560	20	0.000465740	9	121
K. Lumpur Balanced Fund	0.070227980	1	0.053920740	1	0
K. Lumpur Bond Fund	0.025316322	5	0.004947934	7	4
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	0.002792400	19	-0.012441620	22	9
Emerging Company Growth Fund	0.007146340	16	-0.006563460	16	0
Savings Fund	0.023921360	6	0.005148380	6	0
High Growth Fund	0.065063760	2	0.044646120	2	0
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	0.012132450	11	-0.007662630	17	36
Capital Fund	0.007421830	14	-0.012119010	21	49
Mudarabah Fund	0.017889470	9	0.000194200	10	1
MAYBAN MANAGEMENT BHD					
Income Trust Fund	0.015793730	10	-0.002630230	11	1
Balanced Trust Fund	0.019271010	8	0.009857130	5	9
ARAB-MALAYASIA U.T. BHD					
First Fund	0.000868240	23	-0.015423500	25	4
Tabung Ittikal Fund	0.001449140	21	-0.017996420	28	49
Capital Growth Fund	0.010459040	13	-0.024886620	32	361
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	0.005348710	18	-0.010166170	18	0
Prime Fund	-0.000905450	25	-0.016144110	26	1
Dana Putra Fund	0.011750330	12	-0.004987010	15	9
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.046370250	3	0.027756550	3	0
MBF UNIT TRUST MGT BHD					
First Fund	-0.003849520	30	-0.019558260	29	1
Growth Fund	0.000213690	24	-0.016544600	27	9

Sum of squared differences	922
Spearman Rank Correlation	0.83101173
t- statistics *	8.1826493

* Significant at 0.05 level

TABLE 4.6 : PERFORMANCE RANKING BETWEEN ADJUSTED SHARPE INDEX AND ADJUSTED JENSEN'S ALPHA (BENCHMARK : KLSE COMPOSITE INDEX)

Fund	Adjusted Sharpe Index	Rank of Fund	Adjusted Jensen's Alpha	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.014395630	26	-0.012053400	19	49
Malaysia Progress Fund	-0.021689370	28	-0.012902260	23	25
Tabung Amanah Bakti Fund	-0.096896910	32	-0.020625180	30	1
Malaysia Berjaya Fund	-0.015493400	27	-0.012109700	20	49
Malaysia Equity Fund	-0.034966620	29	-0.014296820	24	25
Malaysia Commerce Fund	-0.096119820	31	-0.021476650	31	0
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	0.079854430	16	-0.003803130	12	16
K. Lumpur Growth Fund	0.071011250	17	-0.004782330	14	9
K. Lumpur Index Fund	0.254998020	8	0.002927680	8	0
K. Lumpur Industry Fund	0.013696640	22	-0.004488460	13	81
K. Lumpur Regular Saving Fund	0.400498010	2	0.015001200	4	4
K. Lumpur Aggressive Growth Fund	0.036262020	20	0.000465740	9	121
K. Lumpur Balanced Fund	0.259805300	7	0.053920740	1	36
K. Lumpur Bond Fund	0.226158879	9	0.004947934	7	4
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	0.039671480	19	-0.012441620	22	9
Emerging Company Growth Fund	0.105270210	14	-0.006563460	16	4
Savings Fund	0.386758470	4	0.005148380	6	4
High Growth Fund	0.395250120	3	0.044646120	2	1
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	0.152188360	12	-0.007662630	17	25
Capital Fund	0.133956740	13	-0.012119010	21	64
Mudarabah Fund	0.286153060	5	0.000194200	10	25
MAYBAN MANAGEMENT BHD					
Income Trust Fund	0.175345450	11	-0.002630230	11	0
Balanced Trust Fund	0.096972540	15	0.009857130	5	100
ARAB-MALAYASIA U.T. BHD					
First Fund	0.010905100	23	-0.015423500	25	4
Tabung Ittikal Fund	0.018788590	21	-0.017996420	28	49
Capital Growth Fund	0.273247330	6	-0.024886620	32	676
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	0.069371290	18	-0.010166170	18	0
Prime Fund	-0.008896610	25	-0.016144110	26	1
Dana Putra Fund	0.187291140	10	-0.004987010	15	25
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.406028740	1	0.027756550	3	4
MBF UNIT TRUST MGT BHD					
First Fund	-0.048244080	30	-0.019558260	29	1
Growth Fund	0.003841260	24	-0.016544600	27	9

Sum of squared differences	1421
Spearman Rank Correlation	0.739552786
t- statistics *	6.017985533

* Significant at 0.05 level

TABLE 4.7 : PERFORMANCE RANKING BETWEEN TREYNOR INDEX AND ADJUSTED SHARPE INDEX (BENCHMARK : KLSE COMPOSITE INDEX)

