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ON THE DETERMINANTS OF
SOVEREIGN WEALTH FUNDS' INVESTMENTS:
ARE ARAB SWFS DIFFERENT?

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Abstract

The present study investigates the determinants of Arab sovereign wealth funds' (SWFs) investment decisions. Using a sample of 223 listed firms targeted by SWFs over the 2000-2014 period (among which 73 are targeted by SWFs owned by Arab countries), we find that, in comparison to non-Arab SWFs, Arab SWFs prefer larger firms operating in strategic industries based in countries with higher levels of economic and capital market development, political stability, a significant degree of confidence in rules and a low degree of corruption. Moreover, Arab SWFs do not seem to have a tendency to invest in firms with higher liquidity, profitability, growth or dividend payout. We also find that Arab SWFs concentrate their investments more in their former colonizers' countries compared to non-Arab SWFs. Taken together, results based on the sample suggest that Arab SWFs' acquisitions may not be solely motivated by purely financial considerations.

ملخص

تبحث هذه الدراسة في محددات قرارات الاستثمار في صناديق الثروة السيادية العربية. وباستخدام عينة من ٢٢٣ شركة مدرجة استهدفتها صناديق الثروة السيادية خلال الفترة ٢٠٠٠-٢٠١٤ (من بينها ٧٣ مستهدفة من صناديق الثروة السيادية المملوكة للبلدان العربية)، نجد أنه بالمقارنة مع صناديق الثروة السيادية غير العربية، فإن صناديق الثروة السيادية العربية تفضل الشركات الكبرى العاملة في مجال الصناعات الاستراتيجية القائمة في البلدان ذات المستويات الأعلى من تطوير الأسواق الاقتصادية والرأسمالية، والاستقرار السياسي، ودرجة كبيرة من الثقة في القواعد وانخفاض درجة الفساد. علاوة على ذلك، لا يبدو أن صناديق الثروة السيادية العربية لديها ميل للاستثمار في الشركات ذات السيولة العالية أو الربحية أو النمو أو توزيع الأرباح. كما نجد أن صناديق الثروة السيادية العربية تركز استثماراتها بشكل أكبر في بلدان المستعمرين السابقين مقارنة مع صناديق الثروة السيادية غير العربية. باختصار، تشير النتائج المستندة إلى العينة إلى أن عمليات الاستحواذ على صناديق الثروة السيادية العربية قد لا تكون مدفوعة فقط باعتبارات مالية بحتة.

1. Introduction

Sovereign Wealth Funds (SWFs) control more than $ 7 trillion with an acceleration in their growth in the recent decades until lately.**1** They can be defined as pools of capital often derived from natural resource or trade earnings (Balding, 2012). Recently, they have shifted their investments from traditional reserve currencies (e.g. dollar, yen) to emerging currencies and stocks (public equities, private firms as well as real estate investments). There have been questions as to the drivers of their investment decisions (Megginson et al. 2013; Boubakri et al. 2016).

SWFs are not sensitive only to risk-return considerations like other traditional (or market focused) institutional Investors. One major distinctive feature is their long-term investment horizon as they have no short term liabilities; they maximize their risk adjusted returns and diversify their portfolios across asset classes, industries and geographies. However, unlike other IIs, SWFs are state owned funds. Accordingly, they may respond also to sovereign considerations and invest in strategic industries to serve home state development objectives, influence the domestic development path or diversify the sources of revenues for their national economies. In particular, they are assumed to serve some main goals: (i) intergenerational transfers: they accumulate resources for transfer to future generations, (ii) domestic economic development: they are a means to diversify the domestic economy and improve human capital; (iii) stabilization: soften boom and bust of commodity dependent economies; smooth out economic downturns and accumulate resources otherwise, (iv) liquidity management: their long term horizon may affect their demand for liquidity.

The investment and development objectives are expected to have different portfolio allocation implications and a rich ongoing financial literature tests the validity of the two hypotheses (Dyck and Morse, 2011; Knill et, 2012; Megginson and You, 2013; and Boubakri et al., 2016). Previous work on the motives behind sovereign wealth funds deals was subject to empirical investigation and showed that, in some cases, politics do interfere (Knill et al., 2012a; Truman, 2009), but in most cases, sovereign wealth funds transactions are dealt with as rational institutional investors (Balding, 2012; Bernstein et al., 2013). It has also been shown that, compared to other institutional investors, sovereign wealth funds are more likely to target firms operating in strategic sectors (Boubakri et al, 2016).

The question on whether Arab-based sovereign wealth funds are more likely to have such a preference among their non-Arab peers remains an empirical issue that has not yet been addressed. However, some recent media reports have stated that development objectives can be more pronounced for Arab SWFs than for other funds. Moreover, some research studies suggest that Arab-SWFs are less transparent and more difficult to disentangle from the local economy than other funds (Avendano and Santiso, 2009; Blading, 2012); they may target more development objectives than non-Arab SWF and invest more in strategic industries. By strategic industries we mean industries that may lead global development or key industries whose development may be hindered by perceived market failure or that may contribute to skills acquisition, diversification of the Arab SWFs own country's sources of revenues or to increase their political influence on the world economy.

This study investigates determinants of Arab SWFs' investment decisions. We base our analysis on a sample of 223 listed firms targeted by SWFs over the 2000–2014 period, among which 33% are targeted by SWFs owned by Arab countries. We provide evidence that Arab SWFs have higher preference for larger firms in comparison to other non—Arab SWFs. Moreover, targets operating in perceived strategic industries such as financial sector, mining,

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1 $ 7.4 trillion as of March 2016 according to the SWF Institute.

telecommunication, or utilities appear more likely to attract Arab SWF's interests than firms in other industries. This result suggests that Arab governments may prod their SWFs to invest in strategically important industries to mitigate risk and diversify sources of future incomes of their home countries, to acquire strategic interests or probably influence in host countries. This interpretation is supported by the insignificance of the impact on investment decisions of firm—related variables measuring target's liquidity, profitability, growth or dividend payout. Accordingly, Arab SWFs' acquisitions may not be only driven by a focus on short term financial gains or purely commercial considerations.

Additional results show that target countries with higher levels of economic and capital market development, high political stability, significant degree of confidence in rules and low degree of corruption are more attractive for Arab SWFs in comparison to non-Arab SWFs. This suggests that in the tradeoff, Arab SWFs may put significantly more weight on risk mitigation than on returns. Our results also suggest that Arab SWFs concentrate their investments more in their former colonizers' countries compared to non-Arab SWFs. Thus, it seems that our findings support the view that some nonfinancial considerations may have significant weight in Arab SWFs' investments' decisions.

The remainder of the paper is organized as follows. Section 2 presents the data and introduces the research design. Section 3 discusses empirical findings. Concluding remarks are summarized in Section 4.

2. Data and research design
This section presents the sample selection criteria, the variables included in the empirical analysis and descriptive characteristics of the sample.

2.1. Sample selection and data sources
The initial sample considered contains all sovereign wealth funds' successful acquisitions of publicly traded firms over the period 2000–2014. Details of these transactions are obtained from three sources namely, Thomson Reuters SDC Platinum Global Database, Bureau Van Dyck Zephyr Database of Global Mergers& Acquisitions, and the sovereign wealth fund (SWF) Institute website (www.swfinstitute.org). Target companies financial data (in US dollars) are retrieved from the Worldscope database and country macro–economic data are gathered from the World Bank. Data at the country level are obtained from the World Bank website (databank.worldbank.org/data/). Data on the enforcement of insider trading laws and the establishment of the host countries' main exchanges are retrieved from Bhattacharya and Daouk (2002). We discard all deals for which the needed financial data of the target party are missing. The final sample includes 223 firms targeted by SWFs over the 2000–2014 period, among which 73 (33%) are targeted by SWFs owned by Arab countries namely, Bahrain (1), Libya (5), Qatar (36), Saudi Arabia (4), and United Arab Emirates (UAE) (27).

