APPENDIX A

Contract Code	FCPO
Underlying Instrument	Crude Palm Oil
Contract Size	25 metric tons
Minimum Price Fluctuation	RM 1.00 per metric ton
Daily Price Limits	RM100 per metric ton above or below the Settlement Prices of the preceding day for all months, except spot month. Limits are expanded when the Settlement Prices of all three quoted months immediately following the current month, in any day, are at limits as follows: **Day** — **Limit** First Day — RM100 Second Day — RM150 Third Day — RM200 Daily price limits will remain at RM200, when the preceding day's settlement prices of all the three quoted months immediately following the spot month settle at limits of RM200. Otherwise, it shall revert to the basic limit amount of RM100.
Contract Months	Spot and the next 5 succeeding months, and thereafter, alternate months up to 12 months ahead
Trading Hours	First trading session: Malaysian 10:30 a.m. to 12:30 p.m. Second trading session: Malaysian 3:00 p.m. to 6:00 p.m.
Final Trading Day and Maturity Date	Contract expires at noon on the 15th day of the delivery month. If the 15th is a non-market day, the preceding Business day.
Tender Period	First business day to the 20th business day of the delivery month, or if the 20th is a non-market day, the preceding business day.

APPENDIX B

Name of Index : **KLSE Composite Index (as at 23 September 2003)**
Base year : **1977**
Calculation mode : **Weighted by market capitalisation**
Index = **Current aggregate Market Capitalisation x 100**
Base Aggregate Market Capitalisation

Stock Code	No.	Company
5185	1	AFFIN HOLDINGS BHD
2674	2	ALUMINIUM COMPANY OF MALAYSIA BHD
1007	3	AMDB BHD
1015	4	AMMB HOLDINGS BHD
6351	5	AMWAY (MALAYSIA) HOLDINGS BHD
1473	6	BANDAR RAYA DEVELOPMENTS BHD
1562	7	BERJAYA SPORTS TOTO BHD
5032	8	BINTULU PORT HOLDINGS BHD
4162	9	BRITISH AMERICAN TOBACCO (MALAYSIA) BHD
2836	10	CARLSBERG BREWERY MALAYSIA BHD
2879	11	CHEMICAL COMPANY OF MALAYSIA BHD
1023	12	COMMERCE ASSET-HOLDING BHD
7838	13	COMPUTER SYSTEMS ADVISERS (M) BHD
5738	14	COUNTRY HEIGHTS HOLDINGS BHD
5023	15	COURTS MAMMOTH BHD
7277	16	DIALOG BHD
6947	17	DIGI.COM BHD
5398	18	GAMUDA BHD
3182	19	GENTING BHD
7022	20	GLOBETRONICS TECHNOLOGY BHD
1953	21	GOLDEN HOPE PLANTATIONS BHD
3255	22	GUINNESS ANCHOR BHD
3034	23	HAP SENG CONSOLIDATED BHD
5819	24	HONG LEONG BANK BHD
1503	25	HONG LEONG PROPERTIES BHD
3328	26	HUME INDUSTRIES (M) BHD
1597	27	IGB CORPORATION BHD
3336	28	IJM CORPORATION BHD
1961	29	IOI CORPORATION BHD
4383	30	JAYA TIASA HOLDINGS BHD
1058	31	JOHN HANCOCK LIFE INSURANCE (M) BHD
6416	32	JOHOR PORT BHD
2615	33	JT INTERNATIONAL BHD
3522	34	KIAN JOO CAN FACTORY BHD

