

Sovereign Wealth Funds Investment Effects on Target Firms' Competitors

ABSTRACT

In this paper, we investigate the impact of sovereign wealth funds acquisitions on the performance of target firms' competitors. Our study shows that the impact of sovereign wealth funds acquisitions on target firms' competitors equals 1.20% on the (-1,+1) window. This impact is positive and statistically significant. Our results suggest that market participants clearly anticipate value creation in the targets competitors, due to likely expected restructuring activities. This suggests that sovereign wealth funds' acquisitions create a monitoring pressure on competitors forcing them to re-evaluate their operations. Our cross-sectional analysis shows that relatively large rivals, low leveraged rivals, rivals with highly correlated returns with those of their corresponding targets, rivals in less competitive industries show higher abnormal returns upon the acquisition announcement. Foreign SWFs investments partially explain the cross-sectional variations in the positive valuation effects of rivals, as well as investments coming from commodity financed SWFs, and SWFs with high levels of transparency. Our results have policy implications as they question the rationality, and hence the legitimacy, of protectionist measures adopted by some governments as legal barriers to sovereign wealth funds cross-border investment activities.

Key words: sovereign wealth funds, competitors, cumulative abnormal returns, protectionist measures

I. INTRODUCTION

Sovereign wealth funds (SWFs) manage pools of money on behalf of governments that own the portfolios (Dewenter et al. (2010)). Around 58% of SWFs assets are financed by natural resources revenues, mostly coming from oil and gas, while the remaining 42% are financed by foreign currency reserves accumulated by running trade account surpluses (Kotter and Lel (2011), Dewenter et al. (2010), SWF Institute website). Johnson (2007) highlights the fast growing size of these investment vehicles during the last decade that control today an estimated \$4 trillion in assets (Knill et al. (2012a)). As mentioned by Jen (2007) and Butt et al. (2008), SWFs' size is expected to continue to grow significantly over the next years: Morgan Stanley projects that SWFs could reach up to \$12 trillion by 2015 (Dewenter et al. (2010)).

The importance of SWFs as active players in international financial markets provides us with an interesting setting in which one can evaluate the outcome of these government-owned financial entities' acquisitions. However, rather than focusing on target firms like previous studies, we investigate the impact of SWFs acquisitions on the industry by considering the impact on competitors. Several earlier papers have documented positive risk-adjusted averaged cumulative abnormal returns (CARs) for targets around SWFs acquisition announcement dates (Dewenter et al. (2010), Kotter and Lel (2011), Bortolotti et al. (2010), and Chhaochharia and Laeven (2009)). We here extend the scope of these studies to examine intra-industry-effects of SWFs' acquisitions in an event-study framework. Specifically, we explore two possible hypotheses related to the literature on corporate governance and agency theory. The first hypothesis states that SWFs acquisitions create a monitoring pressure on the firms in the industry which engage in restructuring activities from fear of

becoming potential future targets. This should result in a positive valuation effect similar to what is recorded for target firms. This hypothesis is referred to as the "monitoring hypothesis". Alternatively, if SWFs are not active monitors but are rather perceived to pursue extraction of private benefits from the target firm and ultimately from the whole industry as a whole, a negative valuation effect should be observed. This hypothesis is referred to as the "tunneling hypothesis" as it exacerbates potential tunneling effects.

Our results show that SWFs investments have a positive and significant effect on the risk-adjusted average CAR of the competitors of target firms. This means that investors have a positive perception of SWFs transactions in their sector, which is interpreted as a positive valuation effect in favor of the monitoring hypothesis.

Our work is important for several reasons. First, it contributes to the debate on political protectionism: Since SWFs are sovereign entities owned by governments, the nations targeted by SWFs activities expressed concerns about some transactions perceived by politicians as strategically sensitive considering the political relationships between the acquiring and the host governments (Rose (2009)). According to Knill et al. (2012b), political relations play a significant role in SWFs decision making. As a result, protectionist measures have emerged in some host countries to regulate, and ultimately to counter, controversial and threatening SWFs deals. Our results show that protectionist measures are not justified given the absence of any negative effect of SWFs on target firms' competitors, in addition to the positive effect on target firms themselves as documented in the literature.

Second, by offering empirical evidence on the intra-industry effects of SWFs', we are providing an exhaustive overview of the impact of SWFs acquisitions in foreign countries.

