

Test Results

Table 1. Summary Statistics (entire period: 1991–1998)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | 0.1052 | 0.1466 | 0.0264 | 0.0062 | 0.2559 | 0.0064 |
| Std.Dev. (%) | 1.4884 | 2.4712 | 1.3670 | 1.9569 | 2.6867 | 3.0287 |
| Sharpe Ratio | 0.0707 | 0.0593 | 0.0193 | 0.0032 | 0.0952 | 0.0021 |
| Skewness | -1.2591 | 0.0005 | 3.3600 | 3.6532 | 3.3560 | -1.1235 |
| Kurtosis | 21.8388 | 5.1183 | 33.2941 | 46.4066 | 36.9657 | 8.7240 |
| Minimum (%) | -18.0331 | -11.3443 | -7.5664 | -12.4540 | -10.3165 | -21.5765 |
| Maximum (%) | 11.4491 | 14.7831 | 15.3905 | 27.5531 | 32.0365 | 12.8667 |
| Normality Chi ² | 3389.4** | 802.94** | 641.79** | 862.84** | 336.56** | 289.37** |

| Developed Indices | DAX | NYSE | GT-30 |
|----------------------------|------------|-------------|--------------|
| Mean Return (%) | 0.0550 | 0.0545 | -0.0228 |
| Std.Dev. (%) | 1.1276 | 0.7428 | 0.7207 |
| Sharpe Ratio | 0.0488 | 0.0734 | -0.0316 |
| Skewness | -0.6666 | -0.6731 | 0.1782 |
| Kurtosis | 5.8813 | 9.3293 | 1.5699 |
| Minimum (%) | -8.3822 | -6.7911 | -2.5954 |
| Maximum (%) | 6.7173 | 4.4796 | 3.8273 |
| Normality Chi ² | 750.08** | 1525.2** | 137.14** |

Table 2. Summary Statistics (1991)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | -0.0682 | -0.0454 | | | | |
| Std.Dev. (%) | 1.0188 | 2.1548 | | | | |
| Sharpe Ratio | -0.0669 | -0.0211 | | | | |
| Skewness | -0.2423 | 0.3969 | | | | |
| Kurtosis | 5.8085 | 11.2876 | | | | |
| Minimum (%) | -6.0946 | -10.2542 | | | | |
| Maximum (%) | 3.7857 | 8.9901 | | | | |
| Normality Chi ² | 147.48** | 252.78** | | | | |

Table 3. Summary Statistics (1992)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | 0.0236 | 0.0476 | | | | |
| Std.Dev. (%) | 0.9056 | 1.6712 | | | | |
| Sharpe Ratio | 0.0261 | 0.0285 | | | | |
| Skewness | -1.3862 | 1.7099 | | | | |
| Kurtosis | 11.5064 | 9.3499 | | | | |
| Minimum (%) | -6.1299 | -5.4970 | | | | |
| Maximum (%) | 3.2184 | 9.1406 | | | | |
| Normality Chi ² | 161.69** | 76.731** | | | | |

Table 4. Summary Statistics (1993)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | 0.1346 | 0.9542 | 0.8961 | 0.1173 | | |
| Std.Dev. (%) | 1.0895 | 3.3354 | 3.1245 | 1.1254 | | |
| Sharpe Ratio | 0.1235 | 0.2861 | 0.2868 | 0.1042 | | |
| Skewness | 0.6942 | 0.0281 | 3.1098 | 0.3618 | | |
| Kurtosis | 5.5155 | 2.0309 | 10.0481 | 4.2986 | | |
| Minimum (%) | -5.2093 | -10.1953 | -4.1110 | -4.0448 | | |
| Maximum (%) | 5.3000 | 9.4060 | 15.3905 | 4.2828 | | |
| Normality Chi ² | 101.98** | 34.241** | 310.58** | 40.116** | | |

Table 5. Summary Statistics (1994)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | 0.0581 | -0.1960 | -0.0906 | 0.2614 | | |
| Std.Dev. (%) | 1.5155 | 3.8118 | 1.7750 | 3.6064 | | |
| Sharpe Ratio | 0.0383 | -0.0514 | -0.0510 | 0.0725 | | |
| Skewness | 0.3709 | -0.3263 | 0.8553 | 2.6640 | | |
| Kurtosis | 7.0071 | 1.4743 | 5.6085 | 16.1922 | | |
| Minimum (%) | -7.1350 | -11.3443 | -7.5664 | -12.4540 | | |
| Maximum (%) | 7.0288 | 14.7831 | 7.0221 | 27.5531 | | |
| Normality Chi ² | 181.19** | 18.591** | 87.561** | 132.73** | | |

Table 6. Summary Statistics (1995)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | 0.0151 | 0.0058 | -0.1034 | -0.1310 | | |
| Std.Dev. (%) | 0.9199 | 2.2434 | 0.7547 | 0.9981 | | |
| Sharpe Ratio | 0.0164 | 0.0026 | -0.1370 | -0.1312 | | |
| Skewness | -1.1418 | 0.3049 | -0.3091 | -3.5141 | | |
| Kurtosis | 8.6073 | 1.6440 | 3.0880 | 28.2886 | | |
| Minimum (%) | -5.6995 | -7.3533 | -3.1260 | -9.4084 | | |
| Maximum (%) | 3.7130 | 7.4611 | 2.4586 | 1.8381 | | |
| Normality Chi ² | 128.74** | 22.20** | 57.961** | 183.18** | | |

Table 7. Summary Statistics (1996)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | 0.3797 | 0.2431 | 0.0903 | 0.0578 | 0.7322 | 0.3126 |
| Std.Dev. (%) | 1.4666 | 1.4633 | 0.6886 | 1.1565 | 3.5145 | 1.5754 |
| Sharpe Ratio | 0.2589 | 0.1661 | 0.1311 | 0.0500 | 0.2083 | 0.1984 |
| Skewness | 0.7500 | 0.2396 | -0.5188 | -0.0503 | 3.8171 | -0.1517 |
| Kurtosis | 4.0015 | 0.5878 | 7.3741 | 2.3593 | 31.6306 | 11.3028 |
| Minimum (%) | -5.1247 | -4.4740 | -4.2253 | -4.2486 | -10.1261 | -8.7684 |
| Maximum (%) | 8.1212 | 4.6599 | 2.7923 | 4.9165 | 32.0365 | 7.5119 |
| Normality Chi ² | 57.359** | 5.5402 | 181.65** | 43.086** | 165.09** | 224.68** |

Table 8. Summary Statistics (1997)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | 0.2529 | 0.0086 | -0.0328 | 0.0074 | 0.2204 | 0.1931 |
| Std.Dev. (%) | 2.4506 | 1.6157 | 0.9907 | 1.2371 | 2.1894 | 3.2301 |
| Sharpe Ratio | 0.1032 | 0.0053 | -0.0331 | 0.0060 | 0.1007 | 0.0598 |
| Skewness | -2.1262 | -0.9412 | -0.3519 | 1.2383 | 0.6673 | -2.0174 |
| Kurtosis | 17.0281 | 7.1669 | 2.8244 | 15.0454 | 7.1390 | 13.5903 |
| Minimum (%) | -18.0331 | -10.2864 | -4.4366 | -5.9514 | -10.3165 | -21.5765 |
| Maximum (%) | 11.4491 | 6.8323 | 4.3134 | 9.5738 | 11.4724 | 12.8667 |
| Normality Chi ² | 135.39** | 119.82** | 49.329** | 305.23** | 156.0** | 101.0** |

