**APPENDIX A: STOCK PRICE**

|  |  |  |
| --- | --- | --- |
|  | **year** | **Stock Price** |
| **ADRO** | 2016 | 1695 |
| 2017 | 1860 |
| 2018 | 1215 |
| 2019 | 1555 |
| 2020 | 1430 |
| **BSSR** | 2016 | 1410 |
| 2017 | 2100 |
| 2018 | 2340 |
| 2019 | 1820 |
| 2020 | 1695 |
| **BYAN** | 2016 | 6000 |
| 2017 | 10600 |
| 2018 | 19875 |
| 2019 | 15900 |
| 2020 | 15475 |
| **DEWA** | 2016 | 50 |
| 2017 | 50 |
| 2018 | 50 |
| 2019 | 50 |
| 2020 | 50 |
| **GEMS** | 2016 | 2700 |
| 2017 | 2750 |
| 2018 | 2550 |
| 2019 | 2550 |
| 2020 | 2550 |
| **HRUM** | 2016 | 2140 |
| 2017 | 2050 |
| 2018 | 1400 |
| 2019 | 1320 |
| 2020 | 2980 |
| **ITMG** | 2016 | 16875 |
| 2017 | 20700 |
| 2018 | 20250 |
| 2019 | 11475 |
| 2020 | 13850 |
| **MBAP** | 2016 | 2090 |
| 2017 | 2900 |
| 2018 | 2850 |
| 2019 | 1980 |
| 2020 | 2690 |
| **MYOH** | 2016 | 630 |
| 2017 | 700 |
| 2018 | 1045 |
| 2019 | 1295 |
| 2020 | 1300 |
| **PSAB** | 2016 | 244 |
| 2017 | 179 |
| 2018 | 202 |
| 2019 | 260 |
| 2020 | 264 |
| **TOBA** | 2016 | 1245 |
| 2017 | 1955 |
| 2018 | 1696 |
| 2019 | 358 |
| 2020 | 520 |

A-

**APPENDIX B: CALCULATION OF RETURN ON EQUITY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | YEAR | NET PROFIT | TOTAL EQUITY | RETURN ON EQUITY |
| **ADRO** | 2016 | 340.686 | 3.785.882 | 0,09 |
| 2017 | 536.438 | 4.091.627 | 0,13 |
| 2018 | 477.541 | 4.302.692 | 0,11 |
| 2019 | 435.002 | 3.983.395 | 0,11 |
| 2020 | 158.505 | 3.951.714 | 0,04 |
| **BSSR** | 2016 | 27.421.577 | 127.435.381 | 0,22 |
| 2017 | 82.816.929 | 149.890.675 | 0,55 |
| 2018 | 69.063.191 | 150.279.337 | 0,46 |
| 2019 | 30.467.457 | 170.317.658 | 0,18 |
| 2020 | 30.520.289 | 190.376.045 | 0,16 |
| **BYAN** | 2016 | 18.015.433 | 188.150.974 | 0,10 |
| 2017 | 338.017.199 | 515.603.819 | 0,66 |
| 2018 | 524.309.273 | 678.070.334 | 0,77 |
| 2019 | 234.211.277 | 619.080.163 | 0,38 |
| 2020 | 344.459.870 | 861.553.774 | 0,40 |
| **DEWA** | 2016 | 549.890 | 225.129.671 | 0,00 |
| 2017 | 2.769.140 | 227.552.534 | 0,01 |
| 2018 | 2.565.336 | 230.804.136 | 0,01 |
| 2019 | 3.773.979 | 234.263.034 | 0,02 |
| 2020 | 1.647.892 | 269.400.278 | 0,01 |
| **GEMS** | 2016 | 34.988.248 | 264.918.686 | 0,13 |
| 2017 | 120.106.040 | 292.218.111 | 0,41 |
| 2018 | 100.548.578 | 315.812.916 | 0,32 |
| 2019 | 66.765.857 | 358.267.010 | 0,19 |
| 2020 | 95.856.553 | 349.434.544 | 0,27 |
| **HRUM** | 2016 | 17.979.743 | 355.430.321 | 0,05 |