APPENDIX B

5371	35	KIM HIN INDUSTRY BHD
2445	36	KUALA LUMPUR KEPONG BHD
2003	37	KULIM (M) BHD
3131	38	KUMPULAN GUTHRIE BHD
4529	39	LEADER UNIVERSAL HOLDINGS BHD
6645	40	LINGKARAN TRANS KOTA HOLDINGS BHD
2011	41	LINGUI DEVELOPMENTS BHD
1198	42	MAA HOLDINGS BHD
3735	43	MAGNUM CORPORATION BHD
2496	44	MALAKOFF BHD
1155	45	MALAYAN BANKING BHD
3794	46	MALAYAN CEMENT BHD
3891	47	MALAYAN UNITED INDUSTRIES BHD
5014	48	MALAYSIA AIRPORTS HOLDINGS BHD
3816	49	MALAYSIA INTERNATIONAL SHIPPING CORP BHD
2194	50	MALAYSIA MINING CORPORATION BHD
3786	51	MALAYSIAN AIRLINE SYSTEM BHD
5525	52	MALAYSIAN INDUSTRIAL DEVELOPMENT FINANCE BHD
6459	53	MALAYSIAN NATIONAL REINSURANCE BHD
3832	54	MALAYSIAN OXYGEN BHD
3867	55	MALAYSIAN PACIFIC INDUSTRIES BHD
3875	56	MALAYSIAN TOBACCO COMPANY BHD
5051	57	MAXIS COMMUNICATIONS BHD
5983	58	MBM RESOURCES BHD
5011	59	MESINIAGA BHD
2275	60	MNI HOLDINGS BHD
3905	61	MULPHA INTERNATIONAL BHD
5509	62	NCB HOLDINGS BHD
4707	63	NESTLE (M) BHD
3999	64	NEW STRAITS TIMES PRESS (M) BHD, THE
5017	65	NIKKO ELECTRONICS BHD
4944	66	NYLEX (M) BHD
4006	67	ORIENTAL HOLDINGS BHD
6866	68	PADIBERAS NASIONAL BHD
5304	69	PERUSAHAAN OTOMOBIL NASIONAL BHD
5681	70	PETRONAS DAGANGAN BHD
6033	71	PETRONAS GAS BHD
5052	72	PLUS EXPRESSWAYS BHD
4634	73	POS MALAYSIA & SERVICES HOLDINGS BHD
4065	74	PPB GROUP BHD
1295	75	PUBLIC BANK BHD
6807	76	PUNCAK NIAGA HOLDINGS BHD
6475	77	RAMATEX BHD
1066	78	RHB CAPITAL BHD
5541	79	ROAD BUILDER (M) HOLDINGS BHD
2356	80	SARAWAK ENTERPRISE CORPORATION BHD

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2224	81	SELANGOR DREDGING BHD
1783	82	SELANGOR PROPERTIES BHD
5517	83	SHANGRI-LA HOTELS (M) BHD
4324	84	SHELL REFINING CO (FOM) BHD
4197	85	SIME DARBY BHD
8664	86	SP SETIA BHD
6084	87	STAR PUBLICATIONS (MALAYSIA) BHD
4898	88	TA ENTERPRISE BHD
4405	89	TAN CHONG MOTOR HOLDINGS BHD
2267	90	TANJONG PLC
4863	91	TELEKOM MALAYSIA BHD
5347	92	TENAGA NASIONAL BHD
4456	93	TIME ENGINEERING BHD
4421	94	TRADEWINDS (M) BHD
5013	95	UDA HOLDINGS BHD
4588	97	UMW HOLDINGS BHD
5005	98	UNISEM (M) BHD
2089	96	UNITED PLANTATIONS BHD
4243	99	WTK HOLDINGS BHD
4677	100	YTL CORPORATION BHD

Details of Bond Index Calculations

The RAM Quantshop Malaysia Bond Indices have been developed to measure the performance of the Malaysian fixed interest market. This achieved using a range of indices with different credit and maturities.