Table 9. Summary Statistics (1998)

| Emerging Indices | BUX | WIG | PX-50 | SAX | RICI | TALSE |
|----------------------------|------------|------------|--------------|------------|-------------|--------------|
| Mean Return (%) | -0.0190 | 0.1052 | -0.0456 | -0.4066 | -0.5638 | -0.4029 |
| Std.Dev. (%) | 2.0568 | 1.4884 | 0.9399 | 1.3981 | 1.5814 | 3.4412 |
| Sharpe Ratio | -0.0092 | 0.0707 | -0.0485 | -0.2908 | -0.3565 | -0.1171 |
| Skewness | -1.0799 | -1.2591 | 0.4470 | -0.6938 | -1.1596 | -0.0797 |
| Kurtosis | 5.5668 | 21.8388 | 1.0577 | 3.7583 | 2.8312 | 1.8935 |
| Minimum (%) | -9.4436 | -18.0331 | -2.4298 | -6.8945 | -6.5753 | -13.1196 |
| Maximum (%) | 7.2274 | 11.4491 | 3.0119 | 4.3604 | 3.1724 | 9.6176 |
| Normality Chi ² | 40.41** | 3389.4** | 7.3127* | 33.815** | 18.013** | 28.02** |

Table 10. Correlation (entire period: 1991–1998)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|----------------|------------|------------|--------------|------------|-------------|--------------|------------|-------------|--------------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.1457 | 1.000 | | | | | | | |
| PX-50 | 0.1276 | 0.1283 | 1.000 | | | | | | |
| SAX | 0.0773 | 0.0196 | 0.1254 | 1.000 | | | | | |
| RICI | 0.0286 | 0.0663 | 0.0168 | 0.0760 | 1.000 | | | | |
| TALSE | 0.1879 | 0.1889 | 0.0745 | 0.0267 | 0.0991 | 1.000 | | | |
| DAX | 0.2553 | 0.0987 | -0.0010 | 0.0017 | -0.0600 | 0.1426 | 1.000 | | |
| NYSE | 0.1010 | 0.0506 | 0.0057 | -0.0160 | -0.0420 | -0.0120 | 0.2532 | 1.000 | |
| GT-30 | 0.0039 | 0.0029 | 0.0704 | 0.0374 | 0.0720 | 0.0990 | -0.0470 | -0.3590 | 1.000 |

Table 11. Correlation (1991)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|----------------|------------|------------|--------------|------------|-------------|--------------|------------|-------------|--------------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.0782 | 1.000 | | | | | | | |
| PX-50 | | | 1.000 | | | | | | |
| SAX | | | | 1.000 | | | | | |
| RICI | | | | | 1.000 | | | | |
| TALSE | | | | | | 1.000 | | | |
| DAX | 0.0779 | 0.0236 | | | | | 1.000 | | |
| NYSE | 0.0391 | 0.0621 | | | | | 0.3466 | 1.000 | |
| GT-30 | 0.0433 | -0.0446 | | | | | -0.1551 | -0.4199 | 1.000 |

Table 12. Correlation (1992)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|---------|---------|---------|-------|-------|-------|-------|---------|---------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.0004 | 1.000 | | | | | | | |
| PX-50 | | | 1.000 | | | | | | |
| SAX | | | | 1.000 | | | | | |
| RICI | | | | | 1.000 | | | | |
| TALSE | | | | | | 1.000 | | | |
| DAX | -0.0359 | 0.0119 | | | | | 1.000 | | |
| NYSE | -0.0309 | -0.1186 | | | | | 0.1916 | 1.000 | |
| GT-30 | 0.0844 | -0.0667 | | | | | -0.0044 | -0.2194 | 1.000 |

Table 13. Correlation (1993)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|---------|---------|---------|---------|---------|-------|-------|---------|---------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | -0.1089 | 1.000 | | | | | | | |
| PX-50 | -0.0788 | 0.1068 | 1.000 | | | | | | |
| SAX | -0.0750 | 0.2173 | 0.0835 | 1.000 | | | | | |
| RICI | | | | | 1.000 | | | | |
| TALSE | | | | | | 1.000 | | | |
| DAX | 0.0727 | 0.0047 | -0.0447 | 0.0819 | | | 1.000 | | |
| NYSE | 0.0801 | 0.0361 | -0.2330 | -0.0968 | | | 0.1166 | 1.000 | |
| GT-30 | -0.0361 | -0.0233 | 0.0743 | 0.1089 | | | -0.0351 | -0.3621 | 1.000 |

Table 14. Correlation (1994)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|---------|---------|---------|---------|--------|-------|-------|--------|---------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.0414 | 1.000 | | | | | | | |
| PX-50 | 0.2167 | 0.1076 | 1.000 | | | | | | |
| SAX | 0.1720 | 0.0088 | 0.2175 | 1.000 | | | | | |
| RICI | | | | | 1.000 | | | | |
| TALSE | | | | | | 1.000 | | | |
| DAX | 0.1000 | -0.0355 | -0.1126 | 0.0099 | | | 1.000 | | |
| NYSE | 0.1561 | 0.1037 | -0.0636 | 0.0083 | | | 0.1709 | 1.000 | |
| GT-30 | -0.0144 | -0.0362 | 0.0656 | 0.0442 | | | 0.0083 | -0.6045 | 1.000 |

Table 15. Correlation (1995)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|---------|---------|--------|---------|---------|-------|-------|---------|---------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.0752 | 1.000 | | | | | | | |
| PX-50 | 0.1248 | 0.0781 | 1.000 | | | | | | |
| SAX | -0.0001 | 0.0449 | -0.0709 | 1.000 | | | | | |
| RICI | | | | | 1.000 | | | | |
| TALSE | | | | | | 1.000 | | | |
| DAX | 0.0691 | 0.0978 | 0.0569 | 0.0071 | | | 1.000 | | |
| NYSE | 0.0613 | 0.0332 | 0.0134 | -0.0333 | | | 0.1672 | 1.000 | |
| GT-30 | -0.0349 | 0.0468 | 0.1110 | 0.0188 | | | -0.1751 | -0.4997 | 1.000 |

Table 16. Correlation (1996)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|---------|---------|---------|---------|---------|---------|--------|---------|---------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.3526 | 1.000 | | | | | | | |
| PX-50 | 0.1630 | 0.1340 | 1.000 | | | | | | |
| SAX | 0.1113 | -0.0009 | 0.0785 | 1.000 | | | | | |
| RICI | 0.1009 | 0.1138 | -0.0372 | -0.0185 | 1.000 | | | | |
| TALSE | 0.0771 | 0.0751 | -0.0455 | -0.1435 | -0.0280 | 1.000 | | | |
| DAX | 0.1735 | 0.1752 | 0.0376 | 0.0212 | -0.0536 | 0.0213 | 1.000 | | |
| NYSE | 0.1492 | 0.0134 | 0.0181 | 0.0584 | 0.0204 | 0.0111 | 0.1851 | 1.000 | |
| GT-30 | -0.0126 | 0.1535 | 0.0796 | -0.0433 | 0.0651 | 0.1300 | -0.0071 | -0.6213 | 1.000 |