Fund	Treynor Index	Rank of Fund	Adjusted Sharpe Index	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.001298800	26	-0.014395630	26	0
Malaysia Progress Fund	-0.002144880	28	-0.021689370	28	0
Tabung Amanah Bakti Fund	-0.009856380	31	-0.096896910	32	1
Malaysia Berjaya Fund	-0.001355750	27	-0.015493400	27	0
Malaysia Equity Fund	-0.003538340	29	-0.034966620	29	0
Malaysia Commerce Fund	-0.010088470	32	-0.096119820	31	1
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	0.006943080	17	0.079854430	16	1
K. Lumpur Growth Fund	0.007323250	15	0.071011250	17	4
K. Lumpur Index Fund	0.019325660	7	0.254998020	8	1
K. Lumpur Industry Fund	0.001172430	22	0.013696640	22	0
K. Lumpur Regular Saving Fund	0.028771780	4	0.400498010	2	4
K. Lumpur Aggressive Growth Fund	0.002010560	20	0.036262020	20	0
K. Lumpur Balanced Fund	0.070227980	1	0.259805300	7	36
K. Lumpur Bond Fund	0.025316322	5	0.226158879	9	16
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	0.002792400	19	0.039671480	19	0
Emerging Company Growth Fund	0.007146340	16	0.105270210	14	4
Savings Fund	0.023921360	6	0.386758470	4	4
High Growth Fund	0.065063760	2	0.395250120	3	1
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	0.012132450	11	0.152188360	12	1
Capital Fund	0.007421830	14	0.133956740	13	1
Mudarabah Fund	0.017889470	9	0.286153060	5	16
MAYBAN MANAGEMENT BHD					
Income Trust Fund	0.015793730	10	0.175345450	11	1
Balanced Trust Fund	0.019271010	8	0.096972540	15	49
ARAB-MALAYASIA U.T. BHD					
First Fund	0.000868240	23	0.010905100	23	0
Tabung Ittikal Fund	0.001449140	21	0.018788590	21	0
Capital Growth Fund	0.010459040	13	0.273247330	6	49
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	0.005348710	18	0.069371290	18	0
Prime Fund	-0.000905450	25	-0.008896610	25	0
Dana Putra Fund	0.011750330	12	0.187291140	10	4
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.046370250	3	0.406028740	1	4
MBF UNIT TRUST MGT BHD					
First Fund	-0.003849520	30	-0.048244080	30	0
Growth Fund	0.000213690	24	0.003841260	24	0

Sum of squared differences	198
Spearman Rank Correlation	0.963709677
t- statistics *	19.7730102

* Significant at 0.05 level

Adjusted Sharpe Index as shown in Table 4.7. In all the above cases, the Spearman Rank Correlation Coefficients exceeds 0.7 and all of them are significant at the 0.05 level. This means that all the ranking methods produces significantly similar performance rankings and that any of these methods could be used for ranking purposes without substantial discrepancies.

Using the KLSE Emas Index as benchmark, when the funds are ranked according to the Treynor Index (Table 4.8), the best performer is Kuala Lumpur Balanced Fund with a value of 2.711 while the worst performer is Malaysia Commerce Fund with a value of -0.01027. When ranked using the Adjusted Jensen's Alpha (Table 4.8), the best performer is Kuala Lumpur Balanced Fund with a value of 4.258 while the worst performer is Capital Growth Fund with a value of -0.2340. In the case of the Adjusted Sharpe Index (Table 4.9), the result is same as using KLSE Composite Index as benchmark. The results for Adjusted Sharpe Index remain same for both benchmarks. As can be observed, there are more funds performing better than the market portfolio. The superior performer such as SBB Premium Capital Fund, Kuala Lumpur Balanced Fund, Kuala Lumpur Regular Savings Fund, Kuala Lumpur Index Fund, BHLB Pacific High Growth Fund, BHLB Pacific Savings Fund and DCB-RHB Mudharabah Fund are ranked from the three types of performance measurement. In fact, all the eight funds managed by Kuala Lumpur Mutual Berhad perform better than market portfolio under Adjusted Sharpe Index measurement.

Using KLSE Emas Index as market portfolio benchmark, Spearman Rank Correlation Coefficients were calculated for the different ranking methods namely (1) between Treynor Index and Adjusted Jensen's Alpha as shown in Table 4.8 (2) between Adjusted Sharpe Index and Adjusted Jensen's Alpha as shown in Table 4.9 and (3) between Treynor Index and Adjusted Sharpe Index as shown in Table 4.10.

TABLE 4.8 : PERFORMANCE RANKING BETWEEN TREYNOR INDEX AND ADJUSTED JENSEN'S ALPHA (BENCHMARK : EMAS INDEX)

Fund	Treynor Index	Rank of Fund	Adjusted Jensen's Alpha	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.001265490	26	-0.006498870	18	64
Malaysia Progress Fund	-0.002059230	28	-0.007294790	22	36
Tabung Amanah Bakti Fund	-0.009380390	31	-0.014624180	29	4
Malaysia Berjaya Fund	-0.001327780	27	-0.006560290	19	64
Malaysia Equity Fund	-0.003410940	29	-0.008647040	23	36
Malaysia Commerce Fund	-0.010269030	32	-0.016115550	30	4
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	0.006735700	17	0.001508280	12	25
K. Lumpur Growth Fund	0.007097590	16	-0.003029550	16	0
K. Lumpur Index Fund	0.022226980	9	0.004514520	9	0
K. Lumpur Industry Fund	0.001372130	22	0.001616870	11	121
K. Lumpur Regular Saving Fund	0.033136290	5	0.023437880	5	0
K. Lumpur Aggressive Growth Fund	0.002497500	20	-0.007152660	20	0
K. Lumpur Balanced Fund	2.710734190	1	4.257720350	1	0
K. Lumpur Bond Fund	0.022245127	8	0.009382182	7	1
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	0.003237100	19	-0.008985540	24	25
Emerging Company Growth Fund	0.007685460	15	-0.001959240	15	0
Savings Fund	0.030983420	6	0.017620870	6	0
High Growth Fund	0.061671710	3	0.045913160	2	1
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	0.014479890	13	-0.001839030	14	1
Capital Fund	0.007938090	14	-0.007235120	21	49
Mudarabah Fund	0.016669420	11	0.005139240	8	9
MAYBAN MANAGEMENT BHD					
Income Trust Fund	0.019142990	10	0.003762680	10	0
Balanced Trust Fund	0.025987690	7	0.023660340	4	9
ARAB-MALAYASIA U.T. BHD					
First Fund	0.000948300	23	-0.012007800	26	9
Tabung Ittikal Fund	0.001731490	21	-0.013378290	28	49
Capital Growth Fund	0.015453440	12	-0.234029300	32	400
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	0.005745920	18	-0.006487050	17	1
Prime Fund	-0.001114510	25	-0.013140570	27	4
Dana Putra Fund	0.110350880	2	-0.001118010	13	121
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.039515450	4	0.026260360	3	1
MBF UNIT TRUST MGT BHD					
First Fund	-0.004362520	30	-0.016648860	31	1
Growth Fund	0.000218630	24	-0.011950440	25	1

