**Supplementary tables**

**Table S1.** Fitted results of two linear equations for different block sizes *A* (time interval in days) from 2008−2016

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *A* | Equation lg(variance) = *c* + *b* log(mean) | | | | | | | |  | Equation lg(variance) = *d* + 2 log(mean) | | | |
|  | 95% CI of | |  | 95% CI of | | *R*2 | RMSE1 |  |  | 95% CI of | | RMSE2 |
| 4 | 0.016 | −0.404 | 0.435 | 2.080 | 2.053 | 2.107 | 0.9670 | 0.4083 |  | 1.263 | 1.234 | 1.292 | 0.4170 |
| 5 | 0.034 | −0.450 | 0.518 | 2.085 | 2.054 | 2.116 | 0.9654 | 0.4180 |  | 1.359 | 1.325 | 1.392 | 0.4276 |
| 6 | 0.120 | −0.399 | 0.640 | 2.084 | 2.051 | 2.117 | 0.9670 | 0.4073 |  | 1.433 | 1.397 | 1.469 | 0.4169 |
| 7 | 0.285 | −0.270 | 0.839 | 2.077 | 2.041 | 2.112 | 0.9677 | 0.4016 |  | 1.489 | 1.451 | 1.527 | 0.4097 |
| 8 | 0.345 | −0.251 | 0.941 | 2.077 | 2.039 | 2.115 | 0.9676 | 0.3924 |  | 1.561 | 1.521 | 1.600 | 0.4004 |
| 9 | 0.352 | −0.285 | 0.989 | 2.079 | 2.039 | 2.120 | 0.9673 | 0.3958 |  | 1.606 | 1.563 | 1.648 | 0.4043 |
| 10 | 0.702 | −0.004 | 1.409 | 2.060 | 2.015 | 2.105 | 0.9634 | 0.4091 |  | 1.648 | 1.602 | 1.694 | 0.4136 |
| 11 | 0.669 | −0.077 | 1.415 | 2.064 | 2.017 | 2.111 | 0.9634 | 0.4135 |  | 1.683 | 1.634 | 1.732 | 0.4187 |
| 12 | 0.526 | −0.234 | 1.286 | 2.075 | 2.027 | 2.123 | 0.9656 | 0.3976 |  | 1.714 | 1.665 | 1.763 | 0.4049 |
| 13 | 0.725 | −0.099 | 1.548 | 2.066 | 2.014 | 2.117 | 0.9626 | 0.4097 |  | 1.767 | 1.715 | 1.820 | 0.4150 |
| 14 | 0.533 | −0.290 | 1.356 | 2.079 | 2.027 | 2.131 | 0.9657 | 0.3979 |  | 1.788 | 1.735 | 1.842 | 0.4059 |
| 15 | 0.647 | −0.242 | 1.537 | 2.073 | 2.017 | 2.128 | 0.9626 | 0.4145 |  | 1.801 | 1.744 | 1.859 | 0.4210 |
| 16 | 0.780 | −0.147 | 1.707 | 2.066 | 2.008 | 2.125 | 0.9619 | 0.4118 |  | 1.838 | 1.779 | 1.896 | 0.4172 |
| 17 | 0.878 | −0.045 | 1.800 | 2.063 | 2.006 | 2.121 | 0.9645 | 0.3959 |  | 1.888 | 1.830 | 1.947 | 0.4009 |
| 18 | 0.855 | −0.168 | 1.878 | 2.064 | 2.00 | 2.128 | 0.9590 | 0.4215 |  | 1.870 | 1.806 | 1.934 | 0.4262 |
| 19 | 0.886 | −0.086 | 1.859 | 2.065 | 2.004 | 2.126 | 0.9648 | 0.3928 |  | 1.928 | 1.866 | 1.989 | 0.3981 |