| 2017 | 55.748.001 | 395.860.722 | 0,14 |
| 2018 | 40.205.422 | 388.486.791 | 0,10 |
| 2019 | 20.122.589 | 399.583.513 | 0,05 |
| 2020 | 60.292.315 | 454.796.618 | 0,13 |
| **ITMG** | 2016 | 130.709 | 907.430 | 0,14 |
| 2017 | 252.703 | 958.139 | 0,26 |
| 2018 | 258.756 | 969.783 | 0,27 |
| 2019 | 126.502 | 884.465 | 0,14 |
| 2020 | 37.828 | 846.290 | 0,04 |
| **MBAP** | 2016 | 27.113.735 | 91.630.383 | 0,30 |
| 2017 | 58.635.700 | 122.304.341 | 0,48 |
| 2018 | 50.310.702 | 124.181.254 | 0,41 |
| 2019 | 35.287.557 | 145.640.390 | 0,24 |
| 2020 | 27.467.486 | 138.220.176 | 0,20 |
| **MYOH** | 2016 | 21.258.853 | 107.418.261 | 0,20 |
| 2017 | 12.306.356 | 102.541.343 | 0,12 |
| 2018 | 30.928.664 | 113.987.735 | 0,27 |
| 2019 | 26.098.429 | 122.298.955 | 0,21 |
| 2020 | 22.533.662 | 129.047.722 | 0,17 |
| **PSAB** | 2016 | 22.220.964 | 342.085.869 | 0,06 |
| 2017 | 15.898.012 | 350.024.364 | 0,05 |
| 2018 | 19.147.361 | 369.864.743 | 0,05 |
| 2019 | 4.182.880 | 353.769.837 | 0,01 |
| 2020 | 1.946.714 | 373.853.421 | 0,01 |
| **TOBA** | 2016 | 14.586.772 | 147.744.334 | 0,10 |
| 2017 | 41.369.891 | 174.799.423 | 0,24 |
| 2018 | 68.089.796 | 215.623.872 | 0,32 |
| 2019 | 43.745.700 | 264.139.887 | 0,17 |
| 2020 | 35.803.866 | 290.914.160 | 0,12 |

**APPENDIX C: CALCULATION OF DEBT-TO-EQUITY RATIO**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | YEAR | TOTAL LIABILITY | TOTAL EQUITY | DEBT TO EQUITY RATIO |
| **ADRO** | 2016 | 2.736.375 | 3.785.882 | 0,72 |
| 2017 | 2.722.520 | 4.091.627 | 0,67 |
| 2018 | 2.758.063 | 4.302.692 | 0,64 |
| 2019 | 3.233.710 | 3.983.395 | 0,81 |
| 2020 | 2.429.852 | 3.951.714 | 0,61 |
| **BSSR** | 2016 | 56.636.529 | 127.435.381 | 0,44 |
| 2017 | 60.246.779 | 149.890.675 | 0,40 |
| 2018 | 94.820.865 | 150.279.337 | 0,63 |
| 2019 | 80.362.658 | 170.317.658 | 0,47 |
| 2020 | 72.967.723 | 190.376.045 | 0,38 |
| **BYAN** | 2016 | 636.535.687 | 188.150.974 | 3,38 |
| 2017 | 373.209.321 | 515.603.819 | 0,72 |
| 2018 | 472.793.557 | 678.070.334 | 0,70 |
| 2019 | 658.959.960 | 619.080.163 | 1,06 |
| 2020 | 758.171.248 | 861.553.774 | 0,88 |
| **DEWA** | 2016 | 156.210.035 | 225.129.671 | 0,69 |
| 2017 | 174.247.616 | 227.552.534 | 0,77 |
| 2018 | 184.294.296 | 230.804.136 | 0,80 |
| 2019 | 315.255.563 | 234.263.034 | 1,35 |
| 2020 | 281.239.286 | 269.400.278 | 1,04 |
| **GEMS** | 2016 | 112.751.314 | 264.918.686 | 0,43 |
| 2017 | 298.251.273 | 292.218.111 | 1,02 |
