**Figure 1. Dividend Paying Firms on the Indonesian Stock Exchange (IDX) 1995-2011.**

Figure 1 describes the number of dividend payers in the period from 1995 to 2011, compared to the total number of firms on the Indonesian Stock Exchange (IDX). We excluded the financial and utility industries, and firms with negative equity.



Source: Authors computation.

|  |
| --- |
| Table 1. Descriptive statistics |
|   | N | Mean | sd | Min | p25 | p50 | p75 | Max |
| *DDIV* | 2,600 | 0.534 | 0.499 | 0 | 0 | 1 | 1 | 1 |
| *Div/TA* | 2,600 | 0.016 | 0.041 | 0 | 0 | 0.00004 | 0.0145 | 0.21 |
| *RE/TE* | 2,600 | -0.264 | 2.126 | -23.446 | -0.079 | 0.211 | 0.486 | 0.947 |
| *Age* | 2,600 | 25.963 | 15.768 | 1 | 16 | 24 | 31 | 109 |
| *FCF/TA* | 2,600 | 0.002 | 0.111 | -0.674 | -0.039 | 0 | 0.049 | 0.756 |
| *LC-Index* | 2,600 | 2.557 | 0.645 | 1 | 2 | 2.5 | 3 | 4 |
| *ROA* | 2,600 | 0.035 | 0.118 | -1.262 | 0.003 | 0.031 | 0.074 | 1.49 |
| *M/B* | 2,600 | 1.768 | 2.446 | 0.125 | 0.571 | 1.018 | 1.992 | 31.209 |
| *Cash/TA* | 2,600 | 0.115 | 0.114 | 0 | 0.026 | 0.076 | 0.167 | 0.945 |
| *Size (%)* | 2,600 | 0.179 | 0.62 | 0 | 0.004 | 0.024 | 0.102 | 9.848 |
| *D/TA* | 2,600 | 0.289 | 0.216 | 0 | 0.097 | 0.27 | 0.455 | 0.809 |
| *Largest SH* | 2,600 | 0.481 | 0.251 | 0.001 | 0.31 | 0.501 | 0.638 | 0.993 |
| *Corporate* | 2,600 | 0.504 | 0.5 | 0 | 0 | 1 | 1 | 1 |
| *State* | 2,600 | 0.03 | 0.17 | 0 | 0 | 0 | 0 | 1 |
| *Insider* | 2,600 | 0.012 | 0.109 | 0 | 0 | 0 | 0 | 1 |
| *Individual* | 2,600 | 0.009 | 0.097 | 0 | 0 | 0 | 0 | 1 |
| *DDIV = dummy variable equals one if firm pays dividend and zero otherwise; Div/TA = Dividends related to the period to total assets; RE/TE = retained earnings to total equity RE/TE = retained earnings to total equity; Age = firms’ age; FCF/TA = free cash flow to total assets; LC-Index = life-cycle index; ROA = return on assets; M/B = market value of equity to its book value; Size = firm market capitalization to total market capitalization; Debt/TA = long term debt to total assets; Cash/TA = cash holding to total assets; Largest SH = the percentage of shares of the largest shareholder; Corporate, State, Insider, and individual are dummy variables equal one if the controlling shareholder (ownership >50%) is corporate, state, insider, and individual respectively.*  |
|  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Tabel 2. Dividend concentration (HHI) |  |  |  |  |  |  |
|  | Year |
| Decile | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| 1 | 4.28 | 3.43 | 2.74 | 2.59 | 5.54 | 2.03 | 1.13 | 1.77 | 1.18 |
| 2 | 11.57 | 12.75 | 10.84 | 0.56 | 0.34 | 2.36 | 8.00 | 5.54 | 5.23 |
| 3 | 1.12 | 1.06 | 0.85 | 1.46 | 0.85 | 0.26 | 0.69 | 0.17 | 0.06 |
| 4 | 2.54 | 2.28 | 1.80 | 1.07 | 2.57 | 0.64 | 0.89 | 0.60 | 0.35 |
| 5 | 2.26 | 2.55 | 2.36 | 2.46 | 3.88 | 1.65 | 2.18 | 0.84 | 0.50 |
| 6 | 2.85 | 3.94 | 5.05 | 1.64 | 0.96 | 1.23 | 4.37 | 0.98 | 1.59 |
| 7 | 5.38 | 5.21 | 3.98 | 5.92 | 0.28 | 5.80 | 1.15 | 2.73 | 1.78 |
| 8 | 8.40 | 8.94 | 1.62 | 5.22 | 14.52 | 3.15 | 7.55 | 4.72 | 1.29 |