Third, we complement the existing literature on corporate governance and agency costs related to government acquisitions. In the aftermath of the crisis and the rising importance of state capitalism around the world, our results take on a particular importance, and provide additional evidence on the impact of state ownership.

Finally, we contribute to the debate on the regulation of SWFs' activities. Our results suggest that there is no evidence in favor of protectionist policies initiated by host governments against SWFs transactions. In fact, our analysis shows that investors feel that these acquisitions are seen as positive signals that enhance monitoring in the industry and are thus likely to create positive externalities in competitors.

The rest of the paper is organized as follows. Section 2 presents a literature review. Section 3 describes our data and methodology. Section 4 presents our empirical analysis and results. Section 5 concludes.

II. LITERATURE REVIEW

A growing body of the literature analyses the ways and the reasons behind SWFs' investment allocation decisions. Dewenter et al. (2010) examine the effect of SWFs' investments on target firms and provide evidence of the monitoring benefits of SWFs versus the expropriations costs of these funds. They show that SWFs' investments have positive and significant effects on target returns and that SWFs act often as active investors. Kotter and Lel (2011) investigate SWFs' investment strategies and their impact on target firm valuation and their relationship with SWFs transparency. They find that SWFs prefer large and poorly performing firms facing financial difficulties. They show that SWFs' investments have a positive effect on target firms' stock prices around the announcement date and that more transparent SWFs have a greater impact on target firm value than opaque SWFs. Knill

et al. (2012a) examine SWFs' transactions and show that political factors play a role in SWF decision making. They show that political relations are an important factor in *where* SWFs invest but matter less in determining *how much* to invest. Chhaochharia and Laeven (2009) analyze SWFs' transactions in order to identify the determinants of SWFs' investment strategies. They find that SWFs usually invest to diversify away from industries at home and that they do so predominantly in countries that share the same culture. They also find that investors particularly welcome SWFs' investments in financially distressed firms. Bernstein et al. (2009) and Fernandes (2009) investigate the relevant risk factors that drive SWFs' investment strategies. Fernandes (2009) finds that SWFs prefer large firms that enjoy significant external visibility and shows that firms with higher ownership by SWFs exhibit higher valuation effects. Bernstein et al. (2009) show that SWFs are more likely to invest at home when domestic equity prices are higher, and invest abroad when foreign prices are higher. They also observe that SWFs where politicians are involved have a much greater likelihood of investing at home than those where external managers are involved, and that a positive valuation effect is recorded for firms targeted by SWFs with external managers.

In addition to these academic papers, international institutions also carry research on the subject. For example, the Monitor Group, the Fondazione Eni Enrico Mattei (FEEM), the European Central Bank published several papers describing SWFs' activities and commenting on most recent SWFs' deals. In addition, Butt et al. (2008) describe SWFs and present their key features, specifically the continually evolving time horizon and risk appetites as well as the increasing interest in the corporate governance of their targets. Blundell-Wignall et al. (2008) present a description of SWFs and compare them to pension funds. They find that SWFs share some characteristics with pension funds such as investment horizon and the types of asset classes they invest in. They show that SWFs are

different from pension funds in terms of objectives, investment strategies, sources of funding and transparency requirements. Finally, Balding (2008) studies SWFs' portfolio asset allocation and argues that they behave as rational investors that diversify their investments across regions and asset classes, and seem to take economically driven investment decisions.

Academic event studies on SWFs (e.g, Dewenter et al. (2010), Kotter and Lel (2011), Bortolotti et al. (2010), and Chhaochharia and Laeven (2009)) focus on assessing the impact of SWFs' investments on target firms. To our knowledge, our study is the first that investigates the impact of SWFs' investments on rivals instead of targets. An extensive literature, beginning with Eckbo (1983,1985) and extending through Mitchell and Mulherin (1996), Song and Walking (2000), and Akhigbe and Martin (2000), finds that rivals of acquisition targets earn significant and positive abnormal returns. This literature provides evidence to suggest that mergers and acquisitions have intra-industry effects. To the extent that rival firms compete with each other and share similar characteristics, acquisitions that are likely to impact on the operations and structure of one firm can affect the competitive structure of the industry and consequently, the operations of rival firms. Acquisition activity within an industry is then associated with positive abnormal returns to rivals of the target firm.