| 2018 | 385.233.714 | 315.812.916 | 1,22 |
| 2019 | 422.379.157 | 358.267.010 | 1,18 |
| 2020 | 464.283.221 | 349.434.544 | 1,33 |
| **HRUM** | 2016 | 57.935.532 | 355.430.321 | 0,16 |
| 2017 | 63.582.349 | 395.860.722 | 0,16 |
| 2018 | 79.502.404 | 388.486.791 | 0,20 |
| 2019 | 47.418.441 | 399.583.513 | 0,12 |
| 2020 | 43.905.598 | 454.796.618 | 0,10 |
| **ITMG** | 2016 | 302.362 | 907.430 | 0,33 |
| 2017 | 400.524 | 958.139 | 0,42 |
| 2018 | 472.945 | 969.783 | 0,49 |
| 2019 | 324.576 | 884.465 | 0,37 |
| 2020 | 312.339 | 846.290 | 0,37 |
| **MBAP** | 2016 | 24.745.376 | 91.630.383 | 0,27 |
| 2017 | 38.474.621 | 122.304.341 | 0,31 |
| 2018 | 49.328.008 | 124.181.254 | 0,40 |
| 2019 | 46.886.899 | 145.640.390 | 0,32 |
| 2020 | 43.752.926 | 138.220.176 | 0,32 |
| **MYOH** | 2016 | 39.773.001 | 107.418.261 | 0,37 |
| 2017 | 33.526.632 | 102.541.343 | 0,33 |
| 2018 | 37.338.363 | 113.987.735 | 0,33 |
| 2019 | 37.882.793 | 122.298.955 | 0,31 |
| 2020 | 22.061.137 | 129.047.722 | 0,17 |
| **PSAB** | 2016 | 510.853.523 | 342.085.869 | 1,49 |
| 2017 | 571.225.579 | 350.024.364 | 1,63 |
| 2018 | 546.490.283 | 369.864.743 | 1,48 |
| 2019 | 637.388.727 | 353.769.837 | 1,80 |
| 2020 | 586.460.380 | 373.853.421 | 1,57 |
| **TOBA** | 2016 | 113.843.825 | 147.744.334 | 0,77 |
| 2017 | 173.538.605 | 174.799.423 | 0,99 |
| 2018 | 286.259.322 | 215.623.872 | 1,33 |
| 2019 | 370.500.569 | 264.139.887 | 1,40 |
| 2020 | 480.957.627 | 290.914.160 | 1,65 |

**APPENDIX D: THE T-DISTRIBUTION TABLE**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DF** | **0.80 0.20** | **0.90 0.10** | **0.95 0.05** | **0.98 0.02** | **0.99 0.01** | **0.995 0.005** | **0.998 0.002** | **0.999 0.001** |
| **1** | 3.078 | 6.314 | 12.706 | 31.820 | 63.657 | 127.321 | 318.309 | 636.619 |
| **2** | 1.886 | 2.920 | 4.303 | 6.965 | 9.925 | 14.089 | 22.327 | 31.599 |
| **3** | 1.638 | 2.353 | 3.182 | 4.541 | 5.841 | 7.453 | 10.215 | 12.924 |
| **4** | 1.533 | 2.132 | 2.776 | 3.747 | 4.604 | 5.598 | 7.173 | 8.610 |
| **5** | 1.476 | 2.015 | 2.571 | 3.365 | 4.032 | 4.773 | 5.893 | 6.869 |
| **6** | 1.440 | 1.943 | 2.447 | 3.143 | 3.707 | 4.317 | 5.208 | 5.959 |
| **7** | 1.415 | 1.895 | 2.365 | 2.998 | 3.499 | 4.029 | 4.785 | 5.408 |
| **8** | 1.397 | 1.860 | 2.306 | 2.897 | 3.355 | 3.833 | 4.501 | 5.041 |
| **9** | 1.383 | 1.833 | 2.262 | 2.821 | 3.250 | 3.690 | 4.297 | 4.781 |