| 9 | 13.26 | 12.47 | 12.37 | 13.74 | 3.88 | 2.09 | 4.44 | 6.93 | 5.47 |
| 10 | 48.33 | 47.36 | 58.39 | 65.10 | 67.19 | 80.52 | 68.83 | 75.19 | 82.55 |
| HHI | 0.28 | 0.27 | 0.37 | 0.45 | 0.48 | 0.65 | 0.49 | 0.58 | 0.69 |
|  | Year |
| Decile | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Mean |
| 1 | 1.31 | 1.78 | 1.52 | 0.85 | 1.59 | 1.49 | 1.32 | 0.93 | 2.09 |
| 2 | 4.87 | 10.61 | 8.28 | 42.19 | 10.95 | 15.48 | 17.15 | 11.57 | 10.49 |
| 3 | 0.06 | 0.14 | 0.12 | 0.10 | 0.17 | 0.36 | 0.25 | 0.19 | 0.47 |
| 4 | 0.32 | 0.31 | 0.06 | 0.11 | 0.08 | 0.08 | 0.12 | 0.26 | 0.83 |
| 5 | 0.35 | 0.19 | 0.33 | 0.14 | 0.93 | 0.43 | 0.33 | 0.28 | 1.27 |
| 6 | 1.02 | 2.13 | 0.55 | 0.75 | 0.69 | 0.76 | 0.69 | 0.68 | 1.76 |
| 7 | 2.23 | 0.92 | 1.57 | 1.15 | 1.61 | 2.48 | 1.41 | 1.32 | 2.64 |
| 8 | 1.85 | 2.76 | 2.90 | 1.13 | 2.32 | 3.26 | 4.73 | 7.96 | 4.84 |
| 9 | 3.71 | 4.40 | 2.94 | 1.73 | 4.69 | 5.50 | 9.39 | 8.52 | 6.80 |
| 10 | 84.27 | 76.75 | 81.71 | 51.85 | 76.84 | 70.15 | 64.60 | 68.27 | 68.70 |
| HHI | 0.72 | 0.60 | 0.68 | 0.45 | 0.61 | 0.52 | 0.46 | 0.49 |  |
| *We sort cash dividend payment by size, which is the percentile of the firms’ market capitalization to the overall market. Then we divided it into decile and calculated the percentage of the cash dividend amount to the total cash dividend payment of the year on each decile to obtain the HHI.* |

|  |
| --- |
|  Table 3. Life-Cycle proxies and the proportion of firms paying a dividend |
| Panel A:  |  |  |  |  |  |  |  |  |  |  |
| Life-Cycle Index | 1-1.25 | 1.25-1.75 | 1.75-2 | 2-2.25 | 2.25-2.5 | 2.5-3 | 3-3.25 | 3.25-3.5 | 3.5-4 |  |
| Percentage of payers | 15.48 | 31.8 | 48.38 | 39.67 | 41.56 | 50.82 | 53.26 | 64.03 | 77.89 |  |
| *RE/TE* | -0.599 | 0.009 | 0.117 | 0.01 | 0.08 | 0.232 | 0.298 | 0.45 | 0.661 |  |
| *FCF/TA* | -0.074 | -0.054 | -0.05 | -0.032 | 0 | 0.016 | 0.017 | 0.056 | 0.071 |  |
| *Age* | 4 | 4 | 7 | 9.5 | 8 | 11 | 14 | 11 | 17 |  |
| *Largest SH* | 50 | 51 | 46.44 | 38.5 | 43.15 | 46.58 | 47.49 | 49.83 | 90 |  |
| No. of firms | 101 | 412 | 401 | 368 | 474 | 549 | 552 | 278 | 554 |  |
| Panel B: *RE/TE* | <p10 | p10-p20 | p20-p30 | p30-p40 | p40-p50 | p50p-60 | p60-p70 | p70-p80 | p80-p90 | >p90 |
| Percentage of payers | 11.94 | 16.43 | 23.48 | 25.91 | 50.83 | 66.49 | 72.78 | 75.62 | 78.95 | 77.2 |
| Percentage of samples | 10.51 | 10.54 | 10.57 | 10.48 | 10.57 | 10.51 | 10.51 | 7.97 | 8.32 | 9.99 |
| Panel C: *FCF/TA* |  |  |  |  |  |  |  |  |  |  |
| Percentage of payers | 51.78 | 47.95 | 41.64 | 34.79 | 55.62 | 49.86 | 49 | 50.14 | 61.92 | 62.38 |
| Percentage of samples | 9.89 | 9.89 | 9.89 | 9.89 | 9.89 | 9.89 | 9.89 | 9.89 | 9.89 | 10.95 |
| Panel D: *Age* |  |  |  |  |  |  |  |  |  |  |
| Percentage of payers | 38.22 | 46.2 | 46 | 47.68 | 48.49 | 51.15 | 50.93 | 49.67 | 51.35 | 73.6 |
| Percentage of samples | 9.37 | 9.82 | 10.38 | 10.95 | 10.89 | 11.67 | 11.25 | 13.52 | 11.04 | 1.10 |