2.2. Variable definitions
A Probit model is used to investigate the determinants of Arab SWFs' decisions to invest in publicly traded firms. A right hand side variable is *Arab_SWF*, a dummy variable set to one if the firm is targeted by a SWF owned by an Arab country, and zero otherwise.[2] The model also contains a set of the independent variables presented below and shown in previous studies to affect SWFs investment decisions.[3]

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[2] The results are robust to using logit, instead of probit, regressions. Results are available upon request.

[3] Continuous firm—level variables are winsorized at the 1st and 99th percentiles.

2.2.1. Target—level variables

Following previous studies (e.g., Boubakeri et al., 2016 and references therein), we use the following firm—level independent variables to assess the likelihood of being acquired by an Arab SWF: (i) Size is the natural logarithm of market capitalization, (ii) Liquidity_Ratio is the ratio of current assets to current liability, (iii) Dividend_Payout_Ratio equals to dividend Payout per Share, (iv) ROA is computed as the ratio of earnings before interest and taxes (EBIT) to the book value of assets, (v) Asset_Growth is defined as the percentage change in total assets from year (t–1) to t, and (vi) Percentage_Shares_Acquired equals to the percentage of shares acquired by the SWF in the acquisition, and (vii) Strategic_Industry, which is a dummy that equals one if the target operates in a strategic industry as defined by Fama and French (1997) such as the financial sector, mining, telecommunication and utilities, and zero otherwise.

2.2.2. Country—specific variables

To proxy for the level of attractiveness, openness and economic development of the host countries, we use the variables (i) GDP_Growth defined as the growth rate of gross domestic product (GDP), (ii) LN(GDP_PC) is the natural logarithm of the GDP per capita, (iii) Trade_%GDP is the sum of the host country's exports and imports of goods and services, expressed as a percentage of GDP. Moreover, we include in our model two proxies for capital market development namely, (iv) Market_Cap_%GDP, that is stock market capitalization as a share of the host country's GDP and (v) Est_Main_Exchange which is the difference between the year of the acquisition and the year of the establishment of the host country's main exchange (Bhattacharya and Daouk, 2002). Est_Main_Exchange is also an indicator for the degree of the target's country capital market development. Moreover, we control for the level of investor protection by including the variable Enforcement_IT_Law that equals the difference between the year of the acquisition and that of the first insider trading enforcement case of the host country (Bhattacharya and Daouk, 2002). This variable is set to zero if there has been no insider trading enforcement case.

Finally, we also control for the host country institutional framework. We consider different control variables: (i) *Voice_and_Accountability,* (ii) *Political_Stability_No_Violence,* (iii) *Government_Effectivenes, (iv) Regulatory_Quality,* (v) *Rule_of_Law* and (vi) *Control_of_Corruption*. These control variables are *w*orldwide Governance Indicators constructed by Kaufmann et al. (2010). These indicators capture different dimensions of governance for each target's country. Each indicator ranges from —2.5 (weak governance performance) to 2.5 (strong governance performance). These indicators capture perceptions of (i) the extent to which the residents can select their government and enjoy freedom of expression and association as well as free media (*Voice_and_Accountability*), (ii) the likelihood of exposure to political instability, to terrorism or any other forms of politically motivated violence (*Political_Stability_No_Violence*), (iii) the quality of public and civil services and of the policy formulation and implementation, the independence of the civil service from political pressures, the quality of the government's policy formulation and implementation, and the credibility of its commitment to such policies (*Government_Effectivenes*), (iv) the government's capability to pursue policies and regulations that permit private sector development (*Regulatory_Quality*), (v) the degree of confidence agents have in rules of society and their adherence to these rules (*Rule_of_Law*), and (vi) the extent to which the public power is used by elites and private interests for private gains (*Control_of_Corruption*).

2.3. Descriptive statistics

Table 1 reports the distribution of SWF assets across years (Panel A) and regions (Panel B) over the 1998–2015 period. Panel A shows a sharp increase in total SWF size over the last decade. The same pattern is also manifested for the Gulf SWF size. These patterns can be justified by the substantial rise in hydrocarbon prices between the end of 2005 and end of 2014 that has resulted in large trade surpluses of oil– and gas–rich countries, especially those of the Gulf (Bahrain, Oman, Qatar, Saudi Arabia, and UAE) and Libya (Megginson and Fotak, 2015). However, the last column of Panel A shows a steady decrease in the percentage share of Gulf SWF assets in total SWF assets over the period 2002–2009, which can be explained by the parallel rise of other non—Arab SWFs as major forces in global finance, such as the Norwegian and Chinese SWFs. This decrease has become less pronounced from 2010 onwards. Panel B presents the breakdown of the distribution of SWF market size by region. It shows a concentration of SWFs in the Middle East (42.17%) and Asia (36.99%), reflecting the importance of SWFs sponsored by oil– and gas–rich countries, especially the Gulf countries and those established in other Asian countries such as China or Singapore.

Table 2 presents the ranking of SWFs based on their assets under management (AUM) as updated in April 2016. Fourteen SWFs have portfolios of more than $ 100 billion, half of them are owned by Arab countries (Kuwait, Qatar, Saudi Arabia, and UAE (Dubai and Abu Dhabi)). The table also indicates that Norway, UAE and China own the three largest SWFs in the world (Government Pension Fund – Global (Norway), Abu Dhabi Investment Authority (UAE) and China Investment Corporation (China)), with total assets under management (AUM) of $2385.3 billion, representing almost 33% of the global SWF portfolio. Moreover, 42 out of the 79 SWFs presented in Table 2 were created after 2004, which explains in part the sharp increase in total SWF size observed over the period 2005–2015 in Table 1. Table 2 also clearly shows that most of the largest SWFs are established in countries that are rich in oil and gas (last column of Table 2). Fig. 1 confirms these findings. It shows that all Arab SWFs are funded from oil and gas exports, especially in the Gulf region and North Africa.

Table 3 displays the distribution of deals across host and acquirer countries in the SWF data sample used. Singapore, Qatar and UAE have the most active SWFs in terms of deal number with 82, 36 and 27 acquisitions, respectively. The total number of deals undertaken by Arab SWFs is 73, representing almost 33% of the number of observations in the sample. Moreover, the United Kingdom has the largest share of SWFs' targets in the sample (13%), followed by china (12.55%). However, only 18, out of 223 deals, have been undertaken to acquire firms in Arab countries.

Table 4 shows the breakdown of the sample deals by year (Panel A) and industry (Panel B). Panel A reveals two different patterns throughout the study period. First, a slight increase in the number of SWFs' deals is observed over the 2000—2006 period. The number of deals over this period represents 13% of the sample size. Second, a steep increase in the number of deals is shown during and after the financial crisis of 2007–2009, reaching two peaks in 2008 and 2012 (40 deals). During the financial crisis, SWF may have taken advantage of the depreciated valuation of certain companies such as financial institutions and their need for emergency financing to intervene in the sector: Barclays and Citi are examples that come to mind. Panel B of Table 4 indicates that SWFs tend to invest in publicly traded firms that operate in strategic industries, such as the financial sector (25.56% of the total number of deals), mining (13.90%) and transportation, communications, and utilities (13.00%).

3. Results

In what follows, we present the empirical findings on the determinants of Arab SWFs' investments. We also present a set of robustness checks.

