

## **INTERNET APPENDIX**

This internet appendix contains a detailed discussion of results from multinomial logit regressions and various robustness tests of the paper.

### **1. Multinomial logit regressions**

In this section, we report results from a series of multinomial logit regressions across SWFs' cross-border and domestic investments, equity and joint-venture investments, full acquisitions (equity ownership of greater than 50 percent) and partial acquisitions, and between oil funded and foreign exchange reserve funded SWFs as mentioned in Section 3. We use the specification in column (3) of Table 4 in this analysis but our results are robust to the other specifications in that table.

Table IA.1 reports results from these multinomial logit regressions. Since we discuss results from model (1) earlier in Section 3, we limit our discussion to other models in this table. Specifically, model (2) compares the target selection decisions of SWFs across cross-border and domestic investments. It shows that in cross-border investments, SWFs prefer firms with a high sensitivity to changes in currency rates, as shown by the positive and statistically significant coefficient on the currency rate sensitivity (0.109,  $t = 1.71$ ). This finding suggests that SWFs seek firms whose stock returns are positively correlated with the appreciation of the U.S. dollar, consistent with their motives to hedge against a drop in the value of the local currency. On the other hand, domestic investments are directed at firms with worse operational performance, as the coefficient on sales growth is lower in domestic investments (-0.557,  $t = -3.26$ ) and the difference in the estimates of this variable across cross-border and domestic investment equations is statistically significant at the one percent level. We analyze the distribution of domestic investments and find that more than half of

them are in 1998 and 2008, suggesting SWF capital is likely used to bail out poorly performing domestic firms during crisis periods. Finally, SWFs that tend to invest in firms located in their own countries come from those with weak investor protection laws, as shown by a negative coefficient on the rule of law (-0.871,  $t = -7.38$ ). The test of whether the coefficients on rule of law are the same across the two equations is rejected at the one percent level.

In model (3) we find that SWFs funded by oil revenues invest in firms that have a high exposure to changes in currency rates and that are located in countries with strong protection of investor rights. On the other hand, SWFs funded by foreign exchange reserves prefer firms whose stock returns are positively correlated with the depreciation of the U.S. dollar, firms with high dividend yields, and that are located in weak investor protection countries with relatively developed financial markets.<sup>1</sup> Examining the impact of the size of SWF stake (equity ownership of greater than 50 percent versus partial acquisitions) on SWFs' investment decisions in model (4), we find that a partial acquisition is more likely if the firm is large, and has poor financial performance and high leverage. On the other hand, SWFs are more likely to acquire controlling stakes in firms with intangible assets, inside ownership, and low debt and sales growth. Finally, model (5) shows that while both equity and joint-venture investments involve large firms, the former are directed at firms with low cash reserves. Overall, these results suggest that SWFs differ significantly in their investment strategies across various target and deal characteristics.

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<sup>1</sup> The positive coefficient on the ratio of the stock market capitalization to GDP, our proxy for the degree of financial market development, is partly driven by several SWFs that are funded by foreign exchange reserves, are from countries with a higher stock market capitalization to GDP ratio (and lower investor protection) than the sample average, and that tend to invest in domestic firms (e.g., Malaysia and Hong Kong). If we take out these countries, the coefficient on the ratio of the stock market capitalization to GDP is no longer significant.

**Table IA.1. Multinomial Logit Estimates of the Likelihood of Being Targeted by SWFs**

This table presents multinomial logit estimates of the likelihood of being targeted by SWFs. Dependent variable equals one for firms that receive a SWF investment in the target sample from the year of the investment on, zero otherwise. The base category is the no SWF investments sample. The sample includes the entire Worldscope data from 1981 to 2008. Variable definitions are reported in Table 3. All variables except for the crisis dummy are measured as of the year prior to the SWF investment. In parentheses are t-statistics based on standard errors adjusted for target firm clustering and heteroskedasticity. Coefficients in boldface are statistically different between the subcategories (at the ten percent level or below). All regressions control for year, industry, and target country fixed effects whose coefficient estimates are suppressed. \*\*\* indicates significance at the 1% level, \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