Table 17. Correlation (1997)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|---------|---------|---------|--------|---------|---------|---------|---------|---------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.5471 | 1.000 | | | | | | | |
| PX-50 | 0.1269 | 0.1775 | 1.000 | | | | | | |
| SAX | -0.0320 | -0.0637 | 0.0055 | 1.000 | | | | | |
| RICI | -0.0146 | 0.0119 | 0.0399 | 0.1457 | 1.000 | | | | |
| TALSE | 0.1255 | 0.1399 | 0.0279 | -0.0008 | 0.0924 | 1.000 | | | |
| DAX | 0.4936 | 0.4235 | 0.0154 | -0.0913 | -0.0911 | 0.1574 | 1.000 | | |
| NYSE | 0.0851 | 0.1102 | 0.0904 | -0.0449 | -0.0887 | -0.1388 | 0.2713 | 1.000 | |
| GT-30 | -0.0628 | -0.0263 | 0.0731 | 0.1104 | 0.0903 | 0.0717 | -0.0406 | -0.1830 | 1.000 |

Table 18. Correlation (1998)

| Differ. | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|---------|--------|--------|--------|---------|---------|--------|--------|--------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.3937 | 1.000 | | | | | | | |
| PX-50 | 0.3460 | 0.2855 | 1.000 | | | | | | |
| SAX | 0.1278 | 0.1334 | 0.1195 | 1.000 | | | | | |
| RICI | 0.0079 | 0.1523 | 0.0631 | 0.1090 | 1.000 | | | | |
| TALSE | 0.3690 | 0.3440 | 0.2260 | 0.1288 | 0.3041 | 1.000 | | | |
| DAX | 0.4739 | 0.3182 | 0.1925 | 0.1667 | 0.0530 | 0.1393 | 1.000 | | |
| NYSE | 0.2408 | 0.1948 | 0.2327 | -0.0923 | -0.0477 | 0.1338 | 0.4952 | 1.000 | |
| GT-30 | 0.1805 | 0.1582 | 0.1004 | -0.0078 | 0.0629 | 0.1221 | 0.1697 | 0.2830 | 1.000 |

Table 19. Correlation in Levels (entire period: 1991–1998)

| Levels | BUX | WIG | PX-50 | SAX | RICI | TALSE | DAX | NYSE | GT-30 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| BUX | 1.000 | | | | | | | | |
| WIG | 0.7671 | 1.000 | | | | | | | |
| PX-50 | -0.0960 | 0.3582 | 1.000 | | | | | | |
| SAX | -0.0991 | 0.1722 | 0.6061 | 1.000 | | | | | |
| RICI | 0.8671 | 0.7906 | -0.2820 | -0.4680 | 1.000 | | | | |
| TALSE | 0.8377 | 0.6861 | -0.1970 | -0.3201 | 0.8877 | 1.000 | | | |
| DAX | 0.9642 | 0.7683 | -0.1861 | -0.2770 | 0.7407 | 0.4199 | 1.000 | | |
| NYSE | 0.9487 | 0.7499 | -0.3211 | -0.2834 | 0.7358 | 0.4765 | 0.9704 | 1.000 | |
| GT-30 | -0.5840 | -0.6580 | 0.3610 | 0.5994 | -0.4550 | -0.0281 | -0.6874 | -0.7412 | 1.000 |

Table 20. Unit Roots (entire period: 1991–1998)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | 1.2269 | -37.928** | 0.92876 (1) | -27.685** (1) |
| WIG | -1.1757 | -36.087** | -1.1573 (2) | -25.358** (1) |
| PX-50 | -1.9666 | -30.149** | -2.6532 (10) | -7.6471** (9) |
| SAX | -1.4774 | -31.149** | -2.7868 (7) | -9.7484** (4) |
| RICI | -1.2621 | -21.481** | -1.6113 (9) | -8.3378** (4) |
| TALSE | -0.99551 | -21.173** | -1.1931 (3) | -13.492** (2) |
| DAX | -0.50945 | -44.391** | -0.48178 (2) | -33.314** (1) |
| NYSE | -0.77149 | -27.163** | -0.74835 (3) | -11.152** (6) |
| GT-30 | -0.60606 | -44.630** | -0.50555 (4) | -27.613** (2) |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 21. Unit Roots (1991)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | 0.082925 | -14.903** | -0.48254 (9) | -3.8849** (8) |
| WIG | -1.2804 | -13.146** | -1.4532 (10) | -4.3308** (9) |
| PX-50 | | | | |
| SAX | | | | |
| RICI | | | | |
| TALSE | | | | |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 22. Unit Roots (1992)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | -1.9630 | -15.639** | -2.2894 (3) | -7.2163** (2) |
| WIG | -0.81032 | -15.928** | -1.5434 (3) | -6.5275** (2) |
| PX-50 | | | | |
| SAX | | | | |
| RICI | | | | |
| TALSE | | | | |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 23. Unit Roots (1993)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | 0.92740 | -13.073** | 0.56601 (1) | -3.9107** (7) |
| WIG | -0.039180 | -13.694** | -0.26425 (2) | -8.1937** (1) |
| PX-50 | -1.1681 | -9.5726** | -1.4688 (5) | -5.1331** (1) |
| SAX | -1.4337 | -9.4923** | -1.4371 (3) | -6.8101** (1) |
| RICI | | | | |
| TALSE | | | | |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 24. Unit Roots (1994)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | -2.2545 | -9.6571** | -2.6845 (1) | -3.8275** (8) |
| WIG | -0.79444 | -12.502** | -1.0593 (5) | -6.9787** (4) |
| PX-50 | -0.11651 | -13.297** | -1.0308 (10) | -3.5866** (9) |
| SAX | -2.1597 | -13.045** | -2.8518 (7) | -3.7464** (4) |
| RICI | | | | |
| TALSE | | | | |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 25. Unit Roots (1995)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | -0.62553 | -11.311** | -0.99499 (1) | -3.4449* (11) |
| WIG | -1.5283 | -13.645** | -1.7525 (1) | -3.9424** (19) |
| PX-50 | -5.5793** | -9.2019** | -4.3710** (4) | -7.7927** (3) |
| SAX | -0.72314 | -15.102** | -1.0037 (6) | -4.9886** (5) |
| RICI | | | | |
| TALSE | | | | |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 26. Unit Roots (1996)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | -1.8471 | -10.763** | -1.4911 (1) | -4.5696** (15) |
| WIG | -3.2784* | -12.185** | -2.8080 (1) | -9.9919** (1) |
| PX-50 | -2.5106 | -11.725** | -2.1001 (1) | -4.4120** (8) |
| SAX | -2.4394 | -15.887** | -2.3986 (7) | -5.2548** (4) |
| RICI | -0.61408 | -12.348** | -0.83108 (5) | -3.6842** (4) |
| TALSE | 2.1958 | -7.7764** | 2.0928 (2) | -9.3194** (1) |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 27. Unit Roots (1997)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | -1.6611 | -16.905** | -1.5670 (6) | -8.1002** (5) |
| WIG | -1.8247 | -13.225** | -2.2168 (1) | -7.1480** (5) |
| PX-50 | -1.0454 | -11.697** | -1.2855 (2) | -10.756** (1) |
| SAX | -1.3820 | -18.201** | -1.2273 (1) | -8.7125** (4) |
| RICI | -5.5844** | -11.744** | -4.7534** (3) | -6.4482** (2) |
| TALSE | -1.4045 | -13.394** | -1.4551 (4) | -8.4823** (3) |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 28. Unit Roots (1998)

| Index | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|-------|-----------|----------------|------------------|-----------------------|
| BUX | -1.7756 | -9.5106** | -1.3276 (6) | -6.4624** (5) |
| WIG | -1.6777 | -8.6198** | -1.8418 (1) | -5.6864** (4) |
| PX-50 | -1.2420 | -7.4122** | -1.8623 (1) | -6.1763** (1) |
| SAX | -0.68933 | -11.162** | -0.70456 (1) | -3.8849** (7) |
| RICI | -1.3884 | -13.145** | -1.2404 (1) | -11.004** (1) |
| TALSE | -1.7996 | -13.779** | -1.8002 (3) | -8.7414** (2) |