3.1. Empirical evidence on the determinants of Arab SWFs' investments

Table 5 presents initial insights on the determinants of Arab SWFs' investment decisions by comparing different target—level and country—specific characteristics after splitting the sample according to whether the acquirer is an Arab or non—Arab SWF. The results clearly indicate that larger firms are more likely to be acquired by an Arab SWF. For instance, Table 5 shows that the mean (median) target size, measured by the natural logarithm of market capitalization, is 14.38 (14.55) when the acquirer is a non—Arab SWF, but increases to about 15.60 (15.80) when the acquirer is owned by an Arab country, with a mean (median) difference that is significant at the 1% level.

The results also show that firms operating in strategic sectors (e.g. banks, utilities, mining, transportation) are more likely to be acquired by an Arab SWF, since the mean (median) of the variable *Strategic_Industry* is 0.71 (1.00) when the acquirer is sponsored by an Arab country, but only 0.43 (0.00) when the acquirer is a non—Arab SWF, with a significant mean (median) difference at the 1% level.[4] Interestingly, Table 5 reveals also that the levels of host country economic and capital market development —as proxied by the natural logarithm of the GDP per capita and the number of years since the establishment of the main exchange — seem to be important determinants of Arab SWFs' acquisitions. Particularly, the table indicates that Arab SWFs are more likely to invest in more developed countries (with significantly higher GDP per capita) and in those with more developed capital markets. Another important result is that Arab SWF concentrate their investments more in their former colonizers' countries (26%) compared to non—Arab SWF (8%).

The results of the probit regressions are displayed in Table 6. Below the coefficients, Wald z—statistics are in parentheses followed by the marginal effects in brackets. We consider five specifications. The first one is a baseline regression that includes, as independent variables, *Size*, *Liquidity_Ratio*, *Dividend_Payout_Ratio*, *ROA*, *Asset_Growth*, and *Percentage_Shares_Acquired* (Column (1) of Table 6). The probit results reveal that the coefficient of *Size* is positive and statistically significant at the 1% level. This result implies that Arab SWFs prefer larger firms compared to non—Arab SWFs. Moreover, the marginal effect of this variable shows that an increase of one unit in the firm's size raises the estimated likelihood of being acquired by an Arab SWF by almost 8%, holding the other independent variables constant at their mean values.[5]

In a second specification (Column (2) of Table 6), we add the variable *Strategic_Industry* as regressor. To avoid multicollinearity, we do not include the variable *Size* in this specification. We find that *Strategic_Industry* enters the probit regression with a positive and strongly significant sign (at the 1% level), indicating that Arab SWFs are more inclined to target strategic sectors than non—Arab SWFs. The marginal effect of *Strategic_Industry* indicates that being in a strategic sector increases the target's probability of being acquired by an Arab SWF by more than 24%, *ceteris paribus*.

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[4] In an unreported table (available upon request), we provide pairwise correlations between the variables used in our analysis. The correlations between the independent variables that we include in our regressions are very weak, except those between (i) *Est_Main_Exchange* and *GDP_Growth*, (ii) *Est_Main_Exchange* and *LN(GDP_PC)*, (iii) *Trade_%GDP* and *Market_Cap_%GDP*, and (iii) *Strategic_Industry* and *Size*. For these pairs, the correlation coefficients are higher than 0.5.

[5] We tested for possible misspecification due to potential nonlinear effects by including one-by-one the square of all continuous variables. The results remain qualitatively the same.

This finding may reflect the willingness of some Arab governments to force their SWFs to invest strategically as a way of pursuing financial or non-commercial objectives or accessing foreign technology (Chhaochharia and Laeven, 2009; Cohen, 2009; Knill et al., 2012; Boubakri et al., 2016). This result may also reflect a diversification strategy by Arab SWFs in an effort to stabilize their revenues by reducing their dependency on one underlying commodity (Truman, 2008; Megginson et al., 2013).[6] Arab SWFs seem aiming to diversify future incomes of their home countries, seeking industries that are the mainstay of any economy. While finance and mining may be cyclical and offensive, utilities and some transport may be defensive, combined they mitigate the impact of cyclical downturns. Thus, it seems that in the risk-return tradeoff, Arab SWFs may put significantly more weight on risk mitigation than on returns. Moreover, the coefficients of the other independent variables fall short of statistical significance, which implies that a target's liquidity, profitability, growth or dividend payout are not important determinants of the likelihood of its acquisition by an Arab SWF. This finding would confirm the premise that Arab SWFs' acquisitions are driven by considerations other than financial gains or commercial business objectives.

Next, we consider a third specification in which we add three macro—economic variables that proxy for the host countries' levels of economic characteristics, namely *GDP_Growth*, *LN(GDP_PC)*, and *Trade_%GDP* (Column (3) of Table 6). The coefficients of *GDP_Growth* and *LN(GDP_PC)* are positive and strongly significant at the 1% level. These results suggest that SWFs owned by Arab countries tend to concentrate their acquisitions specifically in countries with better growth performance and higher income per capita compared to non—Arab SWFs. The variable *Trade_%GDP*, however, is not statistically significant, implying that the openness of the target's economy does not seem to be an important determinant of Arab SWFs' investment decisions.

In Column (4), we add to our baseline specification two measures of capital market development, *Market_Cap_%GDP* and *Est_Main_Exchange*. The results show that only *Est_Main_Exchange* is positively and significantly (at the 1% level) related to the likelihood of being targeted by an SWF owned by an Arab country. This result indicates that Arab SWFs tend to target firms in countries with more established (but not necessarily larger) capital markets. Furthermore, in Column (5), we replace the two measures of capital market development by a proxy for investor protection, *Enforcement_IT_Law*. We find that this variable also falls short of being statistically significant at conventional levels. This finding does not support the *"investment facilitation hypothesis"* described by Megginson et al. (2013), which stipulates that the investment preferences of SWFs are mainly driven by purely commercial considerations, leading them to prefer target countries with better investor protection.

The last column (6) includes also a dummy variable, *Colonial_Ties,* that equals one if there exist colonial ties between the acquirer and the host countries and zero otherwise. The results confirm those of the univariate analysis. The coefficient of *Colonial_Ties* loads positive and statistically significant at the 5% level, suggesting that firms in former colonizers' countries are more likely to attract Arab SWFs. [7]

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[6] For instance, a recent Financial Times article notes that Qatar's SWF (Qatar Investment Authority) *"… has unveiled a new investment strategy which will see it make investments in Asia and the US as it looks to diversify its asset base, according to people familiar with the matter."* (Financial Times, *"Qatar's sovereign wealth fund looks to diversify in Asia and US. Strategy revealed after review by QIA chief",* June 18th, 2015).

[7] Another potential explanation for the investment of Arab SWFs in a given country is the existence of ongoing military and security cooperation. Since most Arab countries have military ties with former colonizers' countries as well as many other

In Table 7, we study the impact of the institutional framework in the host country on the decisions of acquirers. Formally, we include in our regressions 6 institutional indicators constructed by Kaufmann et al. (2010) to capture different dimensions of governance for each target's country. The coefficients on the variables *Political_Stability_No_Violence*, *Rule_of_Law* and *Control_of_Corruption* are positive and significant at the 10% level. Thus, it seems that SWFs owned by Arab countries tend to concentrate their acquisitions specifically in countries with political stability, significant degree of confidence in rules and low degree of corruption. However, the coefficients on the variables *Voice_and_Accountability*, *Government_Effectivenes* and *Regulatory_Quality* are not statistically significant suggesting that democracy and freedom of expression and association, the quality of public and civil services and the quality of the government's policy formulation and implementation as well as the government's capability to pursue policies and regulations that permit private sector development do not seem to be an important determinant of Arab SWFs' investment decisions.