| **10** | 1.372 | 1.812 | 2.228 | 2.764 | 3.169 | 3.581 | 4.144 | 4.587 |
| **11** | 1.363 | 1.796 | 2.201 | 2.718 | 3.106 | 3.497 | 4.025 | 4.437 |
| **12** | 1.356 | 1.782 | 2.179 | 2.681 | 3.055 | 3.428 | 3.930 | 4.318 |
| **13** | 1.350 | 1.771 | 2.160 | 2.650 | 3.012 | 3.372 | 3.852 | 4.221 |
| **14** | 1.345 | 1.761 | 2.145 | 2.625 | 2.977 | 3.326 | 3.787 | 4.140 |
| **15** | 1.341 | 1.753 | 2.131 | 2.602 | 2.947 | 3.286 | 3.733 | 4.073 |
| **16** | 1.337 | 1.746 | 2.120 | 2.584 | 2.921 | 3.252 | 3.686 | 4.015 |
| **17** | 1.333 | 1.740 | 2.110 | 2.567 | 2.898 | 3.222 | 3.646 | 3.965 |
| **18** | 1.330 | 1.734 | 2.101 | 2.552 | 2.878 | 3.197 | 3.610 | 3.922 |
| **19** | 1.328 | 1.729 | 2.093 | 2.539 | 2.861 | 3.174 | 3.579 | 3.883 |
| **20** | 1.325 | 1.725 | 2.086 | 2.528 | 2.845 | 3.153 | 3.552 | 3.850 |
| **21** | 1.323 | 1.721 | 2.080 | 2.518 | 2.831 | 3.135 | 3.527 | 3.819 |
| **22** | 1.321 | 1.717 | 2.074 | 2.508 | 2.819 | 3.119 | 3.505 | 3.792 |
| **23** | 1.319 | 1.714 | 2.069 | 2.500 | 2.807 | 3.104 | 3.485 | 3.768 |
| **24** | 1.318 | 1.711 | 2.064 | 2.492 | 2.797 | 3.090 | 3.467 | 3.745 |
| **25** | 1.316 | 1.708 | 2.060 | 2.485 | 2.787 | 3.078 | 3.450 | 3.725 |
| **26** | 1.315 | 1.706 | 2.056 | 2.479 | 2.779 | 3.067 | 3.435 | 3.707 |
| **27** | 1.314 | 1.703 | 2.052 | 2.473 | 2.771 | 3.057 | 3.421 | 3.690 |
| **28** | 1.313 | 1.701 | 2.048 | 2.467 | 2.763 | 3.047 | 3.408 | 3.674 |
| **29** | 1.311 | 1.699 | 2.045 | 2.462 | 2.756 | 3.038 | 3.396 | 3.659 |
| **30** | 1.310 | 1.697 | 2.042 | 2.457 | 2.750 | 3.030 | 3.385 | 3.646 |
| **31** | 1.309 | 1.695 | 2.040 | 2.453 | 2.744 | 3.022 | 3.375 | 3.633 |
| **32** | 1.309 | 1.694 | 2.037 | 2.449 | 2.738 | 3.015 | 3.365 | 3.622 |
| **33** | 1.308 | 1.692 | 2.035 | 2.445 | 2.733 | 3.008 | 3.356 | 3.611 |
| **34** | 1.307 | 1.691 | 2.032 | 2.441 | 2.728 | 3.002 | 3.348 | 3.601 |
| **35** | 1.306 | 1.690 | 2.030 | 2.438 | 2.724 | 2.996 | 3.340 | 3.591 |
| **36** | 1.306 | 1.688 | 2.028 | 2.434 | 2.719 | 2.991 | 3.333 | 3.582 |
| **37** | 1.305 | 1.687 | 2.026 | 2.431 | 2.715 | 2.985 | 3.326 | 3.574 |
| **38** | 1.304 | 1.686 | 2.024 | 2.429 | 2.712 | 2.980 | 3.319 | 3.566 |
| **39** | 1.304 | 1.685 | 2.023 | 2.426 | 2.708 | 2.976 | 3.313 | 3.558 |
| **40** | 1.303 | 1.684 | 2.021 | 2.423 | 2.704 | 2.971 | 3.307 | 3.551 |
| **42** | 1.302 | 1.682 | 2.018 | 2.418 | 2.698 | 2.963 | 3.296 | 3.538 |
| **44** | 1.301 | 1.680 | 2.015 | 2.414 | 2.692 | 2.956 | 3.286 | 3.526 |