| 20 | 1.057 | 0.027 | 2.087 | 2.055 | 1.991 | 2.120 | 0.9625 | 0.4008 |  | 1.943 | 1.879 | 2.007 | 0.4046 |
| 21 | 0.982 | −0.018 | 1.982 | 2.061 | 1.998 | 2.123 | 0.9663 | 0.3853 |  | 1.951 | 1.888 | 2.015 | 0.3901 |
| 22 | 0.875 | −0.244 | 1.994 | 2.068 | 1.998 | 2.138 | 0.9605 | 0.4149 |  | 1.964 | 1.895 | 2.034 | 0.4203 |
| 23 | 0.728 | −0.345 | 1.802 | 2.078 | 2.011 | 2.145 | 0.9654 | 0.3959 |  | 1.979 | 1.911 | 2.048 | 0.4036 |
| 24 | 0.829 | −0.315 | 1.974 | 2.073 | 2.001 | 2.144 | 0.9624 | 0.4043 |  | 1.993 | 1.922 | 2.065 | 0.4106 |
| 25 | 0.749 | −0.418 | 1.917 | 2.079 | 2.006 | 2.152 | 0.9626 | 0.4127 |  | 2.012 | 1.938 | 2.086 | 0.4203 |
| 26 | 0.898 | −0.303 | 2.098 | 2.072 | 1.998 | 2.147 | 0.9621 | 0.4055 |  | 2.057 | 1.982 | 2.131 | 0.4117 |
| 27 | 1.028 | −0.069 | 2.124 | 2.064 | 1.996 | 2.133 | 0.9692 | 0.3696 |  | 2.059 | 1.990 | 2.128 | 0.3752 |
| 28 | 0.844 | −0.309 | 1.996 | 2.078 | 2.006 | 2.149 | 0.9679 | 0.3813 |  | 2.096 | 2.022 | 2.169 | 0.3893 |
| 29 | 0.733 | −0.566 | 2.033 | 2.083 | 2.002 | 2.164 | 0.9610 | 0.4132 |  | 2.069 | 1.988 | 2.149 | 0.4212 |
| 30 | 1.111 | −0.169 | 2.391 | 2.061 | 1.981 | 2.140 | 0.9624 | 0.3973 |  | 2.089 | 2.010 | 2.167 | 0.4018 |
| 31 | 1.401 | 0.043 | 2.760 | 2.045 | 1.961 | 2.129 | 0.9590 | 0.4096 |  | 2.125 | 2.043 | 2.207 | 0.4119 |
| 32 | 0.951 | −0.385 | 2.287 | 2.072 | 1.989 | 2.155 | 0.9623 | 0.4045 |  | 2.100 | 2.017 | 2.183 | 0.4107 |
| 33 | 1.401 | 0.116 | 2.686 | 2.044 | 1.964 | 2.123 | 0.9653 | 0.3838 |  | 2.102 | 2.023 | 2.181 | 0.3862 |
| 34 | 1.367 | −0.041 | 2.775 | 2.047 | 1.96 | 2.135 | 0.9601 | 0.4068 |  | 2.131 | 2.046 | 2.216 | 0.4095 |
| 35 | 1.171 | −0.221 | 2.562 | 2.061 | 1.975 | 2.147 | 0.9624 | 0.4017 |  | 2.152 | 2.067 | 2.238 | 0.4062 |
| 36 | 1.185 | −0.174 | 2.543 | 2.061 | 1.976 | 2.145 | 0.9653 | 0.3853 |  | 2.159 | 2.075 | 2.243 | 0.3899 |
| 37 | 1.175 | −0.203 | 2.552 | 2.063 | 1.978 | 2.148 | 0.9654 | 0.3881 |  | 2.189 | 2.104 | 2.275 | 0.3931 |
| 38 | 0.881 | −0.553 | 2.316 | 2.082 | 1.993 | 2.17 | 0.9641 | 0.3981 |  | 2.198 | 2.109 | 2.288 | 0.4062 |