Eckbo (1983, 1985) finds that horizontal competitors of target firms earn significantly positive abnormal returns of 0.76% around the announcement date. Eckbo and Wier (1985) report similar announcement period abnormal returns. Stillman (1983) reports separate results for the rivals of eleven different mergers. The abnormal returns to rivals are positive in nine of the eleven cases analyzed. Mitchell and Mulherin (1996) report abnormal returns of 0.5% to rivals around the announcement date. Song and Walking (2000) examine the effects of domestic acquisitions on rival firms and find a positive abnormal return of

0.35% for a 2 day window and 0.56% for a longer window (10 days period). Finally, Akhigbe and Martin (2000) examine the effects of foreign acquisitions on domestic competitors of US targets and find significantly positive stock price effects.

Overall, the empirical findings in the literature support the idea of a positive valuation effect of mergers and acquisitions announcements on rival firms' valuation. Extending these results to SWFs investments is appealing, and warrants further investigation for two main reasons. The first one is related to the nature of these funds: they are foreign institutional investors that present transparency issues, and hence regulatory ones. The second reason is related to the agency theory and to the fact that SWFs are state-owned investors whose activities may trigger agency costs because of the role that the acquiring SWFs may play in the corporate governance of target firms. We then advance two alternative hypotheses with respect to the response of rival firms to SWFs' acquisition announcements.

The first hypothesis states that SWFs acquisitions create a monitoring pressure on the firms in the industry which engage in restructuring activities from fear of becoming potential future targets. This should result in a positive valuation effect similar to what is recorded for target firms. This hypothesis is referred to as the "monitoring hypothesis".

Alternatively, if SWFs are not active monitors but are rather perceived to pursue extraction of private benefits from the target firm and ultimately from the whole industry as a whole, a negative valuation effect should be observed. This hypothesis is referred to as the "tunneling hypothesis" as it exacerbates potential tunneling effects.

These hypotheses are related to the agency theory and are consistent with Bortolotti et al. (2010) who state that "While a positive relation between post-investment performance and fund governance appears to point to a beneficial monitoring effect, the negative relation

between the size of the stake acquired and subsequent performance seems to indicate that SWFs impose agency costs by extracting wealth from minority shareholders.”

III. DATA AND SAMPLE CONSTRUCTION

A. Data on SWFs

Table 1 presents the growth of SWFs size by year. In December 2011, SWFs assets under management are worth around \$ 4.7 trillion with an annual growth rate of more than 10% on average during the last five years (from 2006 (\$3 trillion) to 2011 (\$ 4.7 trillion)). SWFs are concentrated in Asia and the Middle East whose nations own more than 75% of SWFs in terms of asset size. Commodity-financed SWFs represent 58% of the whole SWFs global portfolio.

Insert Table 1 about here

Table 2 shows that the United Arab Emirates, China, Saudi Arabia, Kuwait, Norway and Singapore own the largest SWFs. Put together, these countries hold more than 82% of the global SWF portfolio.

In addition, we notice the recent inception of SWFs in some emerging economies such as Brazil (2008) and Nigeria (2011) that try to invest wealth abroad to diversify their sources of revenues. Other new, but smaller, SWFs were recently created by local politicians for protectionist reasons to counter the worldwide SWFs tendency coming from Asia and the Middle East (Italy (2011, \$1.4 billion) and France (2008, \$28 billion)).

Another important feature presented in Table 2 is the weak transparency index for the majority of SWFs. This is a major issue that the international community fears: the

emergence of large financial players combined with the difficulty to understand their behavior and their motives because of their lack of transparency and information disclosure.

Insert Table 2 about here

B. Sample construction

We analyze competitors' stock price reactions to announcements of purchases of target firms by SWFs. We first identify SWFs' purchase transactions of target firms through Thomson Reuters Securities Data Corporation Platinum Global Database (SDC) database and Bureau Van Dyck Zephyr Database of Global Mergers & Acquisitions (Zephyr). We extract acquisitions for SWFs using research criteria such as "Sovereign Wealth Fund", "SWF", "Sovereign Entity", and other key words such as "invest," "stake," and "acquire" combined with the SWF name. Our sample of transactions is supplemented using additional sources of information, essentially SWF-specific websites for information, including the website of the SWF Institute, www.zawya.com, www.sovereignwealthfundwatch.com and financial newspapers such as Wall Street Journal, BusinessWeek, Financial Times, New York Times, Gulf Times, The National and Gulf News and market followers such as Reuters and Bloomberg. Our search of SWFs transactions yields 284 different firms involved in 393 transactions over all available years.