| **46** | 1.300 | 1.679 | 2.013 | 2.410 | 2.687 | 2.949 | 3.277 | 3.515 |
| **48** | 1.299 | 1.677 | 2.011 | 2.407 | 2.682 | 2.943 | 3.269 | 3.505 |
| **50** | 1.299 | 1.676 | 2.009 | 2.403 | 2.678 | 2.937 | 3.261 | 3.496 |
| **60** | 1.296 | 1.671 | 2.000 | 2.390 | 2.660 | 2.915 | 3.232 | 3.460 |
| **70** | 1.294 | 1.667 | 1.994 | 2.381 | 2.648 | 2.899 | 3.211 | 3.435 |
| **80** | 1.292 | 1.664 | 1.990 | 2.374 | 2.639 | 2.887 | 3.195 | 3.416 |
| **90** | 1.291 | 1.662 | 1.987 | 2.369 | 2.632 | 2.878 | 3.183 | 3.402 |
| **100** | 1.290 | 1.660 | 1.984 | 2.364 | 2.626 | 2.871 | 3.174 | 3.391 |
| **120** | 1.289 | 1.658 | 1.980 | 2.358 | 2.617 | 2.860 | 3.160 | 3.373 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **150** | 1.287 | 1.655 | 1.976 | 2.351 | 2.609 | 2.849 | 3.145 | 3.357 |
| **200** | 1.286 | 1.652 | 1.972 | 2.345 | 2.601 | 2.839 | 3.131 | 3.340 |
| **300** | 1.284 | 1.650 | 1.968 | 2.339 | 2.592 | 2.828 | 3.118 | 3.323 |
| **500** | 1.283 | 1.648 | 1.965 | 2.334 | 2.586 | 2.820 | 3.107 | 3.310 |
| **Infinity** | 1.282 | 1.645 | 1.960 | 2.326 | 2.576 | 2.807 | 3.090 | 3.291 |

**APPENDIX E: THE F-DISTRIBUTION TABLE**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Critical Values of the *F* -Distribution: *α* = 0*.*05 | | | | | | | | | |
| Denom. d.f. | Numerator Degrees of Freedom | | | | | | | | | |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1 | 161.448 | 199.500 | 215.707 | 224.583 | 230.162 | 233.986 | 236.768 | 238.883 | 240.543 | 241.882 |
| 2 | 18.513 | 19.000 | 19.164 | 19.247 | 19.296 | 19.330 | 19.353 | 19.371 | 19.385 | 19.396 |
| 3 | 10.128 | 9.552 | 9.277 | 9.117 | 9.013 | 8.941 | 8.887 | 8.845 | 8.812 | 8.786 |
| 4 | 7.709 | 6.944 | 6.591 | 6.388 | 6.256 | 6.163 | 6.094 | 6.041 | 5.999 | 5.964 |
| 5 | 6.608 | 5.786 | 5.409 | 5.192 | 5.050 | 4.950 | 4.876 | 4.818 | 4.772 | 4.735 |
| 6 | 5.987 | 5.143 | 4.757 | 4.534 | 4.387 | 4.284 | 4.207 | 4.147 | 4.099 | 4.060 |
| 7 | 5.591 | 4.737 | 4.347 | 4.120 | 3.972 | 3.866 | 3.787 | 3.726 | 3.677 | 3.637 |
| 8 | 5.318 | 4.459 | 4.066 | 3.838 | 3.687 | 3.581 | 3.500 | 3.438 | 3.388 | 3.347 |
| 9 | 5.117 | 4.256 | 3.863 | 3.633 | 3.482 | 3.374 | 3.293 | 3.230 | 3.179 | 3.137 |
| 10 | 4.965 | 4.103 | 3.708 | 3.478 | 3.326 | 3.217 | 3.135 | 3.072 | 3.020 | 2.978 |
| 11 | 4.844 | 3.982 | 3.587 | 3.357 | 3.204 | 3.095 | 3.012 | 2.948 | 2.896 | 2.854 |