| 39 | 1.230 | −0.045 | 2.504 | 2.062 | 1.983 | 2.141 | 0.9721 | 0.3492 |  | 2.228 | 2.149 | 2.308 | 0.3546 |
| 40 | 1.197 | −0.057 | 2.451 | 2.064 | 1.986 | 2.141 | 0.9737 | 0.3392 |  | 2.229 | 2.151 | 2.307 | 0.3451 |
| 41 | 0.855 | −0.734 | 2.443 | 2.083 | 1.984 | 2.181 | 0.9601 | 0.4200 |  | 2.190 | 2.091 | 2.288 | 0.4279 |
| 42 | 1.437 | −0.004 | 2.878 | 2.049 | 1.960 | 2.138 | 0.9664 | 0.3780 |  | 2.231 | 2.142 | 2.319 | 0.3811 |
| 43 | 1.213 | −0.302 | 2.729 | 2.064 | 1.970 | 2.157 | 0.9645 | 0.3831 |  | 2.243 | 2.152 | 2.335 | 0.3880 |
| 44 | 1.586 | −0.064 | 3.235 | 2.041 | 1.939 | 2.143 | 0.9585 | 0.4068 |  | 2.255 | 2.157 | 2.352 | 0.4087 |
| 45 | 1.789 | 0.227 | 3.351 | 2.029 | 1.932 | 2.126 | 0.9627 | 0.3875 |  | 2.259 | 2.165 | 2.352 | 0.3886 |
| 46 | 0.929 | −0.527 | 2.384 | 2.081 | 1.991 | 2.171 | 0.9700 | 0.3678 |  | 2.235 | 2.143 | 2.327 | 0.3767 |
| 47 | 0.738 | −0.804 | 2.28 | 2.094 | 1.999 | 2.189 | 0.9674 | 0.3760 |  | 2.259 | 2.164 | 2.354 | 0.3871 |
| 48 | 1.043 | −0.612 | 2.699 | 2.076 | 1.973 | 2.178 | 0.9631 | 0.4000 |  | 2.265 | 2.164 | 2.367 | 0.4068 |
| 49 | 1.694 | −0.022 | 3.409 | 2.036 | 1.931 | 2.142 | 0.9597 | 0.4023 |  | 2.284 | 2.182 | 2.385 | 0.4038 |
| 50 | 1.127 | −0.538 | 2.792 | 2.073 | 1.970 | 2.176 | 0.9639 | 0.3913 |  | 2.307 | 2.206 | 2.408 | 0.3977 |
| 51 | 1.343 | −0.349 | 3.035 | 2.061 | 1.957 | 2.166 | 0.9637 | 0.3851 |  | 2.337 | 2.237 | 2.438 | 0.3896 |
| 52 | 1.218 | −0.433 | 2.868 | 2.066 | 1.964 | 2.168 | 0.9660 | 0.3757 |  | 2.289 | 2.190 | 2.388 | 0.3812 |
| 53 | 1.859 | 0.173 | 3.544 | 2.030 | 1.926 | 2.134 | 0.9641 | 0.3770 |  | 2.346 | 2.247 | 2.446 | 0.3781 |
| 54 | 0.970 | −0.778 | 2.718 | 2.081 | 1.973 | 2.189 | 0.9638 | 0.4051 |  | 2.278 | 2.169 | 2.388 | 0.4132 |
| 55 | 1.464 | −0.330 | 3.258 | 2.054 | 1.943 | 2.164 | 0.9618 | 0.3963 |  | 2.338 | 2.231 | 2.445 | 0.3998 |
| 56 | 1.748 | 0.070 | 3.427 | 2.039 | 1.936 | 2.142 | 0.9667 | 0.3618 |  | 2.380 | 2.282 | 2.478 | 0.3637 |
| 57 | 1.597 | −0.155 | 3.348 | 2.046 | 1.938 | 2.154 | 0.9647 | 0.3779 |  | 2.344 | 2.240 | 2.448 | 0.3806 |