* denotes significance at 5%, ** denotes significance at 1%

Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 29. Cointegration (entire period: 1991–1998)

| BUX – base index | | | | |
|-------------------------|----------|-------------|-----------|--------------|
| | constant | coefficient | DF | ADF (lag) |
| WIG | 3.1569 | 0.51087 | -0.036918 | -0.23749 (1) |
| PX-50 | 9.6427 | -0.27413 | -0.53667 | -0.63892 (2) |
| SAX | 9.3051 | -0.26621 | -0.78721 | -0.85254 (2) |
| DAX | -9.0542 | 2.1473 | -2.0637 | -2.2304 (1) |
| NYSE | -10.284 | 2.1204 | -2.8714 | -2.9284 (1) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 30. Cointegration (entire period: 1991–1998)

* denotes significance at 5%

Table 31. Cointegration (entire period: 1991–1998)

| PX-50 – base index | | | | |
|---------------------------|----------|-------------|---------|--------------|
| | constant | coefficient | DF | ADF (lag) |
| BUX | 6.5576 | -0.033890 | -2.1344 | -2.7645 (10) |
| WIG | 3.7804 | 0.26796 | -1.3319 | -1.9098 (17) |
| SAX | 3.3257 | 0.57091 | -1.5066 | -2.1970 (10) |
| DAX | 7.4681 | -0.14920 | -2.3114 | -2.8567 (10) |
| NYSE | 8.5470 | -0.26307 | -2.7063 | -3.1336 (10) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 32. Cointegration (entire period: 1991–1998)

| SAX – base index | | | | |
|-------------------------|----------|-------------|---------|--------------|
| | constant | coefficient | DF | ADF (lag) |
| BUX | 5.4858 | -0.036797 | -1.7051 | -2.9386 (7) |
| WIG | 3.9162 | 0.13647 | -1.1285 | -2.4308 (7) |
| PX-50 | 1.1467 | 0.64338 | -1.3617 | -2.6227 (5) |
| DAX | 7.0427 | -0.23389 | -2.3008 | -3.2525* (7) |
| NYSE | 6.9635 | -0.20611 | -2.1180 | -3.1518 (7) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 33. Cointegration (entire period: 1991–1998)

| RICI – base index | | | | |
|--------------------------|-----------|-------------|-----------|---------------|
| | constant | coefficient | DF | ADF (lag) |
| BUX | -5.7936 | 1.3889 | -0.45675 | -0.81983 (12) |
| WIG | -35.430 | 4.3184 | -2.1691 | -2.3132 (1) |
| PX-50 | 18.577 | -1.9884 | -3.3575 | -3.0364 (1) |
| SAX | 12.662 | -1.2597 | -1.5297 | -1.1655 (5) |
| TALSE | 0.0073264 | 1.1672 | -1.9166 | -2.5507 (3) |
| DAX | -2.9418 | 1.1008 | -0.29602 | -0.34943 (5) |
| NYSE | -14.905 | 2.3639 | 0.0041031 | -0.17241 (15) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 34. Cointegration (entire period: 1991–1998)

| TALSE – base index | | | | |
|---------------------------|----------|-------------|-----------|--------------|
| | constant | coefficient | DF | ADF (lag) |
| BUX | -4.5582 | 1.1402 | -0.074765 | -0.21379 (9) |
| WIG | -25.054 | 3.1478 | -1.5084 | -1.7805 (2) |
| PX-50 | 13.209 | -1.2643 | -0.93276 | -1.1520 (1) |
| SAX | 9.8171 | -0.87340 | -0.13075 | -0.42796 (1) |
| RICI | 0.89984 | 0.70638 | -1.9984 | -2.6405 (3) |
| DAX | -0.95445 | 0.75355 | -0.23330 | -0.57107 (3) |
| NYSE | -9.7507 | 1.6854 | -0.10103 | -0.56567 (1) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 35. Cointegration (1991)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|-------------------------|-------------|-------------------------|--------------|---------------------------|-----------|-------------------------|-----------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | -1.2514 | -1.1253 (10) | | | | |
| WIG | -2.0165 | -1.9225 (5) | | | | | | |
| PX-50 | | | | | | | | |
| SAX | | | | | | | | |
| DAX | -1.9742 | -2.0916 (3) | -0.18670 | -0.18347 (1) | | | | |
| NYSE | -2.4123 | -2.4415 (1) | 0.37312 | 0.30718 (5) | | | | |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 36. Cointegration (1992)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|------------------|--------------|------------------|--------------|--------------------|-----------|------------------|-----------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | -0.19183 | -0.18439 (3) | | | | |
| WIG | -0.44348 | -0.66168 (3) | | | | | | |
| PX-50 | | | | | | | | |
| SAX | | | | | | | | |
| DAX | -1.1483 | -1.4540 (4) | -0.46877 | -0.46319 (4) | | | | |
| NYSE | -1.2530 | -1.2526 (1) | -0.13674 | -0.14799 (1) | | | | |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 37. Cointegration (1993)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|------------------|--------------|------------------|--------------|--------------------|--------------|------------------|--------------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | 0.96066 | 0.47374 (2) | -1.7910 | -1.7563 (5) | -0.62873 | -0.69260 (1) |
| WIG | 1.4820 | 1.0084 (2) | | | -0.81105 | -1.3663 (5) | 0.36116 | 0.43164 (4) |
| PX-50 | -3.083 | -2.1873 (1) | -1.0929 | -0.7718 (11) | | | 1.5667 | 0.44995 (5) |
| SAX | -1.6525 | -0.97113 (1) | -2.1629 | -2.1204 (2) | 0.80120 | -0.26966 (7) | | |
| DAX | 0.08740 | 0.15612 (1) | 0.03168 | -0.20576 (1) | -1.8935 | -1.7876 (5) | -0.90212 | -0.89275 (3) |
| NYSE | -0.62586 | -0.83510 (9) | 1.0162 | 0.55137 (2) | -2.3386 | -1.9417 (5) | -0.71605 | -0.79642 (1) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 38. Cointegration (1994)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|------------------|--------------|------------------|--------------|--------------------|--------------|------------------|-------------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | -1.4856 | -1.4531 (5) | -1.9497 | -1.670 (10) | -1.0800 | -1.8686 (7) |
| WIG | -1.4760 | -1.4657 (5) | | | -0.64909 | -0.83469 (3) | -0.90342 | -1.6208 (5) |
| PX-50 | -0.49048 | -0.56540 (1) | -0.41590 | -0.69821 (5) | | | -3.0910 | -3.268* (4) |
| SAX | -1.8097 | -1.2957 (4) | -0.62888 | -0.89017 (5) | -2.9041 | -2.5633 (6) | | |
| DAX | -3.408* | -3.738* (3) | -0.82801 | -0.82784 (1) | -1.9122 | -1.6545 (10) | -1.1155 | -2.0266 (7) |
| NYSE | -0.61983 | -0.77559 (1) | -1.1273 | -1.0718 (5) | -1.8496 | -1.7102 (10) | -1.1776 | -2.0844 (7) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 39. Cointegration (1995)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|------------------|--------------|------------------|--------------|--------------------|--------------|------------------|--------------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | -0.39183 | -0.41763 (1) | 0.76772 | 0.25290 (4) | 0.39443 | 0.22761 (9) |
| WIG | -0.40130 | -0.42376 (1) | | | -1.0533 | -1.1164 (4) | -1.1233 | -1.2010 (9) |
| PX-50 | 0.15229 | -0.04746 (2) | -1.0364 | -1.0416 (5) | | | -0.57179 | -0.67415 (1) |
| SAX | 0.00867 | -0.08471 (1) | -0.55003 | -0.58802 (1) | -0.01703 | -0.29511 (1) | | |
| DAX | -0.61366 | -0.58097 (4) | -0.81133 | -0.81999 (5) | 0.80223 | 0.26651 (4) | 0.65382 | 0.55088 (9) |
| NYSE | 1.2188 | 0.97080 (1) | -1.9528 | -1.9205 (1) | 0.70952 | 0.27149 (4) | 0.38408 | 0.32800 (9) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 40. Cointegration (1996)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|------------------|--------------|------------------|--------------|--------------------|-------------|------------------|--------------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | -2.1913 | -2.4879 (5) | -3.2438 | -2.5402 (1) | -1.3429 | -1.5040 (7) |
| WIG | -0.77442 | -0.83393 (1) | | | -1.4538 | -1.4649 (1) | -1.1273 | -1.4072 (7) |
| PX-50 | -1.1281 | -0.91834 (1) | -0.92087 | -1.1316 (1) | | | -0.80253 | -0.96870 (3) |
| SAX | -1.0539 | -0.91510 (1) | -1.5444 | -1.6009 (1) | -1.3161 | -1.3690 (1) | | |
| DAX | -0.36038 | -0.36969 (4) | -0.41691 | -0.40086 (1) | -3.3576* | -2.7468 (1) | -1.6016 | -1.6802 (7) |
| NYSE | -2.2792 | -2.1539 (1) | -0.78486 | -0.91687 (1) | -2.9938 | -2.4409 (1) | -1.2240 | -1.3941 (7) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