Sum of squared differences	1036
Spearman Rank Correlation	0.810117302
t- statistics *	7.568546409

* Significant at 0.05 level

TABLE 4.9 : PERFORMANCE RANKING BETWEEN ADJUSTED SHARPE INDEX AND ADJUSTED JENSEN'S ALPHA (BENCHMARK : EMAS COMPOSITE INDEX)

Fund	Adjusted Sharpe Index	Rank of Fund	Adjusted Jensen's Alpha	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.014395630	26	-0.006498870	18	64
Malaysia Progress Fund	-0.021689370	28	-0.007294790	22	36
Tabung Amanah Bakti Fund	-0.096896910	32	-0.014624180	29	9
Malaysia Berjaya Fund	-0.015493400	27	-0.006560290	19	64
Malaysia Equity Fund	-0.034966620	29	-0.008647040	23	36
Malaysia Commerce Fund	-0.096119820	31	-0.016115550	30	1
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	0.079854430	16	0.001508280	12	16
K. Lumpur Growth Fund	0.071011250	17	-0.003029550	16	1
K. Lumpur Index Fund	0.254998020	8	0.004514520	9	1
K. Lumpur Industry Fund	0.013696640	22	0.001616870	11	121
K. Lumpur Regular Saving Fund	0.400498010	2	0.023437880	5	9
K. Lumpur Aggressive Growth Fund	0.036262020	20	-0.007152660	20	0
K. Lumpur Balanced Fund	0.259805300	7	4.257720350	1	36
K. Lumpur Bond Fund	0.226158879	9	0.009382182	7	4
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	0.039671480	19	-0.008985540	24	25
Emerging Company Growth Fund	0.105270210	14	-0.001959240	15	1
Savings Fund	0.386758470	4	0.017620870	6	4
High Growth Fund	0.395250120	3	0.045913160	2	1
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	0.152188360	12	-0.001839030	14	4
Capital Fund	0.133956740	13	-0.007235120	21	64
Mudarabah Fund	0.286153060	5	0.005139240	8	9
MAYBAN MANAGEMENT BHD					
Income Trust Fund	0.175345450	11	0.003762680	10	1
Balanced Trust Fund	0.096972540	15	0.023660340	4	121
ARAB-MALAYASIA U.T. BHD					
First Fund	0.010905100	23	-0.012007800	26	9
Tabung Ittikal Fund	0.018788590	21	-0.013378290	28	49
Capital Growth Fund	0.273247330	6	-0.234029300	32	676
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	0.069371290	18	-0.006487050	17	1
Prime Fund	-0.008896610	25	-0.013140570	27	4
Dana Putra Fund	0.187291140	10	-0.001118010	13	9
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.406028740	1	0.028260360	3	4
MBF UNIT TRUST MGT BHD					
First Fund	-0.048244080	30	-0.016648860	31	1
Growth Fund	0.003841260	24	-0.011950440	25	1

Sum of squared differences	1382
Spearman Rank Correlation	0.74670088
t- statistics *	6.148669931

* Significant at 0.05 level

TABLE 4.10 : PERFORMANCE RANKING BETWEEN TREYNOR INDEX AND ADJUSTED SHARPE INDEX (BENCHMARK : EMAS INDEX)

Fund	Treynor Index	Rank of Fund	Adjusted Sharpe Index	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.001265490	26	-0.014395630	26	0
Malaysia Progress Fund	-0.002059230	28	-0.021689370	28	0
Tabung Amanah Bakti Fund	-0.009380390	31	-0.096896910	32	1
Malaysia Berjaya Fund	-0.001327780	27	-0.015493400	27	0
Malaysia Equity Fund	-0.003410940	29	-0.034966620	29	0
Malaysia Commerce Fund	-0.010269030	32	-0.096119820	31	1
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	0.006735700	17	0.079854430	16	1
K. Lumpur Growth Fund	0.007097590	16	0.071011250	17	1
K. Lumpur Index Fund	0.022226980	9	0.254998020	8	1
K. Lumpur Industry Fund	0.001372130	22	0.013696640	22	0
K. Lumpur Regular Saving Fund	0.033136290	5	0.400498010	2	9
K. Lumpur Aggressive Growth Fund	0.002497500	20	0.036262020	20	0
K. Lumpur Balanced Fund	2.710734190	1	0.259805300	7	36
K. Lumpur Bond Fund	0.022245127	8	0.226158879	9	1
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	0.003237100	19	0.039671480	19	0
Emerging Company Growth Fund	0.007685460	15	0.105270210	14	1
Savings Fund	0.030983420	6	0.386758470	4	4
High Growth Fund	0.061671710	3	0.395250120	3	0
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	0.014479890	13	0.152188360	12	1
Capital Fund	0.007938090	14	0.133956740	13	1
Mudarabah Fund	0.016669420	11	0.286153060	5	36
MAYBAN MANAGEMENT BHD					
Income Trust Fund	0.019142990	10	0.175345450	11	1
Balanced Trust Fund	0.025987690	7	0.096972540	15	64
ARAB-MALAYASIA U.T. BHD					
First Fund	0.000948300	23	0.010905100	23	0
Tabung Ittikal Fund	0.001731490	21	0.018788590	21	0
Capital Growth Fund	0.015453440	12	0.273247330	6	36
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	0.005745920	18	0.069371290	18	0
Prime Fund	-0.001114510	25	-0.008896610	25	0
Dana Putra Fund	0.110350880	2	0.187291140	10	64
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.039515450	4	0.406028740	1	9
MBF UNIT TRUST MGT BHD					
First Fund	-0.004362520	30	-0.048244080	30	0
Growth Fund	0.000218630	24	0.003841260	24	0

Sum of squared differences	268
Spearman Rank Correlation	0.950879765
t- statistics *	16.8244457

* Significant at 0.05 level

In all the above cases, the Spearman Rank Correlation Coefficients exceeds 0.7 and all of them are significant at the 0.05 level. This means that all the ranking methods produces significantly similar performance rankings and that any of these methods could be used for ranking purposes without substantial discrepancies.