| 58 | 1.115 | −0.726 | 2.956 | 2.076 | 1.963 | 2.19 | 0.9629 | 0.3984 |  | 2.349 | 2.237 | 2.461 | 0.4053 |
| 59 | 2.030 | 0.258 | 3.802 | 2.022 | 1.914 | 2.131 | 0.9646 | 0.3735 |  | 2.395 | 2.291 | 2.499 | 0.3741 |
| 60 | 1.817 | 0.094 | 3.541 | 2.035 | 1.929 | 2.141 | 0.9675 | 0.3615 |  | 2.387 | 2.285 | 2.489 | 0.3631 |
| 61 | 1.691 | −0.026 | 3.409 | 2.042 | 1.937 | 2.148 | 0.9685 | 0.3579 |  | 2.379 | 2.277 | 2.482 | 0.3602 |
| 62 | 1.985 | 0.138 | 3.833 | 2.025 | 1.912 | 2.139 | 0.9640 | 0.3717 |  | 2.396 | 2.289 | 2.503 | 0.3725 |
| 63 | 1.700 | −0.286 | 3.686 | 2.040 | 1.918 | 2.163 | 0.9590 | 0.4010 |  | 2.354 | 2.238 | 2.469 | 0.4028 |
| 64 | 2.255 | 0.385 | 4.125 | 2.009 | 1.894 | 2.124 | 0.9633 | 0.3746 |  | 2.401 | 2.292 | 2.509 | 0.3747 |
| 65 | 2.174 | 0.319 | 4.029 | 2.013 | 1.899 | 2.127 | 0.9648 | 0.3719 |  | 2.385 | 2.276 | 2.494 | 0.3721 |
| 66 | 2.058 | 0.213 | 3.904 | 2.018 | 1.905 | 2.132 | 0.9661 | 0.3701 |  | 2.353 | 2.243 | 2.462 | 0.3706 |
| 67 | 2.410 | 0.479 | 4.34 | 1.999 | 1.880 | 2.118 | 0.9623 | 0.3747 |  | 2.398 | 2.286 | 2.509 | 0.3747 |
| 68 | 1.932 | −0.025 | 3.888 | 2.028 | 1.908 | 2.149 | 0.9633 | 0.3772 |  | 2.391 | 2.278 | 2.505 | 0.3781 |
| 69 | 1.773 | −0.301 | 3.847 | 2.042 | 1.914 | 2.169 | 0.9605 | 0.3957 |  | 2.450 | 2.329 | 2.571 | 0.3976 |
| 70 | 2.379 | 0.241 | 4.517 | 2.004 | 1.872 | 2.135 | 0.9565 | 0.3993 |  | 2.440 | 2.318 | 2.561 | 0.3993 |
| 71 | 1.169 | −0.714 | 3.052 | 2.074 | 1.958 | 2.190 | 0.9687 | 0.3717 |  | 2.363 | 2.247 | 2.480 | 0.3789 |
| 72 | 2.381 | 0.400 | 4.363 | 2.003 | 1.882 | 2.125 | 0.9643 | 0.3661 |  | 2.433 | 2.319 | 2.547 | 0.3661 |
| 73 | 2.194 | 0.319 | 4.070 | 2.014 | 1.899 | 2.129 | 0.9681 | 0.3551 |  | 2.423 | 2.312 | 2.534 | 0.3553 |
| 74 | 2.322 | 0.484 | 4.161 | 2.006 | 1.893 | 2.119 | 0.9699 | 0.3414 |  | 2.422 | 2.314 | 2.529 | 0.3415 |
| 75 | 1.807 | −0.255 | 3.87 | 2.039 | 1.913 | 2.166 | 0.9636 | 0.3826 |  | 2.448 | 2.327 | 2.569 | 0.3845 |
| 76 | 2.332 | 0.340 | 4.324 | 2.01 | 1.888 | 2.133 | 0.9660 | 0.3566 |  | 2.501 | 2.387 | 2.615 | 0.3568 |