| | RICI – base index | | TALSE – base index | |
|-------|-------------------|--------------|--------------------|--------------|
| | DF | ADF (lag) | DF | ADF (lag) |
| BUX | -0.62593 | -0.69989 (5) | -0.68157 | -0.83371 (2) |
| WIG | -1.3329 | -1.5207 (1) | -0.87456 | -1.1148 (1) |
| PX-50 | -3.1036 | -2.2504 (5) | -1.6261 | -1.3803 (2) |
| SAX | -2.8274 | -1.8185 (5) | -1.2130 | -1.1233 (2) |
| RICI | | | -0.57606 | -0.83253 (5) |
| TALSE | -0.85760 | -1.0172 (5) | | |
| DAX | -2.0397 | -1.4276 (5) | -1.2008 | -1.1244 (2) |
| NYSE | -1.7836 | -1.3734 (5) | -0.93459 | -0.95190 (2) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 41. Cointegration (1997)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|-------------------------|--------------|-------------------------|--------------|---------------------------|--------------|-------------------------|--------------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | 1.0039 | 1.0268 (5) | -1.1741 | -1.4269 (2) | -1.1311 | -1.0876 (3) |
| WIG | 1.2326 | 1.4849 (7) | | | -0.17938 | -0.41238 (1) | -1.3776 | -1.2229 (1) |
| PX-50 | 0.83714 | 1.2162 (6) | -0.37382 | -0.41464 (1) | | | -1.4816 | -1.1474 (7) |
| SAX | 0.92875 | 1.3958 (6) | -0.43010 | -0.48238 (1) | -1.2060 | -1.4293 (1) | | |
| DAX | -1.7588 | -1.7441 (1) | -0.24861 | -0.30246 (3) | -1.2541 | -1.4908 (2) | -0.67232 | -0.68172 (3) |
| NYSE | -0.79510 | -0.47857 (2) | 0.24719 | -0.2156 (10) | -1.1216 | -1.2622 (2) | -0.79686 | -0.66752 (1) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

| | RICI – base index | | TALSE – base index | | |
|-------|--------------------------|-----------|---------------------------|-----------|--------------|
| | DF | ADF (lag) | DF | ADF (lag) | |
| BUX | | | | | |
| | | -1.0564 | -1.0402 (1) | -1.2214 | -1.0755 (8) |
| WIG | | -1.1860 | -1.5186 (1) | -0.92186 | -0.90903 (8) |
| PX-50 | | -0.17261 | -0.41445 (1) | -0.50349 | -0.64008 (4) |
| SAX | | 0.06706 | -0.41101 (3) | -0.40149 | -0.47172 (4) |
| RICI | | | | -1.0830 | -1.4284 (3) |
| TALSE | | -1.1081 | -1.5107 (1) | | |
| DAX | | -0.24806 | -0.44626 (3) | -0.50367 | -0.52765 (4) |
| NYSE | | -0.43307 | -0.54299 (1) | -0.61180 | -0.81749 (1) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 42. Cointegration (1998)

| | BUX – base index | | WIG – base index | | PX-50 – base index | | SAX – base index | |
|-------|------------------|--------------|------------------|--------------|--------------------|--------------|------------------|------------|
| | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) | DF | ADF (lag) |
| BUX | | | -0.73432 | -0.85792 (6) | -0.27598 | -0.66468 (1) | 2.2589 | 2.7662 (1) |
| WIG | -0.34104 | -0.50685 (6) | | | 0.23966 | 0.047218 (1) | 2.4623 | 3.0438 (1) |
| PX-50 | 0.04893 | -0.05206 (6) | 0.37488 | 0.25294 (1) | | | 1.8941 | 2.3493 (1) |
| SAX | -0.43517 | -0.67632 (6) | 0.62862 | 0.44206 (1) | 0.00361 | -0.21446 (1) | | |
| DAX | 1.6409 | 1.6102 (6) | 2.0746 | 1.7985 (7) | -1.1127 | -1.5142 (1) | 1.3303 | 1.7041 (1) |
| NYSE | -1.9113 | -1.9522 (1) | 0.76936 | 0.97363 (1) | -1.2002 | -1.7650 (1) | 1.9141 | 2.3379 (1) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

| | RICI – base index | | TALSE – base index | | |
|-------|-------------------|-----------|--------------------|-----------|--------------|
| | DF | ADF (lag) | DF | ADF (lag) | |
| BUX | | 1.1875 | 1.9367 (6) | 1.8863 | 1.2331 (1) |
| WIG | | -2.1235 | -2.1313 (1) | -1.3331 | -1.4743 (1) |
| PX-50 | | -0.18577 | -0.61253 (1) | 0.25405 | 0.060734 (2) |
| SAX | | 1.8673 | -0.07599 (9) | 1.4962 | 1.1891 (2) |
| RICI | | | | -1.7518 | -2.5066 (3) |
| TALSE | | -0.91066 | -1.5789 (3) | | |
| DAX | | 1.6393 | 1.7144 (2) | 0.39894 | 0.053939 (3) |
| NYSE | | 1.4615 | 0.92971 (8) | 0.52223 | 0.20308 (1) |

* denotes significance at 5%

Critical values: DF=-3.37, ADF=-3.25; without constant

Table 43. Multivariate Cointegration (entire period: 1993–1998)

| The estimates of the equation | Base index | | | |
|-------------------------------|--------------|--------------|-------------|-------------|
| | BUX | WIG | PX-50 | SAX |
| constant | -3.5672 | 2.4116 | -0.26233 | 1.4299 |
| BUX coefficient | | 0.40817 | -0.34568 | 0.014556 |
| WIG coefficient | 2.0900 | | 0.82626 | -0.066560 |
| PX-50 coefficient | -1.3048 | 0.60911 | | 0.67911 |
| SAX coefficient | 0.024207 | -0.021618 | 0.29920 | |
| DF | -3.6639 | -3.8389 | -3.1714 | -1.4627 |
| ADF (lag) | -4.2899* (1) | -4.5261* (1) | -3.6213 (1) | -1.6905 (1) |