We then consider as competitors of target firms all the companies that have, at the month of the announcement date, the same 2-digit SIC code level as the target firms, the same country where the corporate headquarters are located, and a relatively similar size, i.e., a market capitalization of the competitor is comprised between 75% and 125% of the market capitalization of the target firm. We use total assets as an alternative measure of size in a robustness test, with the same thresholds (75%-125%). Since we study the impact of

SWFs' activities on competitors' stock price, we drop from the sample the competitors involved in other transactions 3 months before the announcement period. Similar to Kotter and Lel (2011), the final sample is further limited to cases in which returns data on the underlying stock and the market index, the MSCI all Country World Index (ACWI), are available in Datastream around the announcement date and for at least 20 days in the estimation period between day -180 to day -21 relative to the announcement date. Our search results in a clean sample of 729 different competitors corresponding to the 284 target firms. Since one target firm can be involved in more than one transaction, the 393 transactions involving target firms spread into the 729 competitors and gives 890 rows in our final database.

A description of the sample of competitors and targets is presented in Table 3.

Insert Table 3 about here

Our sample shows that more than 60% of SWFs activities target the financial and the mining sectors. If we add the manufacturing sector, we cover around 84% of rivals' sample. These sectors account for 79% of the corresponding sample of targets. In addition, the majority of the transactions (85%) occurred during the first decade of the current century (from 2000 to 2010), peaking in 2008 with 21% of the records. As documented in Bortolotti, et al. (2010), SWFs were relatively active during the 2008 crisis in comparison with other institutional investors. Finally, the distribution by country shows a concentration of events in developed economies (USA) and in the countries recording fast economic growth (India and China).

IV. EMPIRICAL ANALYSIS

A. Univariate analysis

Table 4 presents descriptive statistics on the financial characteristics of targets and their corresponding rivals. Financial data for targets and rivals are compared: leverage ratio, total assets, tangible assets, ROE, and Tobin's Q.

Insert Table 4 about here

Table 4 shows significant differences between the targets and their rivals in terms of leverage and Tobin's Q. The mean Tobin's Q (leverage) for the target firms of 1.65 (0.109) is significantly different from that of the rivals of 1.04 (0.122) at 1% (10%). SWFs then seem to invest in low leveraged and undervalued firms. We also notice significant differences between the targets and their rivals in terms of size, measured by their total assets. Consistently with the previous literature on SWFs (Dewenter et al. (2010), Kotter and Lel (2011), Bortolotti et al. (2010), and Chhaochharia and Laeven (2009)), we find that SWFs' targets have a significantly larger size than their rivals, which confirms SWFs' preference for investments in large firms.

B. Rivals' stock market reaction to SWFs announcements

In order to assess the stock market reaction of competitors to SWFs' announcements, we compute CARs over three windows around the announcement date: (0,+1), (-1,+1), and (-2,+2). We use the traditional capital asset pricing model estimated over a 160 day pre-event period, from day -180 to day -21 relative to the announcement date. Similar to Kotter and Lel (2011), The MSCI All Country World Index is used as a proxy for market returns. The following section presents the results of our analysis. The subsequent section presents robustness checks analysis.

Table 5 presents average abnormal returns for the (0,+1), (-1,+1), and(-2,+2) windows.

Insert Table 5 about here

Panel A of Table 5 reports abnormal returns around the announcement of SWFs' investments for the entire sample. The average cumulative abnormal return is 0.86% (t=4.88), 1.20% (t=6.34), and 1.00% (t=3.43) for the windows (0,+1), (-1,+1), and (-2,+2) around the announcement date, respectively. CARs for other windows are also positive and statistically significant. These results suggest that investors view SWF investments positively, even for the competitors of the target firm. The well documented positive effect in the previous studies (Dewenter et al. (2010), Kotter and Lel (2011), Bortolotti et al. (2010), and Chhaochharia and Laeven (2009)), added to the recorded positive effect in the present study suggest that we can extend investors' positive view of SWFs' investments from the target firm to its competitors, which gives to our findings an industry perspective.