| 77 | 2.128 | −0.029 | 4.285 | 2.021 | 1.888 | 2.153 | 0.9618 | 0.3834 |  | 2.466 | 2.341 | 2.59 | 0.3840 |
| 78 | 2.325 | 0.269 | 4.381 | 2.009 | 1.883 | 2.135 | 0.9647 | 0.3608 |  | 2.468 | 2.351 | 2.585 | 0.3609 |
| 79 | 1.708 | −0.270 | 3.685 | 2.044 | 1.922 | 2.165 | 0.9691 | 0.3529 |  | 2.418 | 2.301 | 2.535 | 0.3554 |
| 80 | 2.304 | 0.146 | 4.462 | 2.011 | 1.879 | 2.144 | 0.9624 | 0.3770 |  | 2.484 | 2.361 | 2.608 | 0.3772 |
| 81 | 2.428 | 0.248 | 4.608 | 2.002 | 1.868 | 2.136 | 0.9624 | 0.3743 |  | 2.458 | 2.333 | 2.583 | 0.3743 |
| 82 | 2.371 | 0.133 | 4.608 | 2.007 | 1.870 | 2.144 | 0.9606 | 0.3820 |  | 2.484 | 2.356 | 2.611 | 0.3821 |
| 83 | 1.727 | −0.370 | 3.824 | 2.045 | 1.916 | 2.174 | 0.9664 | 0.3701 |  | 2.463 | 2.339 | 2.588 | 0.3728 |
| 84 | 2.479 | 0.176 | 4.783 | 2.003 | 1.862 | 2.144 | 0.9595 | 0.3871 |  | 2.529 | 2.398 | 2.659 | 0.3871 |
| 85 | 1.651 | −0.623 | 3.926 | 2.051 | 1.912 | 2.191 | 0.9621 | 0.3958 |  | 2.488 | 2.353 | 2.623 | 0.3990 |
| 86 | 1.612 | −0.503 | 3.727 | 2.053 | 1.923 | 2.183 | 0.9681 | 0.3528 |  | 2.473 | 2.351 | 2.596 | 0.3563 |
| 87 | 2.106 | −0.041 | 4.252 | 2.026 | 1.894 | 2.158 | 0.9664 | 0.3430 |  | 2.531 | 2.413 | 2.649 | 0.3438 |
| 88 | 1.670 | −0.597 | 3.937 | 2.051 | 1.912 | 2.19 | 0.9647 | 0.3625 |  | 2.498 | 2.371 | 2.625 | 0.3656 |
| 89 | 1.985 | −0.095 | 4.064 | 2.031 | 1.903 | 2.159 | 0.9694 | 0.3322 |  | 2.487 | 2.371 | 2.603 | 0.3334 |
| 90 | 1.335 | −0.885 | 3.555 | 2.071 | 1.934 | 2.207 | 0.9666 | 0.3598 |  | 2.487 | 2.360 | 2.615 | 0.3658 |
| 91 | 1.530 | −0.905 | 3.964 | 2.061 | 1.911 | 2.210 | 0.9611 | 0.3802 |  | 2.516 | 2.380 | 2.652 | 0.3842 |
| 92 | 2.199 | −0.110 | 4.509 | 2.022 | 1.880 | 2.163 | 0.9635 | 0.3581 |  | 2.550 | 2.423 | 2.677 | 0.3586 |
| 93 | 1.875 | −0.519 | 4.268 | 2.042 | 1.895 | 2.189 | 0.9629 | 0.3736 |  | 2.558 | 2.422 | 2.693 | 0.3756 |
| 94 | 2.186 | −0.291 | 4.663 | 2.024 | 1.872 | 2.176 | 0.9598 | 0.3803 |  | 2.578 | 2.441 | 2.715 | 0.3810 |
| 95 | 2.994 | 0.551 | 5.437 | 1.974 | 1.824 | 2.124 | 0.9588 | 0.3685 |  | 2.572 | 2.439 | 2.705 | 0.3692 |
| 96 | 1.673 | −0.871 | 4.216 | 2.051 | 1.895 | 2.207 | 0.9600 | 0.3973 |  | 2.501 | 2.354 | 2.648 | 0.4002 |