| Variables               | (1)                          |                              | (2)                           |                              | (3)                        |                             | (4)                            |                               | (5)                         |                              |
|-------------------------|------------------------------|------------------------------|-------------------------------|------------------------------|----------------------------|-----------------------------|--------------------------------|-------------------------------|-----------------------------|------------------------------|
|                         | Transparent<br>(n=1,201)     | Opaque<br>(n=704)            | Cross-<br>border<br>(n=1,483) | Domestic<br>(n=688)          | Oil<br>revenues<br>(n=549) | FX<br>reserves<br>(n=1,230) | Controlling<br>stake<br>(n=89) | Partial<br>stake<br>(n=2,082) | Equity<br>(n=2,060)         | Joint-<br>venture<br>(n=111) |
| Stock returns           | <b>-0.006***</b><br>(-6.689) | <b>-0.002***</b><br>(-5.043) | -0.003***<br>(-5.439)         | -0.005***<br>(-5.882)        | -0.006***<br>(-4.859)      | -0.003***<br>(-6.471)       | <b>-0.001</b><br>(-1.114)      | <b>-0.004***</b><br>(-7.303)  | -0.003***<br>(-7.178)       | -0.003*<br>(-1.879)          |
| Log Market Cap          | 0.955***<br>(8.515)          | 0.674***<br>(10.949)         | 0.761***<br>(12.250)          | 0.864***<br>(9.202)          | 0.744***<br>(7.902)        | 0.779***<br>(12.542)        | <b>0.268</b><br>(1.430)        | <b>0.810***</b><br>(14.987)   | <b>0.765***</b><br>(13.732) | <b>1.173***</b><br>(5.537)   |
| Leverage                | 0.051***<br>(2.735)          | 0.037***<br>(3.200)          | 0.044***<br>(4.056)           | 0.021<br>(0.952)             | 0.060***<br>(5.217)        | 0.034***<br>(2.666)         | <b>-0.135***</b><br>(-3.480)   | <b>0.046***</b><br>(4.748)    | 0.041***<br>(4.019)         | 0.031<br>(0.935)             |
| Cash Assets Ratio       | <b>-4.379***</b><br>(-2.739) | <b>0.186</b><br>(0.244)      | -1.069*<br>(-1.817)           | -2.114**<br>(-2.010)         | -0.707<br>(-0.451)         | -1.482*<br>(-1.861)         | -1.333<br>(-0.295)             | -1.438*<br>(-1.918)           | <b>-1.576*</b><br>(-1.906)  | <b>0.679</b><br>(0.697)      |
| Sales Growth            | <b>-0.491**</b><br>(-2.518)  | <b>0.032</b><br>(0.504)      | <b>0.068</b><br>(1.237)       | <b>-0.557***</b><br>(-3.257) | <b>0.028</b><br>(0.312)    | <b>-0.159**</b><br>(-1.974) | <b>-0.773***</b><br>(-5.072)   | <b>-0.063</b><br>(-0.966)     | -0.071<br>(-1.054)          | -0.333*<br>(-1.875)          |
| Intangible Assets Ratio | -2.044<br>(-1.233)           | -0.028<br>(-0.039)           | -0.183<br>(-0.268)            | -2.278<br>(-1.230)           | -0.146<br>(-0.142)         | -0.500<br>(-0.658)          | <b>4.277***</b><br>(3.894)     | <b>-1.062</b><br>(-1.591)     | -0.625<br>(-0.919)          | -1.046<br>(-0.690)           |
| Dividend Yield          | 3.776<br>(1.169)             | 0.923<br>(0.337)             | 1.738<br>(0.647)              | 4.197<br>(1.488)             | <b>-4.083</b><br>(-0.981)  | <b>5.186**</b><br>(2.200)   | 7.275**<br>(2.056)             | -1.415<br>(-0.659)            | <b>-1.459</b><br>(-0.677)   | <b>13.844***</b><br>(2.848)  |