Table 4.11 and Table 4.12 shows the performance ranking for Treynor Index and adjusted Jensen's Alpha compare between the two benchmarks. For both Treynor Index and adjusted Jensen's Alpha, the Spearman Rank Correlation Coefficients were calculated. In all the above cases, the Spearman Rank Correlation Coefficients exceeds 0.9 and all of them are significant at the 0.05 level. This study shows that there are not much difference using different benchmark in ranking the fund performance.

4.2 BETA VALUES

Table 4.1 shows that the unit trust funds as a whole has a mean beta value of 0.5577 which is lower than 1.0 of the market portfolio using KLSE Composite Index as benchmark. This means that unit trust funds are less risky than the market portfolio. From Table 4.2, the mean beta value of 0.5073 is lower when KLSE Emas Index being used as benchmark. This means that the unit trust funds are even less risky when KLSE Emas Index is used as benchmark.

Table 4.3 shows that when the funds are compared to KLSE Composite Index as benchmark, Malaysia Berjaya Fund has the highest beta value of 0.9194 while the fund with the lowest beta value of 0.07510 is Kuala Lumpur Balanced Fund. It can be observed that all the funds have beta values that are less than 1.0. These results seem

TABLE 4.11 : PERFORMANCE RANKING FOR TREYNOR INDEX BETWEEN BENCHMARK KLSE COMPOSITE INDEX AND EMAS INDEX

Fund	KLSE Treynor Index	Rank of Fund	EMAS Treynor Index	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.001298800	26	-0.001265490	26	0
Malaysia Progress Fund	-0.002144880	28	-0.002059230	28	0
Tabung Amanah Bakti Fund	-0.009856380	31	-0.009380390	31	0
Malaysia Berjaya Fund	-0.001355750	27	-0.001327780	27	0
Malaysia Equity Fund	-0.003538340	29	-0.003410940	29	0
Malaysia Commerce Fund	-0.010088470	32	-0.010269030	32	0
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	0.006943080	17	0.006735700	17	0
K. Lumpur Growth Fund	0.007323250	15	0.007097590	16	1
K. Lumpur Index Fund	0.019325660	7	0.022226980	9	4
K. Lumpur Industry Fund	0.001172430	22	0.001372130	22	0
K. Lumpur Regular Saving Fund	0.028771780	4	0.033136290	5	1
K. Lumpur Aggressive Growth Fund	0.002010560	20	0.002497500	20	0
K. Lumpur Balanced Fund	0.070227980	1	2.710734190	1	0
K. Lumpur Bond Fund	0.025316322	5	0.022245127	8	9
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	0.002792400	19	0.003237100	19	0
Emerging Company Growth Fund	0.007146340	16	0.007685460	15	1
Savings Fund	0.023921360	6	0.030983420	6	0
High Growth Fund	0.065063760	2	0.061671710	3	1
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	0.012132450	11	0.014479890	13	4
Capital Fund	0.007421830	14	0.007938090	14	0
Mudarabah Fund	0.017889470	9	0.016669420	11	4
MAYBAN MANAGEMENT BHD					
Income Trust Fund	0.015793730	10	0.019142990	10	0
Balanced Trust Fund	0.019271010	8	0.025987690	7	1
ARAB-MALAYASIA U.T. BHD					
First Fund	0.000868240	23	0.000948300	23	0
Tabung Ittikal Fund	0.001449140	21	0.001731490	21	0
Capital Growth Fund	0.010459040	13	0.015453440	12	1
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	0.005348710	18	0.005745920	18	0
Prime Fund	-0.000905450	25	-0.001114510	25	0
Dana Putra Fund	0.011750330	12	0.110350880	2	100
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.046370250	3	0.039515450	4	1
MBF UNIT TRUST MGT BHD					
First Fund	-0.003849520	30	-0.004362520	30	0
Growth Fund	0.000213690	24	0.000218630	24	0

Sum of squared differences	128
Spearman Rank Correlation	0.976539589
t- statistics *	24.83876045