| *In Panel A We split the 15 years of the sample into quartiles for each of the variables, earned capital to total equity (RE/TE), free cash flow (FCF/TA), and Age. Then we assigned a value equal to 1 for the first quartile, 2 for the second, and so on for each of the variables, and we sum these values of the three variables resulting in an index that has values ranged from 1 to 4. Then we sort RE/TE, FCF/TA, Age, and the largest shareholder by the 9 range life-cycle index and report the median on each range.* |
| *In Panel B, C, and D we sorted the percentage of dividend payers by the decile of RE/TE, FCF/TA, and Age respectively.* |

|  |
| --- |
| **Table 4. Baseline regression. Propensity to pay a dividend and the firm's life cycle** |
| *DDIV* | (1) | (2) | (3) | (4) | (5) |
| *RE/TE* | 0.171\*\* |  |  | 0.178\*\* |  |
|  | (2.29) |  |  | (2.35) |  |
| *Log Age* |  | 0.0335\*\* |  | 0.0353\*\* |  |
|  |  | (2.12) |  | (2.36) |  |
| *FCF/TA* |  |  | 0.749 | 0.741\* |  |
|  |  |  | (1.63) | (1.66) |  |
| *LC-Index* |  |  |  |  | 0.217\*\* |
|  |  |  |  |  | (2.34) |
| *ROA* | 2.372\*\*\* | 2.211\*\*\* | 2.081\*\*\* | 1.959\*\*\* | 2.187\*\*\* |
|  | (3.37) | (3.35) | (3.17) | (2.99) | (3.26) |
| *M/B* | 0.0756\*\*\* | 0.0445\* | 0.0402 | 0.0461\* | 0.0877\*\*\* |
|  | (2.73) | (1.73) | (1.55) | (1.83) | (3.05) |
| *Cash/TA* | 2.832\*\*\* | 3.042\*\*\* | 2.947\*\*\* | 3.082\*\*\* | 2.733\*\*\* |
|  | (3.70) | (3.95) | (3.79) | (4.02) | (3.52) |
| *Size* | 44.88\*\* | 47.44\*\* | 53.14\*\* | 55.78\*\* | 40.84\*\* |
|  | (2.17) | (2.31) | (2.26) | (2.41) | (2.19) |
| *Debt/TA* | -0.0170\*\*\* | -0.0199\*\*\* | -0.0192\*\*\* | -0.0192\*\*\* | -0.0175\*\*\* |
|  | (-4.70) | (-5.14) | (-5.02) | (-5.05) | (-4.85) |
| *Largest SH* | 0.390\* | 0.339 | 0.340 | 0.336 | 0.405\* |
|  | (1.68) | (1.31) | (1.31) | (1.31) | (1.76) |
| *HHI Inds.* | -1.775\*\* | -1.642\* | -1.759\* | -1.698\* | -1.854\*\* |
|  | (-2.11) | (-1.85) | (-1.94) | (-1.91) | (-2.17) |
| *Constant* | 4.119\*\*\* | 2.657\*\*\* | 4.558\*\*\* | 3.891\*\*\* | 2.359\*\*\* |
|  | (5.94) | (3.24) | (6.21) | (5.23) | (3.02) |
| Year FE | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes |
| AIC | 2184.6 | 2211.1 | 2220.4 | 2219.5 | 2163.0 |
| BIC | 2436.4 | 2463.2 | 2472.5 | 2471.6 | 2426.5 |
| rho | 0.594 | 0.614 | 0.635 | 0.615 | 0.564 |
| No. of Groups | 309 | 309 | 309 | 309 | 309 |
| N | 2600 | 2600 | 2600 | 2600 | 2600 |
| z statistic in parentheses. \* p< 10%, \*\*p < 5%, \*\*\*p < 1% |  |  |
| *Dependent variable is DDIV = dummy variable equals one if the firm pays a dividend and zero otherwise. RE/TE = retained earnings to total equity; Log Age = natural logarithm of the firm's age; FCF/TA = free cash flow to total assets; LC-Index = life-cycle index; ROA = return on assets; M/B = market value of equity to its book value; Size = firm’s market capitalization to total market capitalization; D/TA = long term debt to total assets; Cash/TA = cash holdings to total assets; Largest SH = the percentage of shares of the largest shareholder; HHI Inds.=HHI of total assets industry k. Standard error is adjusted for clustering of firms.* |

|  |  |  |
| --- | --- | --- |
| Table 5. Cash Dividend and the firm's life-cycle |   |   |