|                        |                 |                 |                |                  |                |                  |                 |                 |            |            |
|------------------------|-----------------|-----------------|----------------|------------------|----------------|------------------|-----------------|-----------------|------------|------------|
| Foreign Sales Ratio    | 0.481*          | 0.819**         | 1.037***       | 0.731**          | 0.795          | 0.814***         | -0.357          | 0.921***        | 0.850***   | 0.802      |
|                        | (1.786)         | (2.568)         | (3.102)        | (2.381)          | (1.609)        | (3.208)          | (-0.407)        | (3.574)         | (3.276)    | (0.855)    |
| Inside Ownership       | 0.390           | -0.101          | -0.063         | 0.418            | -0.413         | 0.261            | <b>1.951***</b> | <b>-0.030</b>   | 0.074      | -0.339     |
|                        | (1.029)         | (-0.382)        | (-0.191)       | (1.066)          | (-0.794)       | (0.974)          | <b>(2.804)</b>  | <b>(-0.107)</b> | (0.263)    | (-0.470)   |
| Stock Market Cap / GDP | <b>1.010***</b> | <b>0.620***</b> | 0.424***       | 1.067**          | <b>0.091</b>   | <b>0.982***</b>  | -0.051          | -0.773***       | 0.744      | 0.761      |
|                        | <b>(11.843)</b> | <b>(6.326)</b>  | (3.255)        | (2.599)          | <b>(0.320)</b> | <b>(18.335)</b>  | (-0.588)        | (-4.509)        | (1.367)    | (1.292)    |
| Rule of Law            | -0.345          | -0.471*         | <b>0.249</b>   | <b>-0.871***</b> | <b>0.878*</b>  | <b>-0.734***</b> | 0.668           | -0.172          | -0.121     | 0.392      |
|                        | (-1.336)        | (-1.700)        | <b>(0.739)</b> | <b>(-7.380)</b>  | <b>(1.906)</b> | <b>(-4.810)</b>  | (0.751)         | (-0.711)        | (-0.502)   | (1.236)    |
| Crisis dummy           | <b>0.216</b>    | <b>0.609***</b> | 0.833***       | 1.237            | 1.214***       | 0.691            | -0.030          | 0.661***        | 0.593***   | 1.278***   |
|                        | <b>(1.188)</b>  | <b>(2.637)</b>  | (4.458)        | (1.189)          | (3.834)        | (1.372)          | (-0.058)        | (3.588)         | (3.181)    | (2.776)    |
| Market sensitivity     | <b>-0.026</b>   | <b>0.305***</b> | 0.199*         | 0.008            | 0.027          | 0.290***         | 0.067           | 0.153*          | 0.135      | 0.428***   |
|                        | <b>(-0.192)</b> | <b>(2.730)</b>  | (1.911)        | (0.054)          | (0.205)        | (2.624)          | (0.250)         | (1.666)         | (1.455)    | (2.597)    |
| Oil sensitivity        | 2.342*          | 0.381           | 0.159          | 2.463*           | 0.416          | 1.090**          | -0.314          | 0.800*          | 0.706*     | 1.493      |
|                        | (1.854)         | (0.902)         | (0.322)        | (1.789)          | (0.497)        | (2.566)          | (-0.462)        | (1.851)         | (1.685)    | (0.946)    |
| Currency sensitivity   | 0.069           | -0.041          | <b>0.109*</b>  | <b>-0.345***</b> | <b>0.206*</b>  | <b>-0.220***</b> | 0.031           | -0.010          | 0.004      | -0.143     |
|                        | (1.604)         | (-0.563)        | <b>(1.717)</b> | <b>(-4.280)</b>  | <b>(1.796)</b> | <b>(-3.406)</b>  | (0.263)         | (-0.139)        | (0.052)    | (-0.811)   |
| Constant               | -13.841***      | -13.784***      | -13.344***     | -37.053***       | -38.659***     | -14.509***       | -36.252***      | -13.207***      | -12.874*** | -42.937*** |
|                        | (-10.051)       | (-13.512)       | (-12.842)      | (-27.203)        | (-28.327)      | (-15.263)        | (-23.932)       | (-14.606)       | (-14.155)  | (-20.773)  |
| Country Fixed Effects  | Yes             |                 | Yes            |                  | Yes            |                  | Yes             |                 | Yes        |            |
| Industry Fixed Effects | Yes             |                 | Yes            |                  | Yes            |                  | Yes             |                 | Yes        |            |
| Year Fixed Effects     | Yes             |                 | Yes            |                  | Yes            |                  | Yes             |                 | Yes        |            |
| Observations           | 299,625         |                 | 299,625        |                  | 299,625        |                  | 299,625         |                 | 299,625    |            |
| Pseudo R-squared       | 0.414           |                 | 0.426          |                  | 0.416          |                  | 0.406           |                 | 0.399      |            |

## 2. Additional robustness checks on the market reaction to SWF investments

In this section, we examine the sensitivity of results reported in Table 7 to alternative estimation procedures and various subsamples, and report the results in Table IA.2. In particular, the first column in this table shows that results do not change if we exclude domestic SWF investments. The coefficient on log media exposure is still positive and statistically significant (0.011,  $t = 2.06$ ). The availability of funds and the probability of financial distress continue to be highly statistically significant (0.002,  $t = 3.90$  and  $-0.145$ ,  $t = -2.32$ , respectively). The coefficient on sales growth is negative and becomes statistically significant, but this result does not hold across the various subsamples reported in this table. In the next four columns, we exclude non-equity SWF investments, confounding events such as the dissemination of earnings reports during the week surrounding the announcement of the SWF investment, firms with multiple SWF investments, and banks, respectively. In the following column, we re-run our regressions after excluding investments by Temasek Holdings, as this SWF has the greatest number of announcements in our sample. These tests show that our key results generally continue to hold, with the exception of the number of analysts following the target firm. The coefficient on *log analysts* is not statistically significant in some specifications in Table IA.2.