| 97 | 1.990 | −0.451 | 4.43 | 2.031 | 1.881 | 2.181 | 0.9623 | 0.3821 |  | 2.495 | 2.355 | 2.636 | 0.3833 |
| 98 | 3.249 | 0.679 | 5.818 | 1.959 | 1.801 | 2.116 | 0.9556 | 0.3819 |  | 2.576 | 2.436 | 2.717 | 0.3838 |
| 99 | 2.125 | −0.416 | 4.666 | 2.025 | 1.87 | 2.181 | 0.9607 | 0.3832 |  | 2.536 | 2.393 | 2.679 | 0.3839 |
| 100 | 2.126 | −0.241 | 4.492 | 2.026 | 1.881 | 2.171 | 0.9657 | 0.3575 |  | 2.546 | 2.413 | 2.680 | 0.3583 |

RMSE represents root-mean-square error; *R*2 represents the coefficient of determination for the first linear equation.

**Table S2.** Fitted results using different data range when block size *A* = 10 days

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data range | Equation lg(variance) = *c* + *b* log(mean) | | | | | | | |  | Equation lg(variance) = *d* + 2 log(mean) | | | |
|  | 95% CI of | |  | 95% CI of | | *R*2 | RMSE1 |  |  | 95% CI of | | RMSE2 |
| 2008—2008 | −2.329 | −5.916 | 1.259 | 2.214 | 2.012 | 2.415 | 0.9614 | 0.3665 |  | 1.477 | 1.297 | 1.657 | 0.4068 |
| 2008—2009 | −4.784 | −6.699 | −2.869 | 2.352 | 2.241 | 2.462 | 0.9696 | 0.3515 |  | 1.308 | 1.187 | 1.429 | 0.4602 |
| 2008—2010 | 1.311 | −0.315 | 2.938 | 2.012 | 1.915 | 2.109 | 0.9475 | 0.4985 |  | 1.517 | 1.415 | 1.618 | 0.4986 |
| 2008—2011 | 1.110 | −0.182 | 2.402 | 2.027 | 1.949 | 2.106 | 0.9529 | 0.4704 |  | 1.562 | 1.481 | 1.644 | 0.4713 |
| 2008—2012 | 0.945 | −0.161 | 2.050 | 2.039 | 1.972 | 2.107 | 0.9549 | 0.4519 |  | 1.585 | 1.516 | 1.654 | 0.4536 |
| 2008—2013 | 1.031 | 0.063 | 1.998 | 2.037 | 1.977 | 2.097 | 0.9569 | 0.4459 |  | 1.627 | 1.565 | 1.689 | 0.4475 |
| 2008—2014 | 1.142 | 0.272 | 2.012 | 2.032 | 1.978 | 2.086 | 0.9579 | 0.4358 |  | 1.656 | 1.600 | 1.711 | 0.4370 |
| 2008—2015 | 0.918 | 0.134 | 1.701 | 2.046 | 1.997 | 2.096 | 0.9605 | 0.4244 |  | 1.657 | 1.606 | 1.707 | 0.4271 |
| 2008—2016 | 0.702 | −0.004 | 1.409 | 2.06 | 2.015 | 2.105 | 0.9634 | 0.4091 |  | 1.648 | 1.602 | 1.694 | 0.4136 |

RMSE represents root-mean-square error; *R*2 represents the coefficient of determination for the first linear equation.