| 12 | 4.747 | 3.885 | 3.490 | 3.259 | 3.106 | 2.996 | 2.913 | 2.849 | 2.796 | 2.753 |
| 13 | 4.667 | 3.806 | 3.411 | 3.179 | 3.025 | 2.915 | 2.832 | 2.767 | 2.714 | 2.671 |
| 14 | 4.600 | 3.739 | 3.344 | 3.112 | 2.958 | 2.848 | 2.764 | 2.699 | 2.646 | 2.602 |
| 15 | 4.543 | 3.682 | 3.287 | 3.056 | 2.901 | 2.790 | 2.707 | 2.641 | 2.588 | 2.544 |
| 16 | 4.494 | 3.634 | 3.239 | 3.007 | 2.852 | 2.741 | 2.657 | 2.591 | 2.538 | 2.494 |
| 17 | 4.451 | 3.592 | 3.197 | 2.965 | 2.810 | 2.699 | 2.614 | 2.548 | 2.494 | 2.450 |
| 18 | 4.414 | 3.555 | 3.160 | 2.928 | 2.773 | 2.661 | 2.577 | 2.510 | 2.456 | 2.412 |
| 19 | 4.381 | 3.522 | 3.127 | 2.895 | 2.740 | 2.628 | 2.544 | 2.477 | 2.423 | 2.378 |
| 20 | 4.351 | 3.493 | 3.098 | 2.866 | 2.711 | 2.599 | 2.514 | 2.447 | 2.393 | 2.348 |
| 21 | 4.325 | 3.467 | 3.072 | 2.840 | 2.685 | 2.573 | 2.488 | 2.420 | 2.366 | 2.321 |
| 22 | 4.301 | 3.443 | 3.049 | 2.817 | 2.661 | 2.549 | 2.464 | 2.397 | 2.342 | 2.297 |
| 23 | 4.279 | 3.422 | 3.028 | 2.796 | 2.640 | 2.528 | 2.442 | 2.375 | 2.320 | 2.275 |
| 24 | 4.260 | 3.403 | 3.009 | 2.776 | 2.621 | 2.508 | 2.423 | 2.355 | 2.300 | 2.255 |
| 25 | 4.242 | 3.385 | 2.991 | 2.759 | 2.603 | 2.490 | 2.405 | 2.337 | 2.282 | 2.236 |
| 26 | 4.225 | 3.369 | 2.975 | 2.743 | 2.587 | 2.474 | 2.388 | 2.321 | 2.265 | 2.220 |
| 27 | 4.210 | 3.354 | 2.960 | 2.728 | 2.572 | 2.459 | 2.373 | 2.305 | 2.250 | 2.204 |
| 28 | 4.196 | 3.340 | 2.947 | 2.714 | 2.558 | 2.445 | 2.359 | 2.291 | 2.236 | 2.190 |
| 29 | 4.183 | 3.328 | 2.934 | 2.701 | 2.545 | 2.432 | 2.346 | 2.278 | 2.223 | 2.177 |
| 30 | 4.171 | 3.316 | 2.922 | 2.690 | 2.534 | 2.421 | 2.334 | 2.266 | 2.211 | 2.165 |
| 31 | 4.160 | 3.305 | 2.911 | 2.679 | 2.523 | 2.409 | 2.323 | 2.255 | 2.199 | 2.153 |
| 32 | 4.149 | 3.295 | 2.901 | 2.668 | 2.512 | 2.399 | 2.313 | 2.244 | 2.189 | 2.142 |
| 33 | 4.139 | 3.285 | 2.892 | 2.659 | 2.503 | 2.389 | 2.303 | 2.235 | 2.179 | 2.133 |
| 34 | 4.130 | 3.276 | 2.883 | 2.650 | 2.494 | 2.380 | 2.294 | 2.225 | 2.170 | 2.123 |
| 35 | 4.121 | 3.267 | 2.874 | 2.641 | 2.485 | 2.372 | 2.285 | 2.217 | 2.161 | 2.114 |
| 36 | 4.113 | 3.259 | 2.866 | 2.634 | 2.477 | 2.364 | 2.277 | 2.209 | 2.153 | 2.106 |
| 37 | 4.105 | 3.252 | 2.859 | 2.626 | 2.470 | 2.356 | 2.270 | 2.201 | 2.145 | 2.098 |
| 38 | 4.098 | 3.245 | 2.852 | 2.619 | 2.463 | 2.349 | 2.262 | 2.194 | 2.138 | 2.091 |
| 39 | 4.091 | 3.238 | 2.845 | 2.612 | 2.456 | 2.342 | 2.255 | 2.187 | 2.131 | 2.084 |