* denotes significance at 10%

Critical values: ADF=-4.06; without constant

Table 44. Multivariate Cointegration (1993–1998 by years)

| The estimates of the equation | | Base index | | | |
|-------------------------------|-----------|--------------|--------------|---------------|--------------|
| | | BUX | WIG | PX-50 | SAX |
| 1993 | DF | -0.15308 | -0.56533 | -0.79002 | 1.4011 |
| | ADF (lag) | -0.39234 (5) | -0.95616 (5) | -1.2472 (5) | 0.36473 (5) |
| 1994 | DF | -2.0288 | -1.7001 | -1.4948 | -3.0699 |
| | ADF (lag) | -2.4187 (5) | -2.0595 (5) | -1.8772 (1) | -3.2679 (4) |
| 1995 | DF | -1.7611 | -2.0626 | -1.3571 | -0.60874 |
| | ADF (lag) | -1.8899 (1) | -2.1808 (1) | -1.4458 (1) | -0.71629 (1) |
| 1996 | DF | -1.4235 | -1.3407 | -0.99254 | -0.78450 |
| | ADF (lag) | -1.6079 (1) | -1.5521 (1) | -1.1656 (1) | -0.95796 (3) |
| 1997 | DF | -0.069368 | -0.86200 | -1.5201 | -1.4036 |
| | ADF (lag) | -0.64896 (1) | -1.5031 (1) | -2.0537 (1) | -1.2875 (1) |
| 1998 | DF | -1.4388 | -3.2198 | -0.75675 | 1.8526 |
| | ADF (lag) | -1.3635 (10) | -3.1146 (10) | -0.76069 (15) | 2.2960 (1) |

* denotes significance at 10%; critical values: ADF=-4.06; without constant

Table 45. Multivariate Cointegration (entire period: 1993–1998)

| The estimates of the equation | Base index | | | |
|-------------------------------|-------------|-------------|-------------|-------------|
| | BUX | WIG | PX-50 | SAX |
| constant | -9,7759 | -0,46874 | 0,0339 | 6,2649 |
| DAX coefficient | 1,3854 | 1,6597 | 5,7377 | -0,62993 |
| NYSE coefficient | 0,78631 | -1,2939 | 0,022088 | 0,45319 |
| DF | -2,4816 | -3,3040 | -2,7957 | -1,2984 |
| ADF (lag) | -2,7080 (1) | -3,5435 (1) | -2,7856 (4) | -1,2772 (3) |

* denotes significance at 10%; critical values: ADF=-4.06; without constant

Table 45. Single Factor CAPM (entire period: 1992–1998)

| The estimates of the equation | Market | | | | | |
|-------------------------------|----------------------------|---------------------------|-----------------------------|-----------------------------|--------------------------|---------------------------|
| | BUX | WIG | PX-50 | SAX | RICI | TALSE |
| Intercept | 0.00098422 (0.0003689)* | 0.0013981 (0.0006098)* | -0.00000959 (0.00039602) | -0.00021277 (0.00056293) | 0.0010696 (0.0010508) | 0.00010950 (0.0012277) |
| World Return Beta | 0.77953 (0.036222)* | 0.69328 (0.059864)** | 0.57239 (0.037729)* | 0.57352 (0.053693)* | 0.36056 (0.094737)* | 0.41389 (0.11050)* |
| R ² | 0.215007 | 0.0734839 | 0.155179 | 0.0837641 | 0.0215713 | 0.0223733 |

* denotes significance at 1%; ** denotes significance at 5%

Table 46. Single Factor CAPM (entire period: 1992–1998)

| The estimates of the equation | | Market | | | | | |
|-------------------------------|-------------------|-----------------------------|-----------------------------|-----------------------------|----------------------------|----------------------------|---------------------------|
| | | BUX | WIG | PX-50 | SAX | RICI | TALSE |
| 1992 | Intercept | 0.00032555 (0.00059822) | 0.00057045 (0.0010740) | | | | |
| | World Return Beta | 0.34216 (0.064516)* | 0.47976 (0.11583)* | | | | |
| | R ² | 0.097621 | 0.0619015 | | | | |
| 1993 | Intercept | 0.0010029 (0.00071879) | 0.0093211 (0.0021083)* | 0.0081912 (0.003490)** | 0.00072886 (0.0012960) | | |
| | World Return Beta | 0.63851 (0.074389)* | 0.69434 (0.21820)* | 0.32972 (0.32955) | 0.56877 (0.12455)* | | |
| | R ² | 0.222131 | 0.0377669 | 0.0120606 | 0.213115 | | |
| 1994 | Intercept | 0.00032196 (0.00090940) | -0.0023919 (0.0023997) | -0.0013350 (0.0011205) | 0.0021973 (0.0022390) | | |
| | World Return Beta | 0.90058 (0.087108)* | 0.74310 (0.22986)* | 0.61170 (0.10733)* | 0.69906 (0.21446)* | | |
| | R ² | 0.292932 | 0.0389305 | 0.111819 | 0.0395542 | | |
| 1995 | Intercept | 0.000053193 (0.00064177) | -0.00012831 (0.0014095) | -0.0010298 (0.00050750) | -0.0012952 (0.00065937) | | |
| | World Return Beta | 0.66417 (0.071753)* | 0.65628 (0.15759)* | 0.60697 (0.056740)* | 0.62291 (0.073720)* | | |
| | R ² | 0.249305 | 0.0629879 | 0.307257 | 0.21675 | | |
| 1996 | Intercept | 0.0033278 (0.0008837)* | 0.0019755 (0.00088097) | 0.00044234 (0.00043684) | 0.00011445 (0.00074467) | 0.0070380 (0.0025069)* | 0.0030296 (0.001274)** |
| | World Return Beta | 0.83534 (0.078396)* | 0.61018 (0.078152)* | 0.69766 (0.038752)* | 0.75067 (0.066061)* | 0.59494 (0.23227)** | 0.55849 (0.11821)* |
| | R ² | 0.303953 | 0.189927 | 0.554876 | 0.331836 | 0.032713 | 0.12954 |
| 1997 | Intercept | 0.0019389 (0.0014350) | -0.00027126 (0.00095070) | -0.00035414 (0.00065529) | 0.00020558 (0.00081961) | 0.0024403 (0.0013910) | 0.0020899 (0.0020222) |
| | World Return Beta | 1.0635 (0.12599)* | 0.82255 (0.083470)* | 0.47951 (0.057533)* | 0.31654 (0.071960)* | 0.20773 (0.12213) | 0.28752 (0.17755) |
| | R ² | 0.215744 | 0.272698 | 0.211482 | 0.0695158 | 0.0110459 | 0.010024 |
| 1998 | Intercept | -0.0011062 (0.0016952) | -0.00016761 (0.0015675) | -0.00099785 (0.00087490) | -0.0045487 (0.0013510)* | -0.0063907 (0.0014680)* | -0.0046244 (0.0024730) |
| | World Return Beta | 0.87472 (0.17115)* | 0.74070 (0.15826)* | 0.62469 (0.088331)** | 0.56681 (0.13640)* | 0.36990 (0.13361)* | 0.48053 (0.22508) |
| | R ² | 0.171719 | 0.148106 | 0.28415 | 0.120536 | 0.0369096 | 0.022282 |