The positive market reaction is consistent with the findings of studies on institutional investors and similar in magnitude for a comparable event window (e.g., Brav et al. (2008), Strickland et al. (1996)). Using a large hand-collected dataset from 2001 to 2006, Brav et al. (2008) find that the abnormal return around hedge funds' announcement is approximately 7%, with no reversal during the subsequent year, and that this positive valuation effect is due to hedge funds' activism. Strickland et al. (1996) study a sample of US targets from 1986 to 1993 and show that targets experience a positive gain of 0.9%, suggesting that the added monitoring activities for the acquirer enhance firm value.

Other panels of Table 5 present the cumulative abnormal returns for different subsamples. Panel B reports CARs for the subsample of competitors of target firms that

have been targeted by less transparent SWFs. We run this test in order to investigate whether less transparent SWFs do experience positive valuation effects. Panel B shows that even SWFs with low levels of transparency record positive and statistically significant CARs on the rivals. The average CAR for the (0,+1) window is 1.15%.

In Panel C, we investigate the impact of the financing source for the SWFs on the valuation effects from the announcement. We report CARs for the subsample of competitors where SWFs are commodity financed and continue to find a positive and highly statistically significant average CAR (1.01% for the (0,+1) window). This positive valuation effect suggests that commodity financed SWFs are liquidity providers seeking to diversify their economies, that can enjoy and provide stable cash flows for the few next decades and that, consistently with Balding (2008), act like long term investors.

Panel D reports the average CARs for the sample of competitors during the 2007/2008 financial crises. It shows a statistically significant average CAR of 1.87% for the (0,+1) window. This finding suggests that global financial markets welcome SWFs during periods of economic distress.

Panel E reports the average CARs for the sample of competitors of target firms where SWFs acquired more than 5% of stakes. It shows that the average CAR for cross-border investments is 1.01% and is statistically significant. SWFs acquiring large stakes may be signaling a monitoring and active management behavior. The positive valuation effect of these investments implies that investors welcome the entry of such institutional investors in the industry, and potentially expect them to invest in rivals in order to restructure their activities and create value.

In Panel F, we examine the competitors' stock market reaction to cross-border SWFs' investments, i.e. the rivals' valuation effect following announcements of foreign SWFs. Generally, the literature on cross-border acquisitions shows a positive impact on domestic competitors (Otchere et al. (2006), Szewczyk (1992), and Dunning (1986)). Consistently with this finding, results in Panel F show that the average market reaction is 0.87% and is also statistically significant.

Overall, our results suggest that SWFs' investments convey positive information to investors about the competitors of target firms acquired by SWFs. A first explanation of this positive valuation effect is the possibility for rivals to be targeted by the SWF. Another explanation is the potential spreading of technology and innovation transfer in the industry that results from the fight for survival among domestic firms. In both cases, investors perceive positively the impact of SWFs acquisitions, which suggests that they expect an active monitoring behavior from the SWF, thus supporting the monitoring hypothesis.

An interesting feature that could be mentioned here is that the positive and statistically significant effect of 1.20% recorded in our study on the competitors of target firms is lower than all the positive effects documented in the previous literature on the target firms themselves¹. Even if the results across studies are not comparable because of differences in periods and samples, we mention here their results for illustrative purposes. On the (-1,+1) window, Kotter and Lel (2011) report 2.25% of averaged CARs, Bortolotti et al. (2009) report 1.25% of averaged CARs, Dewenter et al. (2010) report 1.52% of averaged CARs, and Knill et al. (2012a) report 1.37% of averaged CARs. These studies focused on the

¹ We are aware that the differences between our study and the previous studies in terms of samples, periods and measures have impacts on the standard deviation and therefore the level of significance. We factually describe their results in order to present "the whole picture" and cautiously do not rely on them to draw our conclusions.

impact of SWFs' investments on target firms, whereas we focus on the impact of these investments on rivals. \we thus conclude that SWFs' acquisitions have a positive effect on both targets (previous studies) and rivals (our study), thus supporting the monitoring hypothesis.