* Significant at 0.05 level

TABLE 4.12 : PERFORMANCE RANKING FOR ADJUSTED JENSEN'S ALPHA BETWEEN BENCHMARK KLSE COMPOSITE INDEX AND EMAS INDEX

Fund	KLSE Adjusted Jensen's Alpha	Rank of Fund	EMAS Adjusted Jensen's Alpha	Rank of Fund	Squared Differences Between Ranks
ASIA UNIT TRUST BERHAD					
Malaysia Investment Fund	-0.012053400	19	-0.006498870	18	1
Malaysia Progress Fund	-0.012902260	23	-0.007294790	22	1
Tabung Amanah Bakti Fund	-0.020625180	30	-0.014624180	29	1
Malaysia Berjaya Fund	-0.012109700	20	-0.006560290	19	1
Malaysia Equity Fund	-0.014296820	24	-0.008647040	23	1
Malaysia Commerce Fund	-0.021476650	31	-0.016115550	30	1
KL MUTUAL BERHAD					
K. Lumpur Savings Fund	-0.003803130	12	0.001508280	12	0
K. Lumpur Growth Fund	-0.004782330	14	-0.003029550	16	4
K. Lumpur Index Fund	0.002927680	8	0.004514520	9	1
K. Lumpur Industry Fund	-0.004488460	13	0.001616870	11	4
K. Lumpur Regular Saving Fund	0.015001200	4	0.023437880	5	1
K. Lumpur Aggresive Growth Fund	0.000465740	9	-0.007152660	20	121
K. Lumpur Balanced Fund	0.053920740	1	4.257720350	1	0
K. Lumpur Bond Fund	0.004947934	7	0.009382182	7	0
BHLB PACIFIC TRUST MGT BHD					
Double Growth Fund	-0.012441620	22	-0.008985540	24	4
Emerging Company Growth Fund	-0.006563460	16	-0.001959240	15	1
Savings Fund	0.005148380	6	0.017620870	6	0
High Growth Fund	0.044646120	2	0.045913160	2	0
DCB-RHB UNIT TRUST MGT BHD					
Dynamic Fund	-0.007662630	17	-0.001839030	14	9
Capital Fund	-0.012119010	21	-0.007235120	21	0
Mudarabah Fund	0.000194200	10	0.005139240	8	4
MAYBAN MANAGEMENT BHD					
Income Trust Fund	-0.002630230	11	0.003762680	10	1
Balanced Trust Fund	0.009857130	5	0.023660340	4	1
ARAB-MALAYASIA U.T. BHD					
First Fund	-0.015423500	25	-0.012007800	26	1
Tabung Ittikal Fund	-0.017996420	28	-0.013378290	28	0
Capital Growth Fund	-0.024886620	32	-0.234029300	32	0
BBMB UNIT TRUST MGT BHD					
Unit Trust Fund	-0.010166170	18	-0.006487050	17	1
Prime Fund	-0.016144110	26	-0.013140570	27	1
Dana Putra Fund	-0.004987010	15	-0.001118010	13	4
SBB UNIT TRUST MGT BHD					
SBB Premium Capital Fund	0.027756550	3	0.026260360	3	0
MBF UNIT TRUST MGT BHD					
First Fund	-0.019558260	29	-0.016648860	31	4
Growth Fund	-0.016544600	27	-0.011950440	25	4

Sum of squared differences	172
Spearman Rank Correlation	0.968475073
t- statistics *	21.29399129

* Significant at 0.05 level

to confirm the notion that unit trust funds are less risky than the market portfolio and offer security of capital for investors.

From Table 4.4, when the fund compare to KLSE Emas Index as benchmark, the highest and lowest beta fund remain the same with the value of 0.9388 and 0.001946 respectively. All the funds have beta values that are less than 1.0 showing that the unit trust funds are less risky than the market portfolio and offer security of capital for investors.

4.3 RISKS DIVERSIFICATION

The Coefficient of Determination (R^2) of the funds as a whole as shown in Table 4.1 is less than 1.0. This means that the funds are less than perfectly diversified. The unit trust funds in the sample are not well diversified portfolios with an overall R^2 value of 0.5167 when compared with KLSE Composite Index. The diversified portfolio becomes better with the R^2 value of 0.5461 using KLSE Emas Index as benchmark.

Kuala Lumpur Aggressive Growth Fund has the highest R^2 value of 0. 8317 and is the most well diversified portfolio in the sample using KLSE Composite Index as market benchmark as shown in Table 4.3. However, the least diversified portfolio is Kuala Lumpur Growth Fund with a R^2 value of 0.005444. Table 4.3 shows that twenty one out of the thirty two funds in the sample have R^2 value in excess of 0.5. These conflict with the unit trust objective to be well diversified in their portfolio.

Using KLSE Emas Index as market benchmark, Tabung Ittikal Fund has the highest R^2 value of 0. 8504 and is the most well diversified portfolio in the sample as shown in Table 4.4. However, the least diversified portfolio is Kuala Lumpur Balanced Fund with a R^2 value of 0.000016. Table 4.3 shows that twenty three out of the thirty two funds in the sample have R^2 value in excess of 0.5. These also conflict with the unit trust objective to be well diversified in their portfolio.

Comparing both types of benchmarks, the funds have better diversified portfolio under KLSE Emas Index as market benchmark.

4.4 RESULTS FOR FUNDS GROUP ACCORDING TO THEIR OBJECTIVES

The funds are grouped according to their objectives as shown in Table 4.13 and Table 4.14 using KLSE Composite Index and KLSE Emas Index as benchmark respectively. The average mean monthly return of the balanced, growth and income funds are 0.9071%, 0.7408% and 0.7719% respectively. Among them, the growth funds post the worst results while the balanced funds are the best performer.

The mean Adjusted Sharpe Index of the balanced, growth and income funds are 0.1288, 0.1318 and 0.0825 respectively. When performance is risk adjusted, growth funds are the best performers while the income funds are the worst performers. This measurement provide the same results for funds if compare with KLSE Emas Index as benchmark as shown in Table 4.14.

When funds rank by the Treynor Index, the mean values for balanced, growth and income funds are 0.01034, 0.01551 and 0.007308 respectively. Again, growth funds are the best performer while the Income funds are the worst performer. This is consistent with the results when ranking is by the Adjusted Sharpe Index. Using KLSE Emas Index as benchmark, the Treynor Index values for balanced, growth and income

TABLE 4.13 : RETURN, RISK AND PERFORMANCE PROFILE OF FUNDS BASED ON FUND OBJECTIVE (BENCHMARK : KLSE COMPOSITE INDEX)

Fund Objective	Number of Fund	Mean Monthly Return	Standard Deviation	Beta	Coefficient of Determination	Sharpe Index	Adjusted Sharpe Index	Treynor Index	Jensen's Alpha	Adjusted Jensen's Alpha
BALANCE										
RANGE	9	0.002392120 to 0.011693930	0.025104080 to 0.056873840	0.136344440 to 0.661104192	0.069614490 to 0.849767490	-0.014465290 to 0.410187480	-0.014395630 to 0.400498010	-0.003849520 to 0.028771780	-0.013640410 to 0.005378710	-0.012053400 to 0.015001200
MEAN		0.009071273	0.043162271	0.547626842	0.579821669	0.134694751	0.128789602	0.010339882	-0.004163199	-0.004556480
GROWTH										
RANGE	14	-0.002182184 to 0.015288280	0.015654300 to 0.080067134	0.075103200 to 0.919426595	0.021640420 to 0.831666120	-0.097365770 to 0.425061340	-0.096896910 to 0.406028740	-0.009856380 to 0.070227980	-0.013712209 to 0.006017430	-0.024886620 to 0.053920740
MEAN		0.007407922	0.040265318	0.506531628	0.471292857	0.140134446	0.131790752	0.015507992	-0.004577989	0.000528673
INCOME										
RANGE	9	-0.003186868 to 0.017855000	0.005165635 to 0.087353010	0.051914571 to 0.867904540	0.005443700 to 0.812151710	-0.096594100 to 0.258413170	-0.096119820 to 0.254998020	-0.010088470 to 0.025316322	-0.016100961 to 0.001973060	-0.021476650 to 0.004947934
MEAN		0.007718703	0.056439386	0.647353148	0.524178016	0.086373020	0.082493893	0.007308266	-0.006846182	-0.008354333