All in all, the results of Tables 6 and 7 are largely consistent with the view that SWFs owned by Arab countries tend to target strategic acquisitions for purposes other than pure short-term financial returns. [8]

3.2. Sensitivity tests

In this section, we check the sensitivity of our main findings to robustness tests. First, targets in the manufacturing and financial sectors dominate our sample. Firms operating in each of these two sectors represent more than 25% of the total number of observations. Therefore, it is important to check whether our findings are due to the disproportionately large representation of these two sectors. Table 8 presents the results from re-estimating specifications of Table 6 after excluding firms operating in the manufacturing (Columns (1)–(4)) and financial (Columns (5)–(8)) industries from the sample. For the sake of brevity, we do not rerun the baseline regression of Table 6.

The first four columns of table 8 reveal that the estimated coefficients on *Size*, *Strategic_Industry*, *GDP_Growth* and *LN(GDP_PC)* continue to be positive and statistically significant at conventional levels. However, the coefficient of *Est_Main_Exchange* is no more significant. Moreover, we continue to find that the firm's liquidity and profitability are not statistically significant, which indicates that they are not important determinants of the likelihood of being acquired by an Arab SWF. Furthermore, Columns (5)–(8) show that excluding financial targets from our sample affects the significance of the measures for the level of economic development *GDP_Growth* and *LN(GDP_PC)*. However, the signs and statistical significance of the coefficients on *Size*, *Strategic_Industry*, and *Est_Main_Exchange* remain qualitatively unchanged. These results lend additional support to our conclusion that Arab SWFs' acquisitions may not be driven by purely financial risk-return considerations.

Second, to test whether the findings are driven by SWFs' investment behavior during the subprime mortgage crisis, we eliminate deals made during the 2007–2009 period. These acquisitions represent more than 35% of the sample. During the crisis, SWFs became major players by investing billions of dollars to rescue the U.S. and the European banking system. Thus, this robustness test allows us to understand whether the investment activity of Arab and

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countries at the same time (United States, United Kingdom, France, and China), this issue may need to be investigated deeply.

[8] To check whether our results are affected by outlier observations, we winsorize all continuous variables at the first and 99th percentiles. The results remain qualitatively unchanged.

non-Arab SWFs during this period is just circumstantial or it reflects a typical fundamental behavior. The last four columns of Table 7 display the results of probit regressions and confirm previous findings on the variables *Size*, *Strategic_Industry*, and *Est_Main_Exchange*, that remain qualitatively the same. However, the coefficients of the variables *GDP_Growth* and *LN(GDP_PC)* are no more statistically significant.

Finally, we check whether the results are influenced by the predominance of Singaporean SWFs' deals (almost 37% of our sample). Therefore, we rerun Specifications (2)–(5) of Table 6 after excluding firms acquired by Singaporean SWFs. We find that excluding these deals does not qualitatively alter the main results. The latter are also robust to excluding Qatari deals (16% of the total number of acquisitions in the sample).

4. Conclusion

This study investigates the determinants of Arab SWFs' investment decisions. Using a sample of 223 listed firms targeted by SWFs over the 2000–2014 period (among which 73 are targeted by SWFs owned by Arab countries), the paper provides evidence that Arab SWFs have higher preferences for larger firms in comparison to non—Arab SWFs. Moreover, targets operating in strategic industries (such as the financial sector, mining, telecommunication, utilities) are more likely to be acquired by Arab SWFs than firms in other industries. At least from what emerges from the used sample, Arab governments may be encouraging their SWFs to put more weight in the risk-return tradeoff on risk mitigation as it may be that those Arab governments mainly look at diversifying the country's future earnings with a strategy of buy and hold robust companies where risks are relatively under control and securing some strategic resources for instance in what concerns mining. This interpretation is further supported by the insignificance of firm—related variables measuring investment targets' liquidity, profitability, growth or dividend payout, which implies that Arab SWFs' acquisitions are not driven by purely financial gains considerations.

Additional results show that firms in former colonizers' countries as well as those in countries with higher levels of economic and capital market development are more attractive for Arab SWFs in comparison to non—Arab SWFs. Moreover, it seems that SWFs owned by Arab countries tend to concentrate their acquisitions specifically in countries with political stability, significant degree of confidence in rules and low degree of corruption. Again, this would suggest that Arab SWFs are sensitive to political risks for their investments and look for investment environment more likely to protect them and mitigate risks.

Our conclusions stand up to a set of robustness checks, including the elimination of firms operating in the manufacturing and financial industries, deals made during the subprime mortgage crisis and acquisitions made by Singaporean and Qatari SWFs.

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Table 1: SWF size

Panel A: SWF size by year

Year	SWF size (bn $)	Gulf SWF size (bn $)	Percentage Gulf SWF size
1998	858	404	47.09
1999	910	416	45.71
2000	950	443	46.63
2001	1,041	499	47.93
2002	1,104	543	49.18
2003	1,322	620	46.90
2004	1,573	698	44.37
2005	1,836	823	44.83
2006	2,492	1,156	46.39
2007	3,499	1,453	41.53
2008	4,186	1,810	43.24
2009	4,632	1,884	40.67
2010	5,049	2,031	40.23
2011	5,492	2,229	40.59
2012	6,287	2,521	40.10
2013	6,995	2,767	39.56
2014	7,408	2,919	39.40
2015	7,437	2,926	39.34

Panel B: SWF market size distribution by region

Region	Distribution (%)
Middle East	42.17
Asia	36.99
Europe	13.81
Americas	3.54
Africa	2.11
Other	1.39
Total	**100**

This table reports the distribution of SWF assets across years (Panel A) and regions (Panel B) over the 1998–2015 period. These data are provided by the SWF institute and updated in April 2016.