| 40 | 4.085 | 3.232 | 2.839 | 2.606 | 2.449 | 2.336 | 2.249 | 2.180 | 2.124 | 2.077 |
| 41 | 4.079 | 3.226 | 2.833 | 2.600 | 2.443 | 2.330 | 2.243 | 2.174 | 2.118 | 2.071 |
| 42 | 4.073 | 3.220 | 2.827 | 2.594 | 2.438 | 2.324 | 2.237 | 2.168 | 2.112 | 2.065 |
| 43 | 4.067 | 3.214 | 2.822 | 2.589 | 2.432 | 2.318 | 2.232 | 2.163 | 2.106 | 2.059 |
| 44 | 4.062 | 3.209 | 2.816 | 2.584 | 2.427 | 2.313 | 2.226 | 2.157 | 2.101 | 2.054 |
| 45 | 4.057 | 3.204 | 2.812 | 2.579 | 2.422 | 2.308 | 2.221 | 2.152 | 2.096 | 2.049 |
| 46 | 4.052 | 3.200 | 2.807 | 2.574 | 2.417 | 2.304 | 2.216 | 2.147 | 2.091 | 2.044 |
| 47 | 4.047 | 3.195 | 2.802 | 2.570 | 2.413 | 2.299 | 2.212 | 2.143 | 2.086 | 2.039 |
| 48 | 4.043 | 3.191 | 2.798 | 2.565 | 2.409 | 2.295 | 2.207 | 2.138 | 2.082 | 2.035 |
| 49 | 4.038 | 3.187 | 2.794 | 2.561 | 2.404 | 2.290 | 2.203 | 2.134 | 2.077 | 2.030 |
| 50 | 4.034 | 3.183 | 2.790 | 2.557 | 2.400 | 2.286 | 2.199 | 2.130 | 2.073 | 2.026 |
| 60 | 4.001 | 3.150 | 2.758 | 2.525 | 2.368 | 2.254 | 2.167 | 2.097 | 2.040 | 1.993 |
| 70 | 3.978 | 3.128 | 2.736 | 2.503 | 2.346 | 2.231 | 2.143 | 2.074 | 2.017 | 1.969 |
| 80 | 3.960 | 3.111 | 2.719 | 2.486 | 2.329 | 2.214 | 2.126 | 2.056 | 1.999 | 1.951 |
| 90 | 3.947 | 3.098 | 2.706 | 2.473 | 2.316 | 2.201 | 2.113 | 2.043 | 1.986 | 1.938 |
| 100 | 3.936 | 3.087 | 2.696 | 2.463 | 2.305 | 2.191 | 2.103 | 2.032 | 1.975 | 1.927 |
| 120 | 3.920 | 3.072 | 2.680 | 2.447 | 2.290 | 2.175 | 2.087 | 2.016 | 1.959 | 1.910 |
| 140 | 3.909 | 3.061 | 2.669 | 2.436 | 2.279 | 2.164 | 2.076 | 2.005 | 1.947 | 1.899 |
| 180 | 3.894 | 3.046 | 2.655 | 2.422 | 2.264 | 2.149 | 2.061 | 1.990 | 1.932 | 1.884 |
| 200 | 3.888 | 3.041 | 2.650 | 2.417 | 2.259 | 2.144 | 2.056 | 1.985 | 1.927 | 1.878 |
| *∞* | 3.841 | 2.996 | 2.605 | 2.372 | 2.214 | 2.099 | 2.010 | 1.938 | 1.880 | 1.831 |

**APPENDIX F: DURBIN-WATSON SIGNIFICANCE TABLE**

**Durbin-Watson Statistic: 5 Per Cent Significance Points of dL and dU**

| **n** | **k=1** | | **k=2** | | **k=3** | |
| --- | --- | --- | --- | --- | --- | --- |
| **dL** | **dU** | **dL** | **dU** | **dL** | **dU** |
| 6 | 0.6102 | 1.4002 |  |  |  |  |
| 7 | 0.6996 | 1.3564 | 0.4672 | 1.8964 |  |  |
| 8 | 0.7629 | 1.3324 | 0.5591 | 1.7771 | 0.3674 | 2.2866 |
| 9 | 0.8243 | 1.3199 | 0.6291 | 1.6993 | 0.4548 | 2.1282 |
| 10 | 0.8791 | 1.3197 | 0.6972 | 1.6413 | 0.5253 | 2.0163 |