TABLE 4.14 : RETURN, RISK AND PERFORMANCE PROFILE OF FUNDS BASED ON FUND OBJECTIVE (BENCHMARK: KLSE EMAS INDEX)

Fund Objective	Number of Fund	Mean Monthly Return	Standard Deviation	Beta	Coefficient of Determination	Sharpe Index	Adjusted Sharpe Index	Treynor Index	Jensen's Alpha	Adjusted Jensen's Alpha
BALANCE										
RANGE	9	0.00239212 to 0.01678148	0.02510408 to 0.05935858	0.04738499 to 0.68611264	0.05006661 to 0.85039703	-0.01446529 to 0.41018748	-0.01439563 to 0.40049801	-0.00436252 to 0.11035088	-0.01066158 to 0.00729313	-0.01664886 to 0.02366034
MEAN		0.00907127	0.04316227	0.47042941	0.60398269	0.13469475	0.12878960	0.02260704	-0.00126314	0.00158474
GROWTH										
RANGE	14	-0.00218218 to 0.01528828	0.01565430 to 0.08006713	0.00194573 to 0.93879929	0.00001601 to 0.79596872	-0.09736577 to 0.42506134	-0.09689691 to 0.40602874	-0.00938039 to 2.71073419	-0.01021964 to 0.00668535	-0.23402930 to 4.25772035
MEAN		0.00740792	0.04026532	0.47929363	0.47049355	0.14013445	0.13179075	0.20442083	-0.00110669	0.28926275
INCOME										
RANGE	9	-0.00318687 to 0.01785500	0.00516564 to 0.08735301	0.05908197 to 0.77499633	0.20331987 to 0.84849863	-0.09659410 to 0.25841317	-0.09611982 to 0.25499802	-0.01026903 to 0.02224513	-0.01187137 to 0.00263673	-0.01611555 to 0.00938218
MEAN		0.00771870	0.05643939	0.58768472	0.60582797	0.08637302	0.08249389	0.00769561	-0.00427247	-0.00467852

funds are 0.02261, 0.2044 and 0.007696 respectively. The results are consistent with the above results.

The mean Adjusted Jensen's Alpha for balanced, growth and income funds are -0.004556, 0.0005287 and -0.008354 respectively under KLSE Composite Index benchmark. Again similar results as the above two methods of performance ranking is obtained. Under KLSE Emas Index benchmark, the mean Adjusted Jensen's Alpha for balanced, growth and income funds are 0.001585, 0.2893 and -0.004679 respectively. Again, the results consistent with the above results.

Comparing both types of benchmark, the value for Adjusted Sharpe Index, Treynor Index and Adjusted Jensen's Alpha are larger using KLSE Emas Index as benchmark.

The mean beta values of the balance, growth and income funds are 0.5476, 0.5065, 0.6474 respectively. It appears that the growth funds have the lowest risks while income funds have the highest risks. This contradicts the fact that income funds should have the lowest risks as they invest mainly in government securities and bonds while growth funds have the highest risks as they invest in risky stocks which have high capital gains potential. Refer to Table 3.2, non of the fund in the sample seems to adhere to the fund's stated objectives. Using KLSE Emas as benchmark, the results slightly different where the Balance funds have the lowest beta value and income funds still remain at highest beta value. The mean beta values of the balance, growth and income funds are 0.4704, 0.4793 and 0.5877 respectively. Refer to Table 3.2, the Income Funds group seems to adhere to the fund's stated objectives. It seems that the mean beta value are lower using KLSE Emas Index as benchmark.

The R^2 value of balanced, growth and income funds are 0.5798, 0.4713 and 0.5242 respectively under KLSE Composite Index. It seems the funds as a whole are not very well diversified. This means that balanced funds are the most well diversified whereas growth funds are the least diversified. Using KLSE Emas Index as benchmark, the R^2 value of balanced, growth and income funds are 0.6040, 0.4705 and 0.6058 respectively. The income funds are the most well diversified whereas growth funds are the least diversified. Comparing the different results produce by different benchmark, the R^2 value seems higher using KLSE Emas Index as benchmark.

4.5 FORECASTING ABILITY OF INVESTMENT MANAGERS

Table 4.15 shows the Jensen's Alpha values which are tabulated in decreasing magnitude. As can be seen from the table, ten funds out of thirty two funds have Jensen's Alpha values above zero. This means that ten funds' investment managers have forecasting ability of security prices and that they all outperform the naïve "buy and hold" strategy (market portfolio-using KLSE Composite Index which has a value of 0.0). SBB Premium Capital Fund's Investment Manager has the most ability for forecasting security prices and the worst fund's investment managers in forecasting ability is Asia Unit Trust Malaysia Commerce Fund. It would be interesting to note all the Funds managed by Asia Unit Trust Berhad, BBMB Unit Trust Management Berhad, Arab Malaysia Unit Trust Berhad and MBF Unit Trust Management Berhad have Jensen's Alpha values less than zero. This means that the fund's investment managers are poor in forecasting ability of security prices and that they all underperform than the naïve "buy and hold" strategy (market portfolio). Using KLSE Emas Index as benchmark, more funds' (i.e. thirteen fund) investment managers have forecasting ability of security prices and that they all outperform the naïve "buy and