Table 2: SWFs ranking by assets under management

Country	Fund name	Assets ($ bn)	Inception	Origin
Norway	Government Pension Fund – Global	847.6	1990	Oil
UAE – Abu Dhabi	Abu Dhabi Investment Authority	792	1976	Oil
China	China Investment Corporation	746.7	2007	Non—Commodity
Saudi Arabia	SAMA Foreign Holdings	598.4	n/a	Oil
Kuwait	Kuwait Investment Authority	592	1953	Oil
China	SAFE Investment Company	474[a]	1997	Non—Commodity
China – Hong Kong	Hong Kong Monetary Authority Investment Portfolio	442.4	1993	Non—Commodity
Singapore	Government of Singapore Investment Corporation	344	1981	Non—Commodity
Qatar	Qatar Investment Authority	256	2005	Oil & Gas
China	National Social Security Fund	236	2000	Non—Commodity
Singapore	Temasek Holdings	193.6	1974	Non—Commodity
UAE – Dubai	Investment Corporation of Dubai	183	2006	Non—Commodity
Saudi Arabia	Public Investment Fund	160	2008	Oil
UAE – Abu Dhabi	Abu Dhabi Investment Council	110	2007	Oil
Australia	Australian Future Fund	95	2006	Non—Commodity
South Korea	Korea Investment Corporation	91.8	2005	Non—Commodity
Kazakhstan	Samruk—Kazyna JSC	85.1	2008	Non—Commodity
Kazakhstan	Kazakhstan National Fund	77	2000	Oil
Russia	National Welfare Fund	73.5	2008	Oil
UAE – Abu Dhabi	International Petroleum Investment Company	66.3	1984	Oil
UAE – Abu Dhabi	Mubadala Development Company	66.3	2002	Oil
Libya	Libyan Investment Authority	66	2006	Oil
Russia	Reserve Fund	65.7	2008	Oil
Iran	National Development Fund of Iran	62	2011	Oil & Gas
US – Alaska	Alaska Permanent Fund	53.9	1976	Oil
Algeria	Revenue Regulation Fund	50	2000	Oil & Gas
Brunei	Brunei Investment Agency	40	1983	Oil
US – Texas	Texas Permanent School Fund	37.7	1854	Oil & Other
Azerbaijan	State Oil Fund	37.3	1999	Oil
Malaysia	Khazanah Nasional	34.9	1993	Non—Commodity
Oman	State General Reserve Fund	34	1980	Oil & Gas
France	Strategic Investment Fund	25.5	2008	Non—Commodity
Ireland	Ireland Strategic Investment Fund	23.5	2001	Non—Commodity
New Zealand	New Zealand Superannuation Fund	20.2	2003	Non—Commodity
US – New Mexico	New Mexico State Investment Council	19.8	1958	Oil & Gas
Canada	Alberta's Heritage Fund	17.5	1976	Oil
US – Texas	Permanent University Fund	17.2	1876	Oil & Gas
East Timor	Timor—Leste Petroleum Fund	16.9	2005	Oil & Gas
Chile	Social and Economic Stabilization Fund	15.2	2007	Copper
UAE – Federal	Emirates Investment Authority	15	2007	Oil
Russia	Russian Direct Investment Fund	13	2011	Non—Commodity
Bahrain	Mumtalakat Holding Company	11.1	2006	Non—Commodity
Peru	Fiscal Stabilization Fund	9.2	1999	Non—Commodity
Chile	Pension Reserve Fund	7.9	2006	Copper
Mexico	Oil Revenues Stabilization Fund of Mexico	6	2000	Oil
Oman	Oman Investment Fund	6	2006	Oil
Italy	Italian Strategic Fund	6	2011	Non—Commodity
Botswana	Pula Fund	5.7	1994	Diamonds & Minerals
US – Wyoming	Permanent Wyoming Mineral Trust Fund	5.6	1974	Minerals
Trinidad & Tobago	Heritage and Stabilization Fund	5.5	2000	Oil
Brazil	Sovereign Fund of Brazil	5.3	2008	Non—Commodity
China	China—Africa Development Fund	5	2007	Non—Commodity
Angola	Fundo Soberano de Angola	5	2012	Oil
US – North Dakota	North Dakota Legacy Fund	3.2	2011	Oil & Gas
US – Alabama	Alabama Trust Fund	2.5	1985	Oil & Gas
Kazakhstan	National Investment Corporation	2	2012	Oil
Nigeria – Bayelsa	Bayelsa Development and Investment Corporation	1.5	2012	Non—Commodity
Nigeria	Nigerian Sovereign Investment Authority	1.4	2012	Oil
US – Louisiana	Louisiana Education Quality Trust Fund	1.3	1986	Oil & Gas
Panama	Fondo de Ahorro de Panamá	1.2	2012	Non—Commodity
UAE – Ras Al Khaimah	RAK Investment Authority	1.2	2005	Oil

Bolivia	FINPRO	1.2	2012	Non—Commodity	
Senegal	Senegal FONSIS	1	2012	Non—Commodity	
Iraq	Development Fund for Iraq	0.9	2003	Oil	
Palestine	Palestine Investment Fund	0.8	2003	Non—Commodity	
Venezuela	FEM	0.8	1998	Oil	
Kiribati	Revenue Equalization Reserve Fund	0.6	1956	Phosphates	
Vietnam	State Capital Investment Corporation	0.5	2006	Non—Commodity	
Gabon	Gabon Sovereign Wealth Fund	0.4	1998	Oil	
Ghana	Ghana Petroleum Funds	0.45	2011	Oil	
Indonesia	Government Investment Unit	0.3	2006	Non—Commodity	
Mauritania	National Fund for Hydrocarbon Reserves	0.3	2006	Oil & Gas	
Australia	Western Australian Future Fund	0.3	2012	Minerals	
Mongolia	Fiscal Stability Fund	0.3	2011	Minerals	
Equatorial Guinea	Fund for Future Generations	0.08	2002	Oil	
Papua New Guinea	Papua New Guinea Sovereign Wealth Fund	n/a	2011	Gas	
Turkmenistan	Turkmenistan Stabilization Fund	n/a	2008	Oil & Gas	
US – West Virginia	West Virginia Future Fund	n/a	2014	Oil & Gas	
Mexico	Fondo Mexicano del Petroleo	n/a	2014	Oil & Gas	
Total Oil & Gas Related		$4,204.9			
Total Other		$3,038.9			
Total		**$7,243.8**			

This table presents the ranking of SWFs based on their assets under management as updated in April 2016. Data are provided by the SWF institute and updated in April 2016.

[a] This number is a best guess estimation.

Table 3: Distribution of SWFs deals by host and acquirer countries

Country	SWF deals by host country		SWF deals by acquirer country	
	N	Percentage	N	Percentage
Australia	8	3.59	0	0.00
Austria	4	1.79	0	0.00
Bahrain	1	0.45	1	0.45
Belgium	0	0.00	1	0.45
Brazil	2	0.90	1	0.45
China	28	12.56	12	5.38
Colombia	2	0.90	0	0.00
Egypt	3	1.35	0	0.00
France	25	11.21	20	8.97
Germany	0	0.00	2	0.90
Hong Kong	10	4.48	0	0.00
India	12	5.38	0	0.00
Indonesia	3	1.35	0	0.00
Ireland	1	0.45	1	0.45
Italy	6	2.69	0	0.00
Japan	0	0.00	1	0.45
Jordan	1	0.45	0	0.00
Kazakhstan	2	0.90	2	0.90
South Korea	12	5.38	2	0.90
Kuwait	1	0.45	0	0.00
Libya	0	0.00	5	2.24
Malaysia	9	4.04	11	4.93
Malta	1	0.45	0	0.00
Norway	0	0.00	1	0.45
Netherlands	5	2.24	0	0.00
Papua New Guinea	1	0.45	0	0.00
Philippines	1	0.45	0	0.00
Portugal	3	1.35	0	0.00
Qatar	12	5.38	36	16.14
Russian Fed	9	4.04	1	0.45
Saudi Arabia	0	0.00	4	1.79
Singapore	2	0.90	82	36.77
South Africa	3	1.35	0	0.00
Spain	6	2.69	0	0.00
Sri Lanka	1	0.45	0	0.00
Switzerland	5	2.24	1	0.45
Taiwan	1	0.45	0	0.00
United Arab Emirates	0	0.00	27	12.11
United Kingdom	29	13.00	3	1.35
Unite States	13	5.83	9	4.04
Vietnam	1	0.45	0	0.00

This table presents the distribution of our sample SWF deals across host and acquirer countries. The sample includes 223 firms targeted by SWFs over the 2000–2014 period.

Table 4: Distribution of SWFs deals by year and industry

Panel A: Distribution of deals by year

Year	N	Percentage
2000	1	0.45
2001	1	0.45
2002	2	0.90
2003	7	3.14
2004	3	1.35
2005	7	3.14
2006	8	3.59
2007	18	8.07
2008	40	17.94
2009	21	9.42
2010	25	11.21
2011	14	6.28
2012	40	17.94
2013	20	8.97
2014	16	7.17

Panel B: Distribution of deals by industry (based on 2—digit SIC codes)

Industry	N	Percentage
Agriculture, Forestry, and Fishing	2	0.90
Construction	9	4.04
Finance, Insurance, and Real Estate	57	25.56
Manufacturing	59	26.46
Mining	31	13.90
Retail Trade	9	4.04
Services	18	8.07
Transportation, communications, and utilities	29	13.00
Wholesale trade	9	4.04

This table shows the breakdown of our sample deals by year (Panel A) and industry (Panel B). The sample includes 223 firms targeted by SWFs over the 2000–2014 period.