C. Sensitivity tests

C.1 Alternative definition of Competitors

In order to test the robustness of our findings we consider an alternative definition of competitors. We previously defined competitors of target firms as all the companies that have, on the month of the announcement date, the same 2-digit SIC code level as the target firms, the same country where the corporate headquarters are located, and a relatively similar size, i.e a Market Capitalization of the competitor is comprised between 75% and 125% of the market capitalization of the target firm. Our sample resulted in 729 different competitors corresponding to the 284 target firms. Since one target firm can be involved in more than one transaction, the 393 transactions involving target firms spread into the 729 competitors and gives 890 rows in our final database. We then considered a similar definition where we use Total Assets rather than Market Capitalization as selection criteria. This change in sampling criteria resulted in 821 different competitors corresponding to the 284 target firms. The 393 transactions involving target firms spread into the 821 competitors and gives 1034 rows in the final database.

Table 6 shows that our results are still positive and statistically significant at conventional levels for the entire sample as well as for the other subsamples.

Insert Table 6 about here

We then carried an additional robustness check that consists on using [80%-120%] and [70%-130%] intervals for the Market Capitalization and the Total Assets criteria. Our results are robust to the use of these alternative thresholds.

C.2 Alternative benchmarks

The market model used in our analysis consists on the traditional capital asset pricing model. In this model, we use the MSCI All Country World Index (ACWI) from DataStream as a proxy for market returns.

For robustness, and similarly to Kotter and Lel (2011), we use two alternative benchmarks in estimating abnormal returns. The first one is the DataStream's value-weighted national stock market indexes. The second one is the manually constructed Fama and French (1998) global factors². Table 7 shows the results of using these two alternative benchmarks.

Insert Table 7 about here

We notice that using both benchmarks does not alter our findings: we still record positive and significant abnormal returns around the announcement date. This is applicable for the entire sample and for all the subsamples subject to empirical investigation (results in Panels A to F). The only exception concerns the results presented in Panel D (SWFs announcements during the 2007/2008 crisis) for the (-2; +2) period where we record positive but insignificant abnormal returns. This exception is persistent over all our robustness tests.

² The global factors are computed as excess returns on the value-weighted global market portfolio, returns on the global SMB portfolio (excess returns of local small firms over local big firms), and returns on the global HML portfolio (excess returns of local high book to market firms over local low book to market firms).

C.3 Different estimation periods

In order to assess the stock market reaction of competitors to SWFs announcements, we compute CARs over three windows around the announcement date and use the market model estimated over a 160 day pre-event period, from day -180 to day -21 relative to the announcement date. Our choice of the estimation period is similar to Kotter and Lel (2011).

The interpretation of our empirical results relies on the choice of the market model, the choice of market indices and the choice of the estimation window. The two first elements were subject to robustness tests whose results were reported in the previous sections. The estimation period was subject to sensitivity analysis by changing the estimation period and then trying different scenarios in estimating the market model: a 150, 160, 170, 180, 190, and 200 pre-event periods from day -220, -210, -200, -190, and -180 to day -21 relative to the announcement date, respectively. We did this battery of tests using the retained and the alternative definitions of competitors as well as the selected and the alternative benchmarks. Our results remain robust to the use of these different estimation periods across all the possible combinations of competitors' definitions and alternative benchmarks.

D. Cross-sectional analysis of rivals stock price reaction to SWFs announcements

Differences in the valuation effects across rival firms are explored using cross-sectional regression analysis. We regress announcement valuation effects of rivals on firm, country, and SWFs characteristics. For firm characteristics, as our results support the monitoring hypothesis, we expect a more positive rival stock price response for relatively small rivals, for rivals with similar cash flows, low financial leverage, and low Tobin's Q as well as for rivals operating in industries with low degrees of competition. For country characteristics, we expect a more positive rival stock price response for rivals in countries

characterized by a sustainable economic growth and a good quality of legal and institutional environment. For SWFs characteristics, we expect a more positive rival stock price response when the acquiring SWF is foreign (i.e. a cross border investment), has a high level of transparency index, is commodity financed. The rationale behind our expectations relative to the sign of the relationship between the valuation effects of rivals and the characteristics listed above is presented below.

D.1 Rivals' specific variables

- *Relative size*: Slovin et al (1991) and Akhigbe and Martin (2000) show that the valuation effect recorded on industry rivals is inversely related to the relative size of rival firms. This relationship may be explained by the fact that small rivals are relatively less closely followed by the market.