TABLE 4.15 : MEAN JENSEN'S ALPHA VALUE OF UNIT TRUST FUNDS (BENCHMARK : KLSE COMPOSITE INDEX)

Fund	Jensen's Alpha	Ranking of ability fund's Investment Manager in forecasting
SBB Premium Capital Fund	0.006017430	1
BHLB Pacific High Growth Fund	0.005784460	2
Kuala Lumpur Regular Saving Fund	0.005378710	3
Kuala Lumpur Balanced Fund	0.004023800	4
BHLB Pacific Savings Fund	0.002138340	5
Kuala Lumpur Index Fund	0.001973060	6
Mayban Balanced Trust Fund	0.001302790	7
Kuala Lumpur Bond Fund	0.000256244	8
Kuala Lumpur Aggresive Growth Fund	0.000185110	9
DCB-RHB Mudarabah Fund	0.000123860	10
MARKET (KLSE Composite Index)	**0.000000000**	**
Mayban Income Trust Fund	-0.001156230	11
Kuala Lumpur Industry Fund	-0.001344690	12
BBMB Dana Putra Fund	-0.002215380	13
Kuala Lumpur Savings Fund	-0.002497120	14
Kuala Lumpur Growth Fund	-0.003385050	15
BHLB Pacific Emerging Company Growth Fund	-0.004249420	16
DCB-RHB Dynamic Fund	-0.004425960	17
DCB-RHB Capital Fund	-0.006498830	18
Asia UT Malaysia Investment Fund	-0.007961802	19
BBMB Unit Trust Fund	-0.008468690	20
Asia UT Malaysia Progress Fund	-0.009672156	21
BHLB Pacific Double Growth Fund	-0.009767870	22
Arab Malaysia First Fund	-0.011016080	23
Asia UT Malaysia Equity Fund	-0.011061158	24
Asia UT Malaysia Berjaya Fund	-0.011130350	25
Arab Malaysia Capital Growth Fund	-0.011516290	26
MBF Growth Fund	-0.013055880	27
MBF First Fund	-0.013533480	28
Arab Malaysia Tabung Ittikal Fund	-0.013640410	29
Asia UT Tabung Amanah Bakti Fund	-0.013712209	30
BBMB Prime Fund	-0.013950060	31
Asia UT Malaysia Commerce Fund	-0.016100961	32

TABLE 4.16 : MEAN JENSEN'S ALPHA VALUE OF UNIT TRUST FUNDS (BENCHMARK: KLSE EMAS INDEX)

Fund	Jensen's Alpha	Ranking of ability fund's Investment Manager in forecasting
Kuala Lumpur Regular Saving Fund	0.0072931300	1
SBB Premium Capital Fund	0.0066853450	2
BHLB Pacific High Growth Fund	0.0062779290	3
BHLB Pacific Savings Fund	0.0056484000	4
Arab Malaysia Capital Growth Fund	0.0055500800	5
Kuala Lumpur Balanced Fund	0.0052593200	6
DCB-RHB Mudarabah Fund	0.0035185910	7
Kuala Lumpur Index Fund	0.0026367300	8
Mayban Balanced Trust Fund	0.0022954920	9
Mayban Income Trust Fund	0.0014153730	10
Kuala Lumpur Savings Fund	0.0010211000	11
Kuala Lumpur Bond Fund	0.0005491540	12
Kuala Lumpur Industry Fund	0.0004139400	13
MARKET (EMAS Index)	**0.0000000000**	**
BBMB Dana Putra Fund	-0.0005290200	14
DCB-RHB Dynamic Fund	-0.0009349600	15
BHLB Pacific Emerging Company Growth Fund	-0.0011793400	16
Kuala Lumpur Growth Fund	-0.0020844000	17
Kuala Lumpur Aggresive Growth Fund	-0.0022873100	18
DCB-RHB Capital Fund	-0.0036251820	19
Asia UT Malaysia Investment Fund	-0.0044069400	20
BBMB Unit Trust Fund	-0.0050325600	21
Asia UT Malaysia Progress Fund	-0.0056982000	22
Asia UT Malaysia Berjaya Fund	-0.0061594150	23
BHLB Pacific Double Growth Fund	-0.0064035700	24
Asia UT Malaysia Equity Fund	-0.0069426310	25
Arab Malaysia First Fund	-0.0080829000	26
Arab Malaysia Tabung Ittikal Fund	-0.0089640360	27
MBF Growth Fund	-0.0092169220	28
BBMB Prime Fund	-0.0095786900	29
Asia UT Tabung Amanah Bakti Fund	-0.0102196370	30
MBF First Fund	-0.0106615770	31
Asia UT Malaysia Commerce Fund	-0.0118713670	32

hold" strategy (market portfolio-using KLSE Composite Index which has a value of 0.0). Kuala Lumpur Regular Savings Fund's investment manager has the most ability for forecasting security prices and Asia Unit Trust Malaysia Commerce Fund's investment managers is the worst in the ability of forecasting security prices.

For the sample used in this study, one third of the funds in fact performed better than the naïve "buy and hold" strategy (whether using KLSE Composite Index or KLSE Emas Index as market portfolio). There are good correlation between Jensen's Alpha values and the performance measures (Adjusted Sharpe Index, Treynor Index and Adjusted Jensen's Alpha), this means that if the fund's investment manager are good in forecasting security prices, then the fund performance are good such as SBB Premium Capital Fund and Kuala Lumpur Regular Savings Fund.

As far as this sample of unit trust funds is concerned, the result seems to dispel the notion that unit trust managers have superior forecasting ability and in fact could not predict the market portfolio.