Table 5: Univariate analysis

Variable	Mean			Median		
	Non—Arab SWF (A)	Arab SWF (B)	*t*—stat (A – B)	Non—Arab SWF (C)	Arab SWF (D)	*z*—stat (C – D)
Size	14.38	15.60	—4.93***	14.55	15.80	—4.58***
Liquidity_Ratio	1.72	1.68	0.28	1.74	1.73	0.97
Dividend_Payout_Ratio	0.72	0.81	—0.34	0.13	0.52	—4.55***
ROA	0.03	0.02	0.69	0.05	0.03	2.23**
Asset_Growth	0.37	0.17	1.98**	0.13	0.07	1.42
Percentage_Shares_Acquired	7.70	6.24	1.09	5.29	4.76	2.17**
Strategic_Industry	0.43	0.71	—4.04***	0.00	1.00	—3.91***
GDP_Growth (%)	4.12	4.30	—0.26	2.85	1.79	1.92*
LN(GDP_PC)	9.52	10.36	—4.82***	9.93	10.63	—4.77***
Trade_%GDP	94.48	78.96	1.20	56.80	62.29	—0.97
Market_Cap_%GDP	114.83	86.32	1.42	63.28	86.69	0.01
Est_Main_Exchange	113.87	184.85	—5.67***	121.00	208.50	—5.42***
Enforcement_IT_Law	26.31	31.83	—2.32**	21.00	32.00	—1.68*
Colonial_Ties	0.08	0.260	—3.749***	0.000	0.000	—3.643***

This table presents mean and median difference tests of firm- and country-level variables used in our analysis. The sample includes 223 firms targeted by SWFs over the 2000–2014 period. The variables are: *Size,* the natural logarithm of market capitalization; *Liquidity_Ratio,* the ratio of Current assets to current liability; *Dividend_Payout_Ratio,* the dividend Payout per Share; *ROA,* the ratio of earnings before interest and taxes to the book value of assets; *Asset_Growth*, the percentage change in total assets from years (t–1) to t; *Percentage_Shares_Acquire,* the percentage of shares acquired by the SWF in the acquisition; *Strategic_Industry*, a dummy that equals one if the target operates in a strategic industry, and zero otherwise; *GDP_Growth*, the growth rate of gross domestic product (GDP); *LN(GDP_PC)*, the natural logarithm of the GDP per capita; *Trade_%GDP*, the sum of the host country's exports and imports of goods and services, expressed as a percentage of GDP; *Market_Cap_%GDP*, that equals to stock market capitalization expressed as a percentage of the host country's GDP; *Est_Main_Exchange,* the difference between the year of the acquisition and the year of the establishment of the host country's main exchange (Bhattacharya and Daouk, 2002); *Enforcement_IT_Law,* the difference between the year of the acquisition and that of the first insider trading enforcement case of the host country (Bhattacharya and Daouk, 2002). This variable is set to zero if there has been no insider trading enforcement case. *Colonial_Ties* is a dummy variable that equals one if there exist colonial ties between the acquirer and the host countries. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

Table 6: Probit regressions (I)

	(1)	(2)	(3)	(4)	(5)
Size	**0.2555***		**0.2335***	**0.2440***	**0.2836***
	(4.5275)		**(3.6452)**	(3.7442)	**(4.5928)**
	[0.0904]		**[0.0780]**	[0.0772]	**[0.0919]**
Liquidity_Ratio	—0.0299	—0.0032	—0.1321	—0.1321	—0.1106
	(—0.3223)	(—0.0352)	(—1.2119)	(—1.1554)	(—1.0180)
	[—0.0106]	[—0.0011]	[—0.0452]	[—0.0418]	[—0.0358]
Dividend_Payout_Ratio	0.0604	0.0544	0.0787	0.0840	0.0665
	(1.0281)	(0.9495)	(1.2377)	(1.3103)	(1.0602)
	[0.0214]	[0.0193]	[0.0269]	[0.0266]	[0.0215]
ROA	—0.9998	—0.4147	—0.3944	—0.5175	—1.3100*
	(—1.4299)	(—0.5838)	(—0.5067)	(—0.6705)	(—1.7542)
	[—0.3538]	[—0.1473]	[—0.1351]	[—0.1638]	[—0.4245]
Asset_Growth	—0.2045	—0.2669*	—0.1839	—0.2062	—0.1869
	(—1.4056)	(—1.7933)	(—1.1541)	(—1.3044)	(—1.2243)
	[—0.0723]	[—0.0948]	[—0.0623]	[—0.0653]	[—0.0605]
Percentage_Shares_Acquired	0.0066	—0.0057	—0.0007	0.0012	0.0031
	(0.5958)	(—0.5276)	(—0.0547)	(0.0877)	(0.2500)
	[0.0023]	[—0.0020]	[—0.0002]	[0.0004]	[0.0010]
Strategic_Industry		**0.7053***			
		(3.8340)			
		[0.2450]			
GDP_Growth			**0.0610***		
			(2.6190)		
			[0.0208]		
LN(GDP_PC)			**0.4608***		
			(4.6210)		
			[0.1577]		
Trade_%GDP			—0.0009		
			(—0.8178)		
			[—0.0003]		
Market_Cap_%GDP				—0.0010	
				(—1.0494)	
				[—0.0003]	
Est_Main_Exchange				**0.0052***	
				(4.0709)	
				[0.0017]	
Enforcement_IT_Law					0.0064
					(1.0098)
					[0.0021]
Colonial_Ties					
Constant	—4.2068***	—0.7448***	—8.4580***	—4.6664***	—4.8104***
	(—4.76)	(—3.22)	(—6.18)	(—4.65)	(—5.04)
Number of observations	223	223	222	209	209
Pseudo R²	0.1028	0.0771	0.2014	0.2152	0.1453
LR Chi2	28.8144***	21.6183***	55.8774***	53.3324***	36.2202***

This table presents the results of the probit regressions. The sample includes firms targeted by SWFs over the 2000–2014 period. The dependent variable is *Arab_SWF*, a dummy that is set to one if the firm is targeted by a SWF owned by an Arab country, and zero otherwise. The independent variables are: *Size,* the natural logarithm of market capitalization; *Liquidity_Ratio,* the ratio of Current assets to current liability; *Dividend_Payout_Ratio,* the dividend Payout per Share; *ROA,* the ratio of earnings before interest and taxes to the book value of assets; *Asset_Growth*, the percentage change in total assets from years (t–1) to t; *Percentage_Shares_Acquire,* the percentage of shares acquired by the SWF in the acquisition; *Strategic_Industry*, a dummy that equals one if the target operates in a strategic industry, and zero otherwise; *GDP_Growth*, the growth rate of gross domestic product (GDP); *LN(GDP_PC)*, the natural logarithm of the GDP per capita; *Trade_%GDP*, the sum of the host country's exports and imports of goods and services, expressed as a percentage of GDP; *Market_Cap_%GDP*, that equals to stock market capitalization expressed as a percentage of the host country's GDP; *Est_Main_Exchange,* the difference between the year of the acquisition and the year of the establishment of the host country's main exchange (Bhattacharya and Daouk, 2002); *Enforcement_IT_Law,* the difference between the year of the acquisition and that of the first insider trading enforcement case of the host country (Bhattacharya and Daouk, 2002). This variable is set to zero if there has been no insider trading enforcement case. *Colonial_Ties* is a dummy variable that equals one if there exist colonial ties between the acquirer and the host countries. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