| 11 | 0.9273 | 1.3241 | 0.7580 | 1.6044 | 0.5948 | 1.9280 |
| 12 | 0.9708 | 1.3314 | 0.8122 | 1.5794 | 0.6577 | 1.8640 |
| 13 | 1.0097 | 1.3404 | 0.8612 | 1.5621 | 0.7147 | 1.8159 |
| 14 | 1.0450 | 1.3503 | 0.9054 | 1.5507 | 0.7667 | 1.7788 |
| 15 | 1.0770 | 1.3605 | 0.9455 | 1.5432 | 0.8140 | 1.7501 |
| 16 | 1.1062 | 1.3709 | 0.9820 | 1.5386 | 0.8572 | 1.7277 |
| 17 | 1.1330 | 1.3812 | 1.0154 | 1.5361 | 0.8968 | 1.7101 |
| 18 | 1.1576 | 1.3913 | 1.0461 | 1.5353 | 0.9331 | 1.6961 |
| 19 | 1.1804 | 1.4012 | 1.0743 | 1.5355 | 0.9666 | 1.6851 |
| 20 | 1.2015 | 1.4107 | 1.1004 | 1.5367 | 0.9976 | 1.6763 |
| 21 | 1.2212 | 1.4200 | 1.1246 | 1.5385 | 1.0262 | 1.6694 |
| 22 | 1.2395 | 1.4289 | 1.1471 | 1.5408 | 1.0529 | 1.6640 |
| 23 | 1.2567 | 1.4375 | 1.1682 | 1.5435 | 1.0778 | 1.6597 |
| 24 | 1.2728 | 1.4458 | 1.1878 | 1.5464 | 1.1010 | 1.6565 |
| 25 | 1.2879 | 1.4537 | 1.2063 | 1.5495 | 1.1228 | 1.6540 |
| 26 | 1.3022 | 1.4614 | 1.2236 | 1.5528 | 1.1432 | 1.6523 |
| 27 | 1.3157 | 1.4688 | 1.2399 | 1.5562 | 1.1624 | 1.6510 |
| 28 | 1.3284 | 1.4759 | 1.2553 | 1.5596 | 1.1805 | 1.6503 |
| 29 | 1.3405 | 1.4828 | 1.2699 | 1.5631 | 1.1976 | 1.6499 |
| 30 | 1.3520 | 1.4894 | 1.2837 | 1.5666 | 1.2138 | 1.6498 |
| 31 | 1.3630 | 1.4957 | 1.2969 | 1.5701 | 1.2292 | 1.6500 |
| 32 | 1.3734 | 1.5019 | 1.3093 | 1.5736 | 1.2437 | 1.6505 |
| 33 | 1.3834 | 1.5078 | 1.3212 | 1.5770 | 1.2576 | 1.6511 |
| 34 | 1.3929 | 1.5136 | 1.3325 | 1.5805 | 1.2707 | 1.6519 |
| 35 | 1.4019 | 1.5191 | 1.3433 | 1.5838 | 1.2833 | 1.6528 |
| 36 | 1.4107 | 1.5245 | 1.3537 | 1.5872 | 1.2953 | 1.6539 |
| 37 | 1.4190 | 1.5297 | 1.3635 | 1.5904 | 1.3068 | 1.6550 |
| 38 | 1.4270 | 1.5348 | 1.3730 | 1.5937 | 1.3177 | 1.6563 |
| 39 | 1.4347 | 1.5396 | 1.3821 | 1.5969 | 1.3283 | 1.6575 |
| 40 | 1.4421 | 1.5444 | 1.3908 | 1.6000 | 1.3384 | 1.6589 |
| 41 | 1.4493 | 1.5490 | 1.3992 | 1.6031 | 1.3480 | 1.6603 |
| 42 | 1.4562 | 1.5534 | 1.4073 | 1.6061 | 1.3573 | 1.6617 |
| 43 | 1.4628 | 1.5577 | 1.4151 | 1.6091 | 1.3663 | 1.6632 |
| 44 | 1.4692 | 1.5619 | 1.4226 | 1.6120 | 1.3749 | 1.6647 |
| 45 | 1.4754 | 1.5660 | 1.4298 | 1.6148 | 1.3832 | 1.6662 |
| 46 | 1.4814 | 1.5700 | 1.4368 | 1.6176 | 1.3912 | 1.6677 |
| 47 | 1.4872 | 1.5739 | 1.4435 | 1.6204 | 1.3989 | 1.6692 |
| 48 | 1.4928 | 1.5776 | 1.4500 | 1.6231 | 1.4064 | 1.6708 |
| 49 | 1.4982 | 1.5813 | 1.4564 | 1.6257 | 1.4136 | 1.6723 |
| 50 | 1.5035 | 1.5849 | 1.4625 | 1.6283 | 1.4206 | 1.6739 |