The final two columns report results based on alternative regression specifications using the entire sample. Specifically, column (7) replaces SWF fixed effects in the first column in Table 7 with SWF random effects and column (8) includes target country fixed effects in addition to the SWF, year, and industry fixed effects. Again, we find that our main results remain robust. We also conduct additional robustness tests that are not reported in Table IA.2. In particular, we use alternative CAR measures, such as the CAR for the (-1,

+1) and (0, +2) event windows, and alternative measures of investor protection laws, such as political instability from the World Bank's WGI database. In both cases, we continue to find our main results hold. In addition, our results largely remain similar when we limit the sample to banks, with two exceptions. First, the financial distress effect is significantly more pronounced (as measured by the coefficient size on the financial distress proxies such as the CDS premium) for banks, and the cash assets ratio is not statistically significant albeit it has the correct sign. This result is consistent with our previous findings that SWF investments are more valuable for financially distressed targets, as the recent SWF investments in banks coincided with funding difficulties in the banking industry. We also check if restrictions on foreign entry play any role in the stock price impact of SWF investments. Specifically, we create a variable with respect to the severity of legal barriers to capital flows in firms' respective countries using data from the S&P's *Global Stock Markets Factbook*, and find that restrictions on foreign entry do not appear to influence the stock market reaction (untabulated). In sum, Table IA.2 shows that our previously reported results in Table 7 remain robust when we consider alternative samples and estimation procedures.

**Table IA.2. Additional Robustness Tests on the Market Reaction to the Announcements of SWF Investments**

This table presents OLS regressions of the impact of various firm, SWF, deal, and country characteristics on the stock market reaction using alternative samples and estimation procedures. Dependent variable is the reported CAR in Table 5 for the (0, 1) event window. Variable definitions are reported in earlier tables. All time-varying variables except for deal characteristics are measured as of the year prior to the SWF investment. In parentheses are t-statistics based on standard errors adjusted for target firm clustering and heteroskedasticity. The overall R-squared value is reported for random SWF effects estimation in column (7). Regression specifications in all the columns control for year, SWF, and industry fixed effects, whose coefficient estimates are suppressed. The final column also includes target country fixed effects. \*\*\* indicates significance at the 1% level, \*\* indicates significance at the 5% level, and \* indicates significance at the 10% level.

|                                     | (1)                      | (2)                  | (3)                         | (4)                   | (5)                   | (6)                       | (7)                  | (8)                          |
|-------------------------------------|--------------------------|----------------------|-----------------------------|-----------------------|-----------------------|---------------------------|----------------------|------------------------------|
| Variable                            | Cross-border investments | Equity investments   | Non-confounding investments | First investments     | Non-Bank investments  | Temasek Holdings excluded | SWF random effects   | Target country fixed effects |
| <i>SWF Characteristics:</i>         |                          |                      |                             |                       |                       |                           |                      |                              |
| Media Exposure                      | 0.011**<br>(2.063)       | 0.012**<br>(2.184)   | 0.017***<br>(3.569)         | 0.018***<br>(3.113)   | 0.018***<br>(2.857)   | 0.021**<br>(2.220)        | 0.008**<br>(2.165)   | 0.018***<br>(3.680)          |
| <i>Target Firm Characteristics:</i> |                          |                      |                             |                       |                       |                           |                      |                              |
| Log Assets                          | -0.003<br>(-0.913)       | -0.002<br>(-0.639)   | -0.002<br>(-0.594)          | -0.002<br>(-0.634)    | 0.001<br>(0.177)      | -0.005<br>(-1.608)        | -0.0001<br>(-0.035)  | -0.003<br>(-0.740)           |
| Leverage                            | 0.002***<br>(3.906)      | 0.002***<br>(3.258)  | 0.002***<br>(3.572)         | 0.001<br>(1.118)      | 0.002*<br>(1.781)     | 0.002***<br>(3.098)       | 0.002***<br>(3.305)  | 0.002***<br>(3.267)          |
| Cash Ratio                          | -0.145**<br>(-2.318)     | -0.143**<br>(-2.122) | -0.157***<br>(-2.863)       | -0.165***<br>(-2.901) | -0.161***<br>(-2.649) | -0.117*<br>(-1.812)       | -0.120**<br>(-2.337) | -0.158**<br>(-2.287)         |
| Sales Growth                        | -0.008*<br>(-1.675)      | -0.014**<br>(-2.008) | -0.006<br>(-1.330)          | -0.006<br>(-1.060)    | -0.007<br>(-1.089)    | -0.005<br>(-1.074)        | -0.006<br>(-1.561)   | -0.007<br>(-1.372)           |
| ROA                                 | 0.041<br>(0.716)         | 0.026<br>(0.399)     | 0.043<br>(0.808)            | 0.054<br>(0.947)      | 0.062<br>(1.000)      | -0.024<br>(-0.305)        | 0.043<br>(0.983)     | 0.031<br>(0.509)             |
| Intangible Assets Ratio             | 0.008<br>(0.218)         | 0.024<br>(0.638)     | 0.018<br>(0.522)            | 0.029<br>(0.870)      | 0.015<br>(0.379)      | -0.003<br>(-0.099)        | 0.027<br>(0.845)     | 0.016<br>(0.367)             |
| Log Analyst                         | -0.003                   | -0.005               | -0.007**                    | -0.004                | -0.009**              | -0.0003                   | -0.006**             | -0.012***                    |