|   | Fixed Effects | GMM System |
| *Div/TA* | (6) | (7) | (8) | (9) |
| *RE/TE* | 0.00107\*\*\* |   | 0.000721\* |   |
|  | (3.96) |   | (1.77) |   |
| *Log Age* | 0.00359\*\* |   | 0.00257 |   |
|  | (1.96) |   | (1.35) |   |
| *FCF/TA* | 0.0283\*\*\* |   | 0.0134\*\* |   |
|  | (3.36) |   | (2.13) |   |
| *LC-Index* |   | 0.00461\*\*\* |   | 0.00526\*\*\* |
|  |   | (4.43) |   | (3.47) |
| *ROA* | 0.0746\*\*\* | 0.0789\*\*\* | 0.0469\*\* | 0.0437\* |
|  | (3.34) | (3.41) | (2.01) | (1.88) |
| *M/B* | 0.00138\*\*\* | 0.00206\*\*\* | 0.00322\*\*\* | 0.00402\*\*\* |
|  | (3.10) | (2.62) | (3.16) | (3.30) |
| *Cash/TA* | 0.0567\*\*\* | 0.0644\*\*\* | 0.0304\*\*\* | 0.0286\*\*\* |
|  | (5.19) | (5.84) | (3.37) | (3.36) |
| *Size* | 0.699\*\*\* | 1.392\*\* | 0.120 | 0.306 |
|  | (3.58) | (2.29) | (1.00) | (1.15) |
| *Debt/TA* | -0.000269\*\*\* | -0.000278\*\*\* | -0.000377\*\* | -0.00038\*\*\* |
|  | (-6.87) | (-7.09) | (-2.50) | (-2.66) |
| *Largest SH* | 0.0106\*\*\* | 0.0105\*\* | 0.0312 | 0.0265 |
|  | (2.90) | (2.54) | (1.60) | (1.64) |
| *HHI Inds.* | -0.00990 | 0.00295 | -0.00938 | -0.00676 |
|  | (-0.82) | (0.16) | (-1.02) | (-0.73) |
| *L.Div/TA* |   |   | 0.537\*\*\* | 0.599\*\*\* |
|  |   |   | (4.77) | (6.23) |
| *Constant* | 0.00669 | -0.00800 | 0 | -0.0162 |
|  | (0.65) | (-0.50) | (.) | (-1.39) |
| R-Squared | 0.523 | 0.527 |   |   |
| No. of Groups | 309 | 309 | 309 | 309 |
| N | 2578 | 2602 | 2578 | 2602 |
| p-val. AR(1) |   |   | 0.061 | 0.058 |
| p-val. AR(2) |   |   | 0.385 | 0.322 |
| P-val. Hansen stat. |  |   | 0.158 | 0.15 |
| No. Instruments |   |   | 205 | 203 |
| t statistic in parentheses. \* p< 10%, \*\*p < 5%, \*\*\*p < 1% |
| *Twostep GMM System estimator with standard error corrected using finite sample correction of* [*Windmeijer (2005)*](file:///E%3A%5CResearch%5CPaper%201%5CData_paper1%5CDiv_Ina_IJB_2017.docx#_ENREF_33)*. Dependent variable is Div/TA = Dividends related to the period to total assets. RE/TE = retained earnings to total equity; Log Age = natural logarithm of firm's age; FCF/TA = free cash flow to total assets; LC-Index = life-cycle index; ROA = return on assets; M/B = market value of equity to its book value; Size = firm market capitalization to total market capitalization; Cash/TA = cash holding to total assets; Debt/TA = long term debt to total assets; Largest SH = the percent of shares of the largest shareholder; HHI Inds.=HHI of total assets industry k. Instruments used are lagged 2 to lagged 5.*  |

**APPENDIX**

|  |
| --- |
| Table A1. Correlation matrix |
| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 1 | DDIV | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | RE/TE | 0.0044 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Age | 0.0648\* | 0.118\* | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | FCF/TA | 0.261\* | 0.293\* | 0.483\* | 1 |  |  |  |  |  |  |  |  |  |  |  |
| 5 | LC-Index | 0.138\* | 0.0873\* | 0.154\* | 0.138\* | 1 |  |  |  |  |  |  |  |  |  |  |
| 6 | ROA | -0.235\* | 0.0208 | 0.0827\* | -0.201\* | 0.139\* | 1 |  |  |  |  |  |  |  |  |  |