* denotes significance at 1%; ** denotes significance at 5%

Table 47. Multiple Factor CAPM (entire period: 1992–1998)

| The estimates of the equation | | | Market | | | | | |
|-------------------------------|----|----------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| | | | BUJ (92-98) | WIG (92-98) | PX-50 (93-98) | SAX (93-98) | RICI (96-98) | TALSE (96-98) |
| Local Factors | 1 | Local Excess Returns | 0.81233 (0.0593) * | 0.76948 (0.0465) * | 0.68072 (0.0645) * | 0.66835 (0.1049) * | 0.93569 (0.1260) * | 0.49376 (0.1689) * |
| | 2 | Local Exchange Rate | 1.6349 (0.5147) * | 0.84408 (0.4429) | -0.1228 (0.3437) | -0.3072 (1.3816) | 7.3223 (8.8238) | 4.3802 (1.3005) * |
| | 3 | Local Interest Rate | -0.1679 (0.1433) | 0.40680 (0.1856) | 0.18753 (0.2764) | 0.03516 (0.2409) | 0.03429 (0.2988) | -0.2258 (0.2125) |
| | 4 | Local Inflation Rate | -0.7000 (0.3919) | 0.64048 (0.4077) | -0.3189 (0.8784) | 2.1807 (2.3015) | 2.0990 (5.3679) | -8.7061 (3.9162) |
| | 5 | Local GDP Growth | -0.2948 (0.1263) ** | | -0.3305 (0.1185) * | -0.5453 (0.3609) | | |
| Global Factors | 6 | World Excess Returns | -0.0263 (0.1441) | 0.58530 (0.1502) * | 0.33606 (0.1585) | -0.2355 (0.2979) | -0.4129 (0.5620) | 1.4782 (0.7954) |
| | 7 | US Exchange Rate | -0.3147 (0.4762) | 0.22326 (0.6941) | 0.23485 (0.6350) | -0.4176 (1.5209) | -6.0688 (5.8657) | -0.1965 (2.3344) |
| | 8 | US Interest Rate | 0.06270 (0.3058) | 0.11574 (0.3357) | -0.3296 (0.3629) | -0.9271 (0.9171) | -3.7971 (5.1567) | 4.5540 (5.2179) |
| | 9 | US Inflation Rate | 2.7192 (1.8601) | 9.9156 (2.2753) * | 2.0559 (1.4256) | 0.75736 (2.3708) | 8.2684 (9.1470) | 4.8884 (5.6253) |
| | 10 | US GDP Growth | -2.6345 (2.0887) | -11.534 (2.7203) * | -1.4058 (2.3309) | -1.4403 (4.4650) | -2.2147 (5.6648) | 1.5808 (7.2918) |
| Wald Test | 11 | Local Factors | 93.099 [0.0000] *** | 354.99 [0.0000] *** | 23.566 [0.0000] *** | 11.387 [0.0000] *** | 82.755 [0.0000] *** | 39.147 [0.0000] *** |
| | 12 | Global Factors | 0.75322 [0.5871] | 7.9934 [0.0000] *** | 7.2648 [0.0000] *** | 0.58186 [0.7137] | 0.53517 [0.7473] | 3.1493 [0.0309] *** |
| | 13 | R ² | 0.99985 | 0.99975 | 0.99981 | 0.99852 | 0.99926 | 0.99901 |

Figures in the parenthesis are heteroscedasticity consistent standard errors; those in the brackets are t-probabilities,

* denotes significance at 1%; ** denotes significance at 2%; *** denotes significance at 5%

Table 48. Economic Development

| Hungary | 1995 | 1996 | 1997 | 1998* | 1999** |
|-----------------------------|-------------|-------------|-------------|--------------|---------------|
| GDP growth (%) | 1.5 | 1.3 | 4.4 | 4.5 | 4.5 |
| Inflation (annual avg. (%)) | 28.4 | 23.8 | 18.3 | 15.5 | 12.1 |
| Interest rate | 32.4 | 24.8 | 20.1 | 17.9 | 15.3 |
| Unemployment (%) | 10.5 | 10.8 | 10.5 | 10.2 | 10.0 |
| Budget balance (% GDP) | -7.4 | -4.8 | -4.0 | -4.5 | -4.0 |
| Current account (% GDP) | -5.7 | -3.7 | -2.2 | -3.3 | -4.7 |
| FDI (% GDP) | 10.0 | 4.2 | 5.0 | 4.2 | 3.2 |
| External debt (% GDP) | 72.3 | 61.2 | 48.8 | 46.6 | 43.9 |
| Official reserves (\$bn) | 10.0 | 10.4 | 8.4 | 9.0 | 9.5 |
| Currency units/\$ (avg.) | 124.5 | 149.0 | 186.7 | 215.5 | 227.8 |
| Exports (\$bn) | | 14.2 | 19.6 | 22.0 | 24.0 |
| Imports (\$bn) | | 16.8 | 21.4 | 24.4 | 25.0 |

* projection, ** forecast

Source: Business Central Europe, 1998/99 ING Barings

Table 49. Economic Development

| Poland | 1995 | 1996 | 1997 | 1998* | 1999** |
|-----------------------------|-------------|-------------|-------------|--------------|---------------|
| GDP growth (%) | 7.0 | 6.1 | 6.9 | 5.8 | 5.5 |
| Inflation (annual avg. (%)) | 27.8 | 19.9 | 15.0 | 12.0 | 8.0 |
| Interest rate | 25.5 | 22.4 | 23.9 | 20.0 | 17.0 |
| Unemployment (%) | 14.9 | 13.2 | 10.5 | 10.1 | 9.9 |
| Budget balance (% GDP) | -2.6 | -2.5 | -1.3 | -0.5 | 0.0 |
| Current account (% GDP) | 4.7 | -1.0 | -3.1 | -4.9 | -5.1 |
| FDI (% GDP) | 1.0 | 2.0 | 2.4 | 2.7 | 2.7 |
| External debt (% GDP) | 34.7 | 27.4 | 25.4 | 23.2 | N/A |
| Official reserves (\$bn) | 15.0 | 18.0 | 20.5 | 22.0 | 25.0 |
| Currency units/\$ (avg.) | 2.4 | 2.7 | 3.3 | 3.5 | 3.7 |
| Exports (\$bn) | | 24.4 | 27.2 | 31.0 | 37.5 |
| Imports (\$bn) | | 32.6 | 38.5 | 45.0 | 51.0 |

* projection, ** forecast

Source: Business Central Europe, 1998/99 ING Barings

Table 50. Economic Development

| Czech Republic | 1995 | 1996 | 1997 | 1998* | 1999** |
|-----------------------------|-------------|-------------|-------------|--------------|---------------|
| GDP growth (%) | 5.9 | 4.1 | 1.0 | 2.0 | 4.0 |
| Inflation (annual avg. (%)) | 9.1 | 8.8 | 8.5 | 12.1 | 9.0 |
| Interest rate | 10.5 | 12.0 | 17.5 | 15.5 | 14.0 |
| Unemployment (%) | 2.9 | 3.5 | 5.2 | 6.2 | 7.0 |
| Budget balance (% GDP) | 0.4 | -0.5 | -1.5 | -1.0 | -0.5 |
| Current account (% GDP) | -2.9 | -8.2 | -6.1 | -3.6 | -3.8 |
| FDI (% GDP) | 5.1 | 2.6 | 2.5 | 1.8 | 2.6 |
| External debt (% GDP) | 34.5 | 37.2 | 44.5 | 46.0 | 45.5 |
| Official reserves (\$bn) | 14.0 | 12.4 | 9.8 | 10.0 | 11.5 |
| Currency units/\$ (avg.) | 27.3 | 27.2 | 31.7 | 34.5 | 34.0 |
| Exports (\$bn) | | 21.7 | 22.5 | 27.0 | 31.0 |
| Imports (\$bn) | | 27.6 | 27.1 | 30.0 | 33.5 |