1. Securities Covered

MGS Indexes

Issuer	Malaysian Government
Credit	Government Guaranteed
Maturities	All maturities greater than 1 year
Issues Included	Straight, semi annual coupon securities
Minimum Size	individual securities must have at least RM200 million on issue (originally 100 million, the change does not affect the Index because every issue is above RM 200 million)Source of Securities Bank Negara Malaysia– bond market pages http://www.bnm.gov.my/en/Statistics/mgs.asp
Frequency	Calculated bi-monthly
Sub Indexes	All Series (greater than 1 year) 1-3 years (1 year and less than 7 years 3-7 years (3 years and less than 7 years) 7+ years (7 years and greater) 1-5 years (1 year and less than 5 years) this is a NEW index 5-10 years (5 years and less than 10 years) this is a NEW index 10+ years (10 years and greater) this is a NEW index

1-10 years (1 year and less than 10 years) this is a NEW index

2. Pricing and Calculations

Bi-Monthly Indexes:

Start Level	1000.00
Revaluations	Bimonthly, at the 15 th and end of
Pricing basis	MGS – Clean prices provided by Bank Negara Malaysia on http://www.bnm.gov.my/en/Statistics/mgs.asp All Other Indexes - Yields as shown by Bank Negara Malaysia on http://www.bnm.gov.my/en/Statistics/mgs.asp
Weightings	Gross market value including accrued interest on date of revaluation
Reinvestment	Daily, with coupons added in coupon payment dates and interest accrued until the next revaluation date.
Rebalancing	Occurs when a bond has matured or there has been a change in the securities on issue.

3.0 Using Bond Indices

3.1 Causes of Index level changes

Accrued Interest: With the passage of time, the accumulation index will steadily increase due to the interest earned on the bonds in the index portfolio. Since the bond price includes the value of accumulated interest, this effect occurs day-by-

day, rather than just on coupon payment days. This impact must always be positive.

Changing Yields: The major source of movements. A rise in yields implies a fall in prices and the index. A fall in current yields, all other things equal, implies a rise in the index.

Reducing Maturity: The closer the bond is to maturity the smaller will be the impact of differences between yields (market price) and coupon (determined at issue). So bonds priced at a discount will slowly increase in value over time all other things being equal, while bonds priced at a premium will slowly decrease in value.

3.2 Weights in the Index

The RAM Quant shop Indices are market weighted – that is the weight of a security in the index is the market value of that security on issue divided by the total value of all securities on issue. That is:

Market Value of Security/Total Value of all Securities on Issue.

3.3 Rebalancing

The index automatically rebalances for price changes. A rise in the price of a particular bond will increase its weighting in proportion to the rise in market value. So the portfolio representing the index only needs to be revalued to provide a new index value. Rebalancing will occur on a pricing date (either daily or bi-monthly) when one of the following will occur:

coupon payment (on the coupon payment date);

maturity (on the maturity date);

new issue of a new bond; or

any other change in the amount on issue.

At a pricing date, the portfolio is:

revalued (using the day's closing yields) to provide the index figure;
rebalanced for the next period.

As the number and volume of bond series on issue changes the index is not distorted by changes in composition of the index. Essentially this is because all the bonds in the index at the end of a given day are sold for their end-of-day prices. The proceeds are then used to purchase a new set of bonds in their market value proportions.

3.4. Reinvestment

All coupons and maturities are reinvested in securities at their market value proportions on valuation day. So coupon income from a bond is reinvested across the whole portfolio. This takes place on the coupon payment date not on the ex-interest date, as the coupon cash would not be available until the payment date in a real portfolio. The coupon earns the yield associated with the period between the ex-interest and interest payment dates.

APPENDIX D

Results of Means Comparison using T-test for Independent Samples

Market Portfolio Pre- and Post-Crisis Performance

Standard Two-Sample t-Test

data: x: KLCIretpre in SDF5 , and y: KLCIretpost in SDF5
t = 0.5231, df = 82, p-value = 0.3012
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.0247532 NA
sample estimates:
mean of x mean of y
-0.002116342 -0.01346771

Portfolio I and Market Portfolio Pre-Crisis Performance

Standard Two-Sample t-Test

data: x: Port1pre in SDF5 , and y: KLCIretpre in SDF5
t = 0.4411, df = 82, p-value = 0.3301
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01219635 NA
sample estimates:
mean of x mean of y
0.002284188 -0.002116342