| 7 | M/B | 0.118\* | 0.0101 | 0.250\* | 0.139\* | 0.119\* | 0.0615\* | 1 |  |  |  |  |  |  |  |  |
| 8 | Cash/TA | 0.0637\* | 0.0464\* | 0.105\* | 0.0124 | 0.0667\* | 0.181\* | 0.0295 | 1 |  |  |  |  |  |  |  |
| 9 | Size (%) | -0.184\* | -0.0094 | -0.200\* | -0.201\* | -0.142\* | -0.0112 | -0.255\* | 0.0494\* | 1 |  |  |  |  |  |  |
| 10 | Debt/TA | 0.0598\* | 0.110\* | 0.0778\* | 0.0557\* | 0.0397\* | 0.0950\* | 0.0298 | 0.0480\* | -0.062\* | 1 |  |  |  |  |  |
| 11 | Largest SH | 0.0444\* | 0.0751\* | 0.0610\* | 0.0499\* | 0.0334 | 0.107\* | 0.0142 | 0.0230 | -0.0316 | 0.784\* | 1 |  |  |  |  |
| 12 | Corporate | 0.0608\* | 0.0805\* | 0.0440\* | 0.0142 | 0.0278 | 0.0879\* | 0.0602\* | 0.0675\* | -0.0267 | 0.673\* | 0.822\* | 1 |  |  |  |
| 13 | State | 0.0604\* | 0.0671\* | 0.126\* | 0.0131 | 0.0436\* | 0.0411\* | 0.125\* | 0.282\* | -0.090\* | 0.124\* | -0.154\* | -0.051\* | 1 |  |  |
| 14 | Insider | 0.0330 | 0.0148 | 0.0465\* | 0.0817\* | 0.0151 | 0.0085 | 0.0487\* | 0.0152 | -0.045\* | 0.0860\* | -0.038\* | -0.0155 | 0.0385\* | 1 |  |
| 15 | Individual | 0.0255 | 0.0239 | 0.0201 | 0.0115 | 0.0063 | 0.0195 | -0.0014 | -0.0041 | -0.0233 | 0.113\* | -0.0201 | -0.0065 | -0.0175 | 0.291\* | 1 |
| *DDIV = dummy variable equals one if the firm pays a dividend and zero otherwise. RE/TE = retained earnings to total equity; Age = firm's age; FCF/TA = free cash flow to total assets; LC-Index = life-cycle index; ROA = return on assets; M/B = market value of equity to its book value; Size = firm’s market capitalization to total market capitalization; Debt/TA = long term debts to total assets; Cash/TA = cash holdings to total assets; Largest SH = the percentage of shares of the largest shareholder; Corporate, State, Insider, and individual are dummy variables equal one if the controlling shareholder (ownership >50%) is institution, state, insider, and individual respectively. \*p<0.05.*  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| Table A2. Marginal effect of the industry fixed effects |  |
|  |  | Margin |
| No. | Industry | dy/dx |
| 1 | Automobiles & Components (reference dummy) | 2.819\*\*\* |
| 2 | Capital Goods | -0.423 |
| 3 | Commercial & Professional Services | -0.157 |
| 4 | Consumer Durables & Apparel | -0.757\* |
| 5 | Consumer Services | -0.851\* |
| 6 | Energy | -0.618 |
| 7 | Food & Staples Retailing | -0.708 |
| 8 | Food, Beverages & Tobacco | -0.486 |
| 9 | Health Care Equipment & Services | -1.558 |
| 10 | Household & Personal Products | 8.225\*\*\* |
| 11 | Materials | -0.909\*\* |
| 12 | Media | -0.979 |
| 13 | Pharmaceuticals, Biotechnology | -0.463 |
| 14 | Real Estate | -1.234\*\*\* |
| 15 | Retailing | -0.411 |
| 16 | Software & Services | -2.687\*\*\* |
| 17 | Technology Hardware & Equipment | -2.362\*\*\* |
| 18 | Telecommunications Services | -0.696 |
| 19 | Transportation | -0.182 |
| \* < 10%, \*\* < 5%, \*\*\* < 1% |  |
| We compute the marginal effect of industry dummies from specification 5. The reference dummy is the Automobile & Component Industry. Standard error is computed using the delta method. |