* projection, ** forecast

Source: Business Central Europe, 1998/99 ING Barings

Table 51. Economic Development

| Slovakia | 1995 | 1996 | 1997 | 1998* | 1999** |
|-----------------------------|-------------|-------------|-------------|--------------|---------------|
| GDP growth (%) | 6.8 | 6.9 | 6.5 | 4.0 | 3.5 |
| Inflation (annual avg. (%)) | 9.9 | 6.0 | 6.1 | 8.5 | 8.0 |
| Interest rate | 7.4 | 12.6 | 20.2 | 19.0 | 15.0 |
| Unemployment (%) | 13.1 | 12.0 | 12.8 | 12.8 | 12.0 |
| Budget balance (% GDP) | 0.1 | -4.4 | -5.3 | -5.6 | -4.3 |
| Current account (% GDP) | 2.6 | -10.1 | -7.0 | -8.0 | -6.2 |
| FDI (% GDP) | 0.5 | 0.5 | 0.6 | 1.0 | 2.0 |
| External debt (% GDP) | 37.9 | 42.4 | 48.3 | 57.5 | 58.0 |
| Official reserves (\$bn) | 3.4 | 3.5 | 3.4 | 3.4 | 3.5 |
| Currency units/\$ (avg.) | 30.0 | 31.3 | 33.7 | 35.3 | 36.6 |
| Exports (\$bn) | | 8.8 | 8.8 | 9.5 | 9.3 |
| Imports (\$bn) | | 11.1 | 10.3 | 11.5 | 10.6 |

* projection, ** forecast

Source: Business Central Europe, 1998/99 ING Barings

Table 52. Economic Development

| Estonia | 1995 | 1996 | 1997 | 1998* | 1999** |
|---------------------------------|-------------|-------------|-------------|--------------|---------------|
| GDP growth (%) | | 4.0 | 11.4 | 5.0 | 5.0 |
| Inflation (annual avg. (%)) | | 23.0 | 11.0 | 11.0 | 9.0 |
| Exports (\$bn) | | 1.8 | 2.3 | 2.8 | 3.1 |
| Imports (\$bn) | | 2.8 | 3.4 | 4.1 | 4.6 |
| Current account balance (% GDP) | | -9.2 | -12.0 | -10.5 | -6.0 |
| Budget account (% GDP) | | -1.5 | 2.2 | 2.5 | 1.0 |
| Gross debt (\$bn) | | 1.5 | 2.7 | 0.5 | 0.5 |
| Annual FDI flow (\$bn) | | 111 | 128 | 200 | 250 |

* projection, ** forecast

Source: Business Central Europe, 1998/99 ING Barings

Table 53. Economic Development

| Latvia | 1995 | 1996 | 1997 | 1998* | 1999** |
|---------------------------------|-------------|-------------|-------------|--------------|---------------|
| GDP growth (%) | | 3.3 | 6.5 | 4.0 | 3.0 |
| Inflation (annual avg. (%)) | | 17.6 | 8.4 | 5.3 | 5.0 |
| Exports (\$bn) | | 1.5 | 1.8 | 1.9 | 1.9 |
| Imports (\$bn) | | 2.3 | 2.7 | 2.9 | 2.8 |
| Current account balance (% GDP) | | -4.2 | -6.2 | -8.6 | -9.0 |
| Budget account (% GDP) | | -1.4 | 1.4 | 1.0 | 1.0 |
| Gross debt (\$bn) | | 2.0 | 2.8 | 1.0 | 0.8 |
| Annual FDI flow (\$bn) | | 376 | 515 | 344 | 400 |

* projection, ** forecast

Source: Business Central Europe, 1998/99 ING Barings

Table 54. Summary Statistics (entire period: 1996–1998)

| | Emerging Markets | | Developed Markets | | | |
|----------------------------|-------------------------|----------|--------------------------|----------|----------|---------|
| | Large | Small | DAX | NYSE | GT-30 | World |
| Mean Return (%) | 0,0806 | 0,0592 | 0,1562 | 0,0859 | -0,0406 | 0,0633 |
| Std.Dev. (%) | 1,4941 | 1,5456 | 1,2826 | 0,9849 | 0,7542 | 0,7050 |
| Sharpe Ratio | 0,0539 | 0,0383 | 0,1218 | 0,0872 | -0,0538 | 0,0898 |
| Skewness | -1,2781 | -0,1313 | -0,8456 | -0,7972 | 0,1987 | -0,7479 |
| Kurtosis | 11,8857 | 4,0076 | 4,9832 | 7,0464 | 1,6196 | 4,9988 |
| Minimum (%) | -12,4197 | -7,1815 | -8,3822 | -7,4549 | -2,5887 | -4,8031 |
| Maximum (%) | 8,0149 | 6,9086 | 6,1057 | 4,6008 | 3,6677 | 2,5107 |
| Normality Chi ² | 358,8** | 172,23** | 133,83** | 253,07** | 42,043** | 152** |

Table 55. Correlation (entire period: 1996–1998)

| Indices | Emerging Markets | | Developed Markets | | | |
|---------|------------------|-----------|-------------------|----------|----------|--------|
| | Large | Small | DAX | NYSE | GT-30 | World |
| Large | 1.0000 | | | | | |
| Small | 0.14913 | 1.0000 | | | | |
| DAX | 0.44506 | 0.026897 | 1.0000 | | | |
| NYSE | 0.12417 | -0.089522 | 0.29085 | 1.0000 | | |
| GT-30 | 0.083484 | 0.11357 | -0.0094374 | -0.16770 | 1.0000 | |
| World | 0.36007 | -0.038577 | 0.57120 | 0.78506 | -0.10156 | 1.0000 |

Table 56. Unit Roots (entire period: 1996–1998)

| Indices | DF levels | DF differences | ADF levels (lag) | ADF differences (lag) |
|---------|-----------|----------------|------------------|-----------------------|
| Large | -1.7809 | -19.887** | -1.8655 (1) | -6.8109** (9) |
| Small | -2.0494 | -17.141** | -1.9083 (9) | -9.8155** (3) |

* denotes significance at 5%, ** denotes significance at 1%
Critical values: 5%=-2.866, 1%=-3.443; constant included

Table 57. Correlation (entire period: 1996–1998)

| Large portfolio – base index | | | | |
|------------------------------|----------|-------------|---------|-------------|
| Indices | Constant | Coefficient | DF | ADF (lag) |
| DAX | 4.5863 | 0.52568 | -1.6561 | -2.0057 (1) |
| NYSE | 0.95149 | 0.89390 | -2.7334 | -2.4898 (1) |
| World | 2.9409 | 1.1404 | -2.0235 | -2.0600 (1) |

* denotes significance at 5%
Critical values: DF=-3.37, ADF=-3.25; without constant

Table 58. Correlation (entire period: 1996–1998)

| Small portfolio – base index | | | | |
|------------------------------|----------|-------------|---------|--------------|
| Indices | Constant | Coefficient | DF | ADF (lag) |
| DAX | -0.66860 | 0.78144 | 0.83009 | 0.028363 (5) |
| NYSE | -7.5601 | 1.4963 | 0.44211 | 0.36592 (1) |
| World | -2.8777 | 0.21343 | 0.32854 | -0.82737 (9) |

* denotes significance at 5%
Critical values: DF=-3.37, ADF=-3.25; without constant