Table 7: Probit regressions (II)

	(1)	(2)	(3)	(4)	(5)	(6)
Size	0.2448***	0.2566***	0.2490***	0.2388***	0.2340***	0.2372***
	(4.1551)	(4.4992)	(4.3252)	(4.1131)	(4.0464)	(4.1180)
	[0.0868]	[0.0904]	[0.0882]	[0.0845]	[0.0827]	[0.0835]
Liquidity_Ratio	—0.0342	—0.0496	—0.0326	—0.0449	—0.0547	—0.0553
	(—0.3636)	(—0.5301)	(—0.3468)	(—0.4782)	(—0.5800)	(—0.5890)
	[—0.0121]	[—0.0175]	[—0.0115]	[—0.0159]	[—0.0193]	[—0.0194]
Dividend_Payout_Ratio	0.0606	0.0619	0.0584	0.0569	0.0578	0.0575
	(1.0263)	(1.0327)	(0.9887)	(0.9585)	(0.9629)	(0.9514)
	[0.0215]	[0.0218]	[0.0207]	[0.0201]	[0.0204]	[0.0202]
ROA	—0.8578	—0.8031	—0.8996	—0.7455	—0.6107	—0.5624
	(—1.1635)	(—1.1302)	(—1.2418)	(—1.0207)	(—0.8302)	(—0.7704)
	[—0.3043]	[—0.2831]	[—0.3189]	[—0.2639]	[—0.2159]	[—0.1979]
Asset_Growth	—0.2046	—0.1754	—0.2068	—0.1998	—0.1910	—0.1766
	(—1.4022)	(—1.1735)	(—1.4135)	(—1.3567)	(—1.2916)	(—1.1839)
	[—0.0726]	[—0.0618]	[—0.0733]	[—0.0707]	[—0.0675]	[—0.0621]
Percentage_Shares_Acquired	0.0061	0.0062	0.0065	0.0064	0.0063	0.0064
	(0.5437)	(0.5583)	(0.5868)	(0.5703)	(0.5595)	(0.5668)
	[0.0021]	[0.0021]	[0.0023]	[0.0022]	[0.0022]	[0.0022]
Voice_and_Accountability	0.0422					
	(0.5046)					
	[0.0149]					
Political_Stability_No_Violence		0.2536**				
		(2.0196)				
		[0.0894]				
Government_Effectiveness			0.0409			
			(0.4060)			
			[0.0145]			
Regulatory_Quality				0.1097		
				(1.1453)		
				[0.0388]		
Rule_of_Law					0.1712*	
					(1.6755)	
					[0.0605]	
Control_of_Corruption						0.2006**
						(2.2290)
						[0.0706]
Constant	—4.0465	—4.2603	—4.1356	—4.0137	—3.9855	—4.0548
	(—4.40)	(—4.77)	(—4.64)	(—4.47)	(—4.46)	(—4.52)
Number of observations	222	222	222	222	222	222
Pseudo R²	0.1029	0.1168	0.1026	0.1068	0.1122	0.1201
LR Chi2	28.7837***	32.6534***	28.6941***	29.8554***	31.3597***	33.5785***

This table presents the results of the probit regressions. The sample includes firms targeted by SWFs over the 2000–2014 period. The dependent variable is *Arab_SWF*, a dummy that is set to one if the firm is targeted by a SWF owned by an Arab country, and zero otherwise. The independent variables are: *Size,* the natural logarithm of market capitalization; *Liquidity_Ratio,* the ratio of Current assets to current liability; *Dividend_Payout_Ratio,* the dividend Payout per Share; *ROA,* the ratio of earnings before interest and taxes to the book value of assets; *Asset_Growth*, the percentage change in total assets from years (t–1) to t; *Percentage_Shares_Acquire,* the percentage of shares acquired by the SWF in the acquisition. *Voice_and_Accountability, Political_Stability_No_Violence, Government_Effectivenes, Regulatory_Quality, Rule_of_Law* and *Control_of_Corruption* are Worldwide Governance Indicators constructed by Kaufmann et al. (2010). These indicators capture different dimensions of governance for each target's country. Each indicator ranges from —2.5 (weak governance performance) to 2.5 (strong governance performance). These indicators capture perceptions of i) the extent to which the residents can select their government and enjoy freedom of expression and association as well as free media (*Voice_and_Accountability*), ii) the likelihood of exposure to political instability, to terrorism or any other forms of politically motivated violence (*Political_Stability_No_Violence*), iii) the quality of public and civil services and of the policy formulation and implementation, the independence of the civil service from political pressures, the quality of the government's policy formulation and implementation, and the credibility of its commitment to such policies (*Government_Effectivenes*), iv) the government's capability to pursue policies and regulations that permit private sector development (*Regulatory_Quality*), v) the degree of confidence agents have in rules of society and their adherence to these rules (*Rule_of_Law*), and vi) the extent to which the public power is used by elites and private interests for private gains (*Control_of_Corruption*). ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

18

Table 8: Robustness tests

	Excluding firms in the manufacturing sector				Excluding firms in the financial sector				Excluding financial crisis deals			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Size		**0.2271***** **(2.8946)** **[0.0840]**	**0.2817***** **(3.4291)** **[0.0978]**	**0.2973***** **(3.9252)** **[0.1035]**		**0.2725***** **(3.3092)** **[0.0795]**	**0.2414***** **(3.1644)** **[0.0724]**	**0.2994***** **(4.1707)** **[0.0934]**		**0.2837***** **(3.3406)** **[0.0866]**	**0.2983***** **(3.5879)** **[0.0947]**	**0.3276***** **(4.0215)** **[0.1035]**
Liquidity_Ratio	0.1995* (1.7860) [0.0749]	0.0802 (0.6165) [0.0296]	0.1420 (1.0215) [0.0493]	0.0780 (0.5970) [0.0271]	0.0106 (0.1091) [0.0034]	—0.1271 (—1.0635) [—0.0370]	—0.1492 (—1.2018) [—0.0447]	—0.1084 (—0.8681) [—0.0338]	—0.0781 (—0.6635) [—0.0245]	—0.1744 (—1.3163) [—0.0532]	—0.1619 (—1.1854) [—0.0514]	—0.1885 (—1.3886) [—0.0595]
Dividend_Payout_Ratio	**0.1979**** **(2.1088)** **[0.0743]**	**0.2053**** **(2.0234)** **[0.0759]**	**0.2026**** **(2.0944)** **[0.0703]**	**0.2033**** **(1.9758)** **[0.0708]**	0.0121 (0.1636) [0.0039]	0.0268 (0.2788) [0.0078]	0.0471 (0.5433) [0.0141]	0.0169 (0.2038) [0.0052]	0.0450 (0.5587) [0.0141]	0.0940 (0.9259) [0.0286]	0.0709 (0.7628) [0.0225]	0.0631 (0.7199) [0.0199]
ROA	0.4049 (0.4522) [0.1521]	—0.0129 (—0.0136) [—0.0047]	—0.7596 (—0.7986) [—0.2638]	—0.8799 (—0.9571) [—0.3066]	—0.5719 (—0.7705) [—0.1866]	—0.9824 (—1.1507) [—0.2867]	—0.4052 (—0.4851) [—0.1215]	—1.3532* (—1.7097) [—0.4221]	—0.1007 (—0.1125) [—0.0316]	—0.4515 (—0.4857) [—0.1378]	—0.4999 (—0.5602) [—0.1587]	—1.0665 (—1.1992) [—0.3370]
Asset_Growth	**—0.4498**** **(—2.3385)** **[—0.1689]**	**—0.4164*** **(—1.9588)** **[—0.1541]**	**—0.3338*** **(—1.6474)** **[—0.1159]**	**—0.4149**** **(—1.9607)** **[—0.1445]**	—0.4423** (—2.1229) [—0.1443]	—0.1671 (—0.7792) [—0.0487]	—0.4047* (—1.7452) [—0.1214]	—0.3005 (—1.5033) [—0.0937]	0.0231 (0.1327) [0.0072]	0.0435 (0.2458) [0.0132]	—0.0556 (—0.3047) [—0.0176]	0.0036 (0.0201) [0.0011]
Percentage_Shares_Acquired	—0.0135 (—1.0999) [—0.0050]	—0.0111 (—0.8168) [—0.0040]	—0.0065 (—0.4284) [—0.0022]	—0.0080 (—0.5664) [—0.0027]	—0.0100 (—0.6978) [—0.0032]	—0.0036 (—0.2031) [—0.0010]	—0.0043 (—0.2393) [—0.0012]	0.0040 (0.2471) [0.0012]	—0.0636*** (—2.6631) [—0.0199]	—0.0280 (—1.1717) [—0.0085]	—0.0220 (—0.9229) [—0.0069]	—0.0262 (—1.1119) [—0.0082]
Strategic_Industry	**0.6216**** **(2.4932)** **[0.2185]**				**0.6483***** **(2.8934)** **[0.2206]**				**0.7486***** **(3.0445)** **[0.2301]**			
GDP_Growth		**0.0742***** **(2.8199)** **[0.0274]**				—0.0656 (—1.2158) [—0.0191]				—0.0941 (—1.3406) [—0.0287]		
LN(GDP_PC)		**0.4158***** **(3.7289)** **[0.1539]**				0.2468 (1.3150) [0.0720]				0.1774 (1.0186) [0.0541]		
Trade_%GDP		—0.0016 (—1.2359) [—0.0005]				0.0010 (0.7077) [0.0002]				—0.0010 (—0.5290) [—0.0002]		
Market_Cap_%GDP			—0.0020 (—1.3927) [—0.0007]				—0.0003 (—0.2726) [—0.0001]				—0.0008 (—0.4520) [—0.0002]	
Est_Main_Exchange			0.0020				**0.0059*****				**0.0046*****	

