Appendix to
"The Investment Strategies of Sovereign Wealth Funds"
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As our first step in compiling the data on sovereign wealth funds, we created a preliminary sample by combining the profiles of the funds published by J.P.Morgan (Fernandez and Eschweiler 2008) and Preqin (Friedman 2008). In the cases where the two databases use different names for the same sovereign wealth fund, we employ the fund address and related information to eliminate duplicates. We add five funds to the sample that were not included in these two compilations but are frequently described as sovereign wealth funds in at least one of the investment datasets noted below. This initial search yields a population of 69 institutions, including some sovereign wealth funds that have been announced but are not yet active.

We then merge this initial sample of funds with the available data on characteristics of such funds and on their direct investments (and the investments of subsidiaries in which the fund has at least a 50 percent ownership stake). To extract transactions involving subsidiaries of sovereign wealth fund, we supplement our list of subsidiaries by employing ownership data in the *Directory of Corporate Affiliations* and Bureau van Dijk's Orbis.

Second, we track the investments of sovereign wealth funds. We sought such information in Dealogic's M&A Analytics, SDC's Platinum M&A, and Bureau van Dijk's Zephyr. Transactions included in the database encompass outright acquisitions, venture capital and private equity investments, and structured minority purchases in public entities (frequently called PIPEs, or "private investments in public entities"). The databases do not include investments into

hedge, mutual or private equity funds, or open market purchases of minority stakes in publicly traded firms. The 29 funds included in the sample are:

Name	Country
Abu Dhabi Investment Authority (ADIA)	United Arab Emirates
Alaska Permanent Reserve Fund	United States
Brunei Investment Authority	Brunei
China Investment Corporation (CIC)	China
Dubai Holding	United Arab Emirates
Dubai International Capital	United Arab Emirates
Dubai International Financial Centre	United Arab Emirates
Dubai World	United Arab Emirates
Future Fund	Australia
Government of Singapore Investment Corporation (GIC)	Singapore
Hong Kong Exchange Fund	Hong Kong
Investment Corporation of Dubai	United Arab Emirates
Istithmar World	United Arab Emirates
Khazanah Nasional BHD	Malaysia
Kingdom Holding Company (KHC)	Saudi Arabia
Korea Investment Corporation (KIC)	South Korea
Kuwait Investment Authority (KIA)	Kuwait
Mineral Resources Dvlp Co Pty	Papua New Guinea
Mubadala	United Arab Emirates
NSW Local Govt Superannuation	Australia
New Zealand Superannuation Fund	New Zealand
Palestine Investment Fund	Palestine
Public Investment Fund (PIF)	Saudi Arabia
Qatar Investment Authority (QIA)	Qatar
Queensland Investment Corporation (QIC)	Australia
Saudi Arabia Monetary Authority (SAMA)	Saudi Arabia
Social and Economic Stabilization Fund (SESF)	Chile
Temasek	Singapore
Victorian Funds Management Corporation (VFMC)	Australia

In the bulk of the analyses, we also exclude 36 transactions where the targets were in Central America, South America, or Africa. This decision reflects our desire to focus on investments in

the major markets—Asian, Middle Eastern, and Western countries (North America, Europe, and Australia)—where the vast majority of the investments are concentrated.

Finally, we seek to characterize the pricing and subsequent returns in the industry and the country of the transaction. Ideally, we would have calculated the returns from these funds, but sovereign funds typically do not typically disclose their returns from individual investments or particular asset classes (even disclosure about returns from the fund as a whole can be problematic). Failing that, we would have liked to analyze deal pricing using the actual target firm's price/earnings ratio. However, since most investments of sovereign wealth funds are in private firms, these data are not available. We thus need to use the changes in prices in comparable public companies. While these may not be exactly comparable, a substantial body of literature on private equity returns has suggested a high degree of correlation between public and private equity returns (e.g., Kaplan and Schoar, 2005, Phalippou and Gottschalg, 2009).

The performance data we use are the weighted average of the price/earnings ratios of firms in the target company's industry and nation (determined by company headquarters). To calculate the price/earnings ratios for the target countries, we use the price/earnings ratios of public companies in the same industry and country from the Datastream database, dropping companies with negative price/earnings ratios. The main challenge was to get price/earnings ratios for Middle Eastern targets, particularly in the Persian Gulf region. In 73 transactions, we could not compute a price/earnings ratio using the Datastream information. Weighted average price/earnings ratios were formed for each target investment at the country-industry-year level (using market values of the firms as weights). We use a broader definition than the two-digit Standard Industrial Classification level, because under this classification the number of companies per industry is very small in some target countries.

The distribution of price/earnings values was winsorized at the 5 percent and 95 percent level to reduce the impact of extreme observations. Most of the affected transactions are concentrated in the Asian region. The estimators are more robust when we winsorize the extreme observations rather than trimming the sample (and thus disproportionately removing Asian region deals). Nevertheless, the results remain unchanged when we take the latter strategy and exclude outliers.

We also construct an approximate performance measure for each deal: the change in the weighted average industry-country price/earnings ratio in the year following the transaction. To measure the price earnings levels in the home nation versus outside the nation, we also construct *Home P/E* and *Outside P/E* variables using the MSCI database (downloaded from Datastream). These ratios are weighted by market capitalization and measured at the country-year level. For investments made abroad, the variables *Home P/E* and *Outside P/E* correspond to the price/earnings level of the home country of the sovereign wealth fund and the target country, respectively. If investments are made at home, the *Outside P/E* variable equals the weighted average (by the total amount invested by sovereign wealth funds over the sample period) price/earnings ratios of all countries in which investments were made by sovereign wealth funds, excluding the home country. We complete missing country-level price/earnings ratios using the Zawya database and Datastream's price/earnings indexes for emerging markets.

Additional References

Kaplan, Stephen N., and Antoinette Schoar, 2005, Private equity performance: Returns, persistence, and capital flows, *Journal of Finance* 60, 1791–1823.

Phalippou, Ludovic, and Oliver Gottschalg, 2009, The performance of private equity funds, Review of Financial Studies 22, 1747-1776.