4.6 MICROPAL : TRACKING FUND PERFORMANCE RESULTS

Table 4.17 show the results of unit trust performance based on Mircopal rating. Micropal categorized the funds into four groups i.e. Balanced Funds, Islamic Syariah Funds, Fixed Interest Funds and Equity Funds. Ranking in the group uses the method shown in Appendix B.

TABLE 4.17 : MICROPAL RANKING OF MALAYSIA PRIVATE UNIT TRUST FUNDS PERFORMANCE TABLE AT DEC 11, 1996

Malaysia Unit Trust	3 months 2.9.96 - 2.12.96		6 months 3.6.96 - 2.12.96		1 years 1.12.96 - 2.12.96		3 years 2.12.93 - 2.12.96		5 years 2.9.96 - 2.12.96		Fund launch date
	% Chg	Rank	% Chg	Rank	% Chg	Rank	% Chg	Rank	% Chg	Rank	
Balanced Funds											
KL Balanced	4.72	1	5.14	1	14.06	1	N/A	...	N/A	...	07.06.95
Mayban Balanced Trust	2.89	2	2.89	2	12.06	2	N/A	...	N/A	...	19.09.94
Mean/Count	3.8	2	4.01	2	13.06	2	0	0	0	0	
Islamic Syariah Funds											
RHB Islamic Index	4.95		4.16		26.25		11.38		N/A		02.01.92
Asia UT Tabung Amanah Bakti	9.26	1	10.71	1	28.42	1	32.49	1	78.87	1	14.05.71
Dana Putra BBMB	2.68	3	9.24	2	23.44	2	N/A	...	N/A	...	16.07.95
DCB-RHB Mudarabah	2.91	2	6	3	N/A	...	N/A	...	N/A	...	09.05.96
Tabung-Ittikal Arab-Malaysia	2.44	4	1.58	4	20.26	3	-1.01	2	N/A	...	01.01.93
Mean/Count	4.32	4	6.88	4	24.04	3	15.74	2	78.87	1	
Fixed Interest Funds											
Arab Malaysia Gilts	1.19	4	2.5	2	5.06	2	15	2	31.68	2	28.11.86
Asia UT Malaysia Commerce	7.14	1	12.5	1	21.62	1	32.35	1	60.87	1	24.01.84
KL Bond	1.98	2	N/A	...	N/A	...	N/A	...	N/A	...	11.06.96
Mayban Income Trust	1.96	3	N/A	...	N/A	...	N/A	...	N/A	...	19.06.96
Mean/Count	3.07	4	7.5	2	13.34	2	23.68	2	46.28	2	
Equity Funds											
Malaysia KLSE Composite	9.66		7.49		28.88		23.09		130.51		01.12.87
Arab-Malaysia Cumulative Gth	7.29	11	N/A	...	N/A	...	N/A	...	N/A	...	24.07.96
Arab-Malaysia First	8.44	9	9.59	8	26.58	8	11.93	14	82.48	9	10.01.89
Asia UT Malaysia Berjaya	15.63	2	18.09	3	37.49	3	58.38	4	159.56	4	05.05.76
Asia UT Malaysia Equity	18.1	1	21.21	2	43.93	2	64.5	3	170.94	2	20.01.82
Asia UT Malaysia Investment	10.1	3	11.41	5	29.78	5	69	2	155.37	6	02.12.66
Asian UT Malaysia Progress	9.84	4	22.94	1	69.67	1	121.48	1	260.36	1	01.06.70
BBMB Prime	3.49	24	8.2	12	24.84	10	37.7	7	147.75	7	14.05.91
BBMB Unit Trust	2.56	26	3.41	23	20.41	15	26.19	11	134.2	8	19.08.89
BHLB Pacific Double Growth	7.06	12	8.32	11	24.82	11	18.98	13	82.12	10	15.05.91
BHLB Pacific Emg Co Growth	6.06	15	10.45	6	31.23	4	N/A	...	N/A	...	10.05.94
BHLB Pacific High Growth	6	16	7.02	18	18.86	17	N/A	...	N/A	...	28.09.95
BHLB Pacific Savings	5.71	19	7.17	17	23.09	13	N/A	...	N/A	...	05.08.95
DCB-RHB Capital	9.41	5	7.48	15	17.91	20	N/A	...	N/A	...	12.04.95
DCB-RHB Dynamic	5.36	21	4.42	21	18.75	16	20.08	12	N/A	...	15.09.92
HLB Growth	9.17	6	9.65	7	24.78	12	N/A	...	N/A	...	08.09.95
KL Aggressive Growth	5.88	17	3.85	22	13.68	23	N/A	...	N/A	...	25.04.94
KL Growth	4.59	23	4.69	20	14.01	22	41.02	6	157.99	5	11.12.84
KL Index	4.92	22	4.92	19	18.04	19	28.1	10	N/A	...	02.03.92
KL Industry	8.49	8	8.49	10	19.34	16	31.27	9	N/A	...	24.11.93
KL Regular Savings	7.32	10	9.09	9	27.08	7	N/A	...	N/A	...	25.04.94
KL Savings	5.6	20	8.08	14	22.11	14	43.71	5	159.68	3	29.03.81
Mayban Unit Trust	2.86	25	2.76	24	15.9	21	34.16	8	N/A	...	26.03.92
MBf First	-1.22	28	0	26	10.6	24	-3.89	15	47.48	11	01.05.91
MBf Growth	0	27	1.95	25	8.7	25	N/A	...	N/A	...	01.06.95
Multi-Purpose First	6.48	14	7.48	16	N/A	...	N/A	...	N/A	...	16.01.96
Pacific Premier	5.77	18	8.09	13	25.81	9	N/A	...	N/A	...	10.08.95
SBB Premium Capital	6.93	13	12.91	4	28.41	6	N/A	...	N/A	...	01.08.95
TA Balanced	8.82	7	N/A	...	N/A	...	N/A	...	N/A	...	01.07.96
Mean/Count	7.15429	28	8.821536	26	25.7684	25	41.7133	15	153.495	11	