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Portfolio II and Market Portfolio Pre-Crisis Performance

Standard Two-Sample t-Test
data: x: Port2pre in SDF5 , and y: KLCIretpre in SDF5
t = 0.22, df = 82, p-value = 0.4132
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01716438 NA
sample estimates:
mean of x mean of y
0.0005000498 -0.002116342

Portfolio III and Market Portfolio Pre-Crisis Performance

Standard Two-Sample t-Test

data: x: Port3pre in SDF5 , and y: KLCIretpre in SDF5
t = 0.5583, df = 82, p-value = 0.2891
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01103514 NA
sample estimates:
mean of x mean of y
0.003457219 -0.002116342

Portfolio IV and Market Portfolio Pre-Crisis Performance

Standard Two-Sample t-Test

data: x: Port4pre in SDF5 , and y: KLCIretpre in SDF5
t = 0.4738, df = 82, p-value = 0.3184

alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01173037 NA
sample estimates:
mean of x mean of y
0.002554789 -0.002116342

Portfolio I and Market Portfolio Post-Crisis Performance

Standard Two-Sample t-Test

data: x: Port1post in SDF5 , and y: KLCIretpost in SDF5
t = 1.1085, df = 82, p-value = 0.1354
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01101634 NA
sample estimates:
mean of x mean of y
0.008527814 -0.01346771

Portfolio II and Market Portfolio Post-Crisis Performance

Standard Two-Sample t-Test

data: x: Port2post in SDF5 , and y: KLCIretpost in SDF5
t = 0.0758, df = 82, p-value = 0.4699
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.03541156 NA
sample estimates:
mean of x mean of y

-0.01177787 -0.01346771

Portfolio III and Market Portfolio Post-Crisis Performance

Standard Two-Sample t-Test

data: x: Port3post in SDF5 , and y: KLCIretpost in SDF5
t = 1.0702, df = 82, p-value = 0.1438
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01176861 NA
sample estimates:
mean of x mean of y
0.007757452 -0.01346771

Portfolio IV and Market Portfolio Post-Crisis Performance

Standard Two-Sample t-Test

data: x: Port4post in SDF5 , and y: KLCIretpost in SDF5
t = 1.0692, df = 82, p-value = 0.1441
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01178917 NA
sample estimates:
mean of x mean of y
0.007737154 -0.01346771

Portfolio I and II Post Crisis Performance

Standard Two-Sample t-Test

data: x: Port1post in SDF5 , and y: Port2post in SDF5
t = 1.9073, df = 82, p-value = 0.03
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
0.002594434 NA
sample estimates:
mean of x mean of y
0.008527814 -0.01177787

Portfolio IV and Portfolio II Post-Crisis Performance

Standard Two-Sample t-Test

data: x: Port4post in SDF5 , and y: Port2post in SDF5
t = 1.8365, df = 82, p-value = 0.035
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
0.00183703 NA
sample estimates:
mean of x mean of y
0.007737154 -0.01177787

Portfolio I and Portfolio IV Post-Crisis Performance

Standard Two-Sample t-Test

data: x: Port1post in SDF5 , and y: Port4post in SDF5
t = 0.2591, df = 82, p-value = 0.3981
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.004286815 NA

sample estimates:
mean of x mean of y
0.008527814 0.007737154

CPO Futures

CPO Futures and Portfolio II Pre-Crisis Performance

Standard Two-Sample t-Test

data: x: CPOretpre in SDF5 , and y: Port2pre in SDF5
t = 0.2168, df = 82, p-value = 0.4145
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.02031894 NA
sample estimates:
mean of x mean of y
0.003544305 0.0005000498

CPO Futures and Portfolio III Pre-Crisis Performance

Standard Two-Sample t-Test

data: x: Port3pre in SDF5 , and y: CPOretpre in SDF5
t = -0.007, df = 82, p-value = 0.5028
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.02083339 NA
sample estimates:
mean of x mean of y
0.003457219 0.003544305