|  |          |          |          |          |          |          |          |          |
|--|----------|----------|----------|----------|----------|----------|----------|----------|
|  | (-0.826) | (-1.347) | (-2.102) | (-1.017) | (-2.061) | (-0.077) | (-1.962) | (-2.702) |
| Institutional Ownership                        | 0.025    | 0.010    | 0.014    | 0.011    | 0.013    | 0.011    | 0.014    | 0.017    |
|  | (1.590)  | (0.815)  | (1.114)  | (0.798)  | (0.859)  | (0.787)  | (1.237)  | (1.219)  |
| Inside Ownership                               | 0.003    | 0.004    | -0.004   | -0.001   | -0.010   | -0.008   | 0.004    | -0.012   |
|  | (0.164)  | (0.257)  | (-0.287) | (-0.067) | (-0.582) | (-0.492) | (0.356)  | (-0.820) |
| <b><i>Deal Characteristics:</i></b>            |          |          |          |          |          |          |          |          |
| Stake  | 0.068**  | 0.077*** | 0.078*** | 0.084*** | 0.069**  | 0.013    | 0.064*** | 0.074*** |
|  | (2.140)  | (2.987)  | (2.992)  | (2.972)  | (2.525)  | (0.600)  | (4.210)  | (2.781)  |
| Domestic                                       | -        | 0.006    | 0.004    | -0.016   | 0.009    | -0.014   | 0.005    | -0.013   |
|  |          | (0.409)  | (0.338)  | (-0.933) | (0.550)  | (-0.773) | (0.559)  | (-0.698) |
| Equity   | -0.009   | -        | -0.005   | -0.0004  | 0.003    | -0.006   | 0.006    | -0.002   |
|  | (-0.659) |          | (-0.437) | (-0.032) | (0.272)  | (-0.371) | (0.522)  | (-0.150) |
| <b><i>SWF and Target Country Controls:</i></b> |          |          |          |          |          |          |          |          |
| Log SWF Age                                    | 0.004    | -0.008   | -0.026   | -0.027   | -0.019   | 0.003    | -0.001   | -0.027   |
|  | (0.145)  | (-0.283) | (-1.124) | (-0.927) | (-0.614) | (0.112)  | (-0.180) | (-1.087) |
| Stock Market Cap / GDP                         | 0.001    | -0.002   | 0.001    | 0.002    | 0.001    | -0.002   | -0.001   | 0.019    |
|  | (0.273)  | (-0.340) | (0.127)  | (0.338)  | (0.108)  | (-0.362) | (-0.274) | (0.886)  |
| Rule of Law                                    | 0.004    | 0.012*   | 0.010    | 0.009    | 0.012    | 0.009    | 0.009*   | 0.009    |
|  | (0.607)  | (1.690)  | (1.568)  | (1.302)  | (1.415)  | (1.340)  | (1.731)  | (0.127)  |
| Constant                                       | -0.003   | 0.017    | 0.110    | 0.124    | -0.036   | -0.026   | 0.0001   | 0.056    |
|  | (0.022)  | (0.133)  | (1.163)  | (1.143)  | (-0.345) | (-0.210) | (0.0001) | (0.358)  |
| Target Country Fixed Effects                   | No       | Yes      |
| SWF Fixed Effects                              | Yes      | Yes      | Yes      | Yes      | Yes      | Yes      | No       | Yes      |
| Industry Fixed Effects                         | Yes      |
| Year Fixed Effects                             | Yes      |
| Observations                                   | 265      | 319      | 343      | 279      | 269      | 249      | 358      | 358      |
| R-squared                                      | 0.484    | 0.495    | 0.477    | 0.519    | 0.519    | 0.502    | 0.393    | 0.557    |