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			(1.2952)				**(3.9127)**				**(2.9894)**	
			[0.0007]				**[0.0017]**				**[0.0014]**	
Enforcement_IT_Law				0.0063				0.0102				0.0096
				(0.8127)				(1.2115)				(1.0590)
				[0.0021]				[0.0031]				[0.0030]
Constant	—1.0289***	—8.1408***	—5.0732***	—5.2775***	—.6706***	—6.7683***	—4.7230***	—5.1036***	—.5349	—5.8392***	—5.3011***	—5.3295***
	(—3.34)	(—5.14)	(—4.10)	(—4.49)	(—2.69)	(—2.93)	(—3.98)	(—4.56)	(—1.64)	(—2.63)	(—4.08)	(—4.16)
Number of observations	164	163	150	150	166	165	152	152	144	143	142	142
Pseudo R²	0.1028	0.2388	0.2080	0.1902	0.0937	0.2315	0.2551	0.1795	0.1409	0.2536	0.2513	0.2059
LR Chi2	22.1611***	51.0134***	38.9194***	35.7548***	18.4674***	44.9109***	49.3149***	34.8271***	24.1476***	43.2806***	42.7189***	35.1503***

This table presents the results of a set of robustness tests using probit regressions. The different samples include firms targeted by SWFs. The dependent variable is *Arab_SWF*, a dummy that is set to one if the firm is targeted by a SWF owned by an Arab country, and zero otherwise. The independent variables are: *Size,* the natural logarithm of market capitalization; *Liquidity_Ratio,* the ratio of Current assets to current liability; *Dividend_Payout_Ratio,* the dividend Payout per Share; *ROA,* the ratio of earnings before interest and taxes to the book value of assets; *Asset_Growth*, the percentage change in total assets from years (t–1) to t; *Percentage_Shares_Acquire,* the percentage of shares acquired by the SWF in the acquisition; *Strategic_Industry*, a dummy that equals one if the target operates in a strategic industry, and zero otherwise; *GDP_Growth*, the growth rate of gross domestic product (GDP); *LN(GDP_PC)*, the natural logarithm of the GDP per capita; *Trade_%GDP*, the sum of the host country's exports and imports of goods and services, expressed as a percentage of GDP; *Market_Cap_%GDP*, that equals to stock market capitalization expressed as a percentage of the host country's GDP; *Est_Main_Exchange,* the difference between the year of the acquisition and the year of the establishment of the host country's main exchange (Bhattacharya and Daouk, 2002); *Enforcement_IT_Law,* the difference between the year of the acquisition and that of the first insider trading enforcement case of the host country (Bhattacharya and Daouk, 2002). This variable is set to zero if there has been no insider trading enforcement case. ***, ** and * denote statistical significance at the 1%, 5% and 10% level, respectively.

Fig. 1: Sovereign Wealth Fund Assets Map
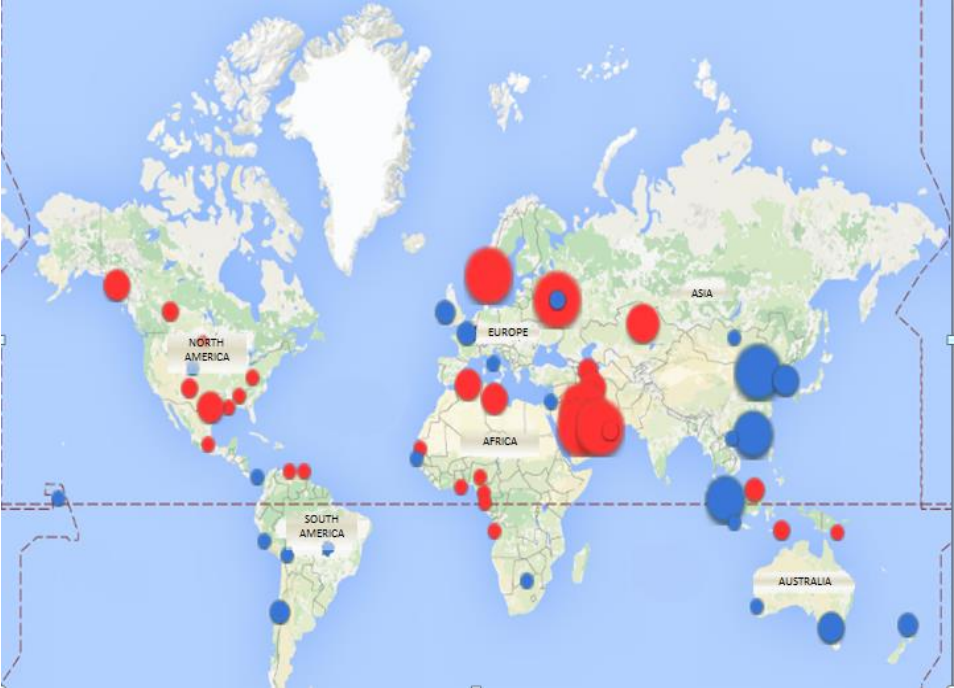
This figure presents the distribution of SWF assets around the world. Data are provided by the SWF institute and updated in April 2016. Red circles present Oil– and Gas– related SWFs. Blue present Non– Oil– and Gas– related SWFs.