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CPO Futures and Portfolio IV Pre-Crisis Performance

Standard Two-Sample t-Test

data: x: CPOretpre in SDF5 , and y: Port4pre in SDF5
t = 0.08, df = 82, p-value = 0.4682
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01959128 NA
sample estimates:
mean of x mean of y
0.003544305 0.002554789

CPO Futures and Portfolio II Post-Crisis Performance

Standard Two-Sample t-Test

data: x: CPOretpost in SDF5 , and y: Port2post in SDF5
t = 0.063, df = 82, p-value = 0.475
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.03015512 NA
sample estimates:
mean of x mean of y
-0.Q1059181 -0.01177787

CPO Futures and Portfolio III Post-Crisis Performance

Standard Two-Sample t-Test
data: x: Port3post in SDF5 , and y: CPOretpost in SDF5
t = 1.1585, df = 82, p-value = 0.125

alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.008001166 NA
sample estimates:
mean of x mean of y
0.007757452 -0.01059181

CPO Futures and Portfolio IV Post-Crisis Performance

Standard Two-Sample t-Test
data: x: Port4post in SDF5 , and y: CPOretpost in SDF5
t = 1.1572, df = 82, p-value = 0.1253
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.008021795 NA
sample estimates:
mean of x mean of y
0.007737154 -0.01059181

CPO Futures Pre- and Post-Crisis Performance

Standard Two-Sample t-Test

data: x: CPOretpre in SDF5 , and y: CPOretpost in SDF5
t = 0.721, df = 82, p-value = 0.2365
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.0184807 NA
sample estimates:
mean of x mean of y
0.003544305 -0.01059181

CPO Futures and Portfolio II Overall Time Period

Standard Two-Sample t-Test

data: x: Portfolio2 in totalport2 , and y: CPOret in totalport2
t = -0.1656, df = 166, p-value = 0.5657
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.0214543 NA
sample estimates:
mean of x mean of y
-0.00547651 -0.00352375

CPO Futures and Portfolio III Overall Time Period

Standard Two-Sample t-Test

data: x: Portfolio3 in totalport3 , and y: CPOret in totalport3
t = 0.8608, df = 166, p-value = 0.1953
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.007987408 NA
sample estimates:
mean of x mean of y
0.005142581 -0.00352375

APPENDIX D

CPO Futures and Portfolio IV Overall Time Period

Standard Two-Sample t-Test

data: x: Portfolio4 in portoverall , and y: CPOret in portoverall
t = 0.7992, df = 166, p-value = 0.2127
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.008598394 NA
sample estimates:
mean of x mean of y
0.004514304 -0.00352375

APPENDIX E

Results of Pre- and Post Crisis Performance of Portfolio

Portfolio I

Standard Two-Sample t-Test

data: x: Port1pre in SDF5 , and y: Port1post in SDF5
t = -1.3224, df = 82, p-value = 0.9051
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01409854 NA
sample estimates:
mean of x mean of y
0.002284188 0.008527814

Portfolio II

Standard Two-Sample t-Test

data: x: Port2pre in SDF5 , and y: Port2post in SDF5
t = 0.948, df = 82, p-value = 0.173
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.009268612 NA
sample estimates:
mean of x mean of y
0.0005000498 -0.01177787

Portfolio III

Standard Two-Sample t-Test
data: x: Port3pre in SDF5 , and y: Port3post in SDF5
t = -0.9168, df = 82, p-value = 0.819
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01210394 NA
sample estimates:
mean of x mean of y
0.003457219 0.007757452

Portfolio IV

Standard Two-Sample t-Test

data: x: Port4pre in SDF5 , and y: Port4post in SDF5
t = -1.1724, df = 82, p-value = 0.8778
alternative hypothesis: true difference in means is greater than 0
95 percent confidence interval:
-0.01253597 NA
sample estimates:
mean of x mean of y
0.002554789 0.007737154