- *Cash flows similarities*: the degree of similarity between the cash-flows of the rivals and the cash-flows of the targets may explain part of the rival stock price reactions to SWFs announcements. An acquisition announcement may indicate that the operating structure of the target is desirable. Similarities in cash flows imply that the operating structure of the rivals are also desirable, which leads us to expect a positive relationship between the valuation effect recorded on industry rivals and the cash flows similarities between rivals and target firms. This is consistent with Lang and Stulz (1992) who show that larger valuation effects are observed on rivals with similar cash flows as their corresponding targets.

- *Financial leverage*: Stulz (1990) argues that financial leverage may limit firm's ability to make investments to compete. This means that rivals with higher leverage will generally experience difficulties to compete with lower leveraged rivals. We then expect a negative relationship between stock market reactions of rivals' prices and their financial leverage.

- *Rivals valuation*: Lang and Stulz (1991) show that investors often tend to acquire undervalued firms because substantial value can be realized from restructuring the firm. Rivals with low Tobin's Q can therefore be expected to earn greater returns following SWFs announcements than those with high Tobin's Q values. A negative relationship between firm's Tobin's Q and rivals' valuation effects is thus expected.

- *Degree of industry competition*: Akhigbe and Martin (2000) argue that rivals in highly competitive industries are already aggressively competing to survive. SWFs investments will then give the target a competitive advantage that may have a negative impact on the rivals. According to this argument, a negative relationship may be expected between the rivals' valuation effect due to SWFs announcements and the degree of competition.

D.2 Country specific variables

- *Economic growth*: countries with high levels of GDP growth offer a desirable economic environment for business. Rivals evolving in such countries often benefit from the overall economic growth. We then expect more positive valuation effects for rivals evolving in countries with high and sustainable economic growth. A positive relationship between the rivals valuation effects and the GDP growth can be predicted.

- *Quality of legal and institutional environment*: we assess the quality of legal and institutional environment using three variables.

The first one, government efficiency is introduced by Kaufman (2003) and measures the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies.

The second one, rule of law, is introduced by La Porta et al. (1998) and reflects an assessment of the law and order tradition in the country. Average of the months of April and October of the monthly index between 1982 and 1995. Scale from 0 to 10, with lower scores for less tradition for law and order.

The third one, checks and balances, is introduced by La Porta et al. (2004) and presents an assessment of the ability of other agents to restrain the government. The index ranges from one (few veto players) to 17 (high number of veto players).

For these three variables, we expect a more positive valuation effect for rivals when the quality of legal and institutional environment in their countries is better because the information flows are less constrained and signaling effects are improved.

D.3 SWFs' specific variables

- Foreign vs. Domestic SWFs:

The literature on cross-border acquisitions shows a positive impact on domestic competitors. Otchere et al. (2006) argue that foreign acquisitions have positive impact on rival firms for two reasons. The first one is the unusual speeding of technology and innovation transfer in the industry to ensure survival among domestic firms. The second one is the increasing probability of being a future target, which is consistent with Szewczyk (1992) and Flowers (1976) findings. Similarly, Dunning (1986) provides evidence that Japanese investments are beneficial for UK rival firms. We then expect a positive relationship between rivals' valuation effects due to foreign SWFs investments.

- Level of transparency of SWFs:

Risk averse investors often react positively to more transparency around relatively new financial vehicles. This applies to SWFs since some of them do not spontaneously

disclose information about their investment activities and are considered as opaque when compared to their peers. We hypothesize here that rivals that react positively to SWFs' acquisitions welcome more transparency and information disclosure that may help them to efficiently restructure their operations. Accordingly, we expect a more positive reaction rivals' stock prices to acquisitions by SWFs with higher levels of transparency .

- *Financing sources of SWFs:*

Rivals positively react to SWFs announcements for different reasons. One of these reasons is related to the fact that SWFs are seen as liquidity provider, specifically commodity financed SWFs that look for long term investment opportunities. According to this argument, we can hypothesize that rivals have more positive reactions to commodity financed SWFs because of the strong perception/belief of abundance of liquidity in these funds. The alternative would be that rivals have more positive reactions to non-commodity financed SWFs. This is based on the idea that commodity financed SWFs have, on average, a low level of transparency compared to non-commodity financed SWFs, and that higher levels of transparency are expected to be associated with more positive reactions of rivals.

D.4 Results analysis

Table 8 displays the results of the regression analysis. We regress (-1,+1) CARs of rivals on firm, country, and SWFs characteristics. Regression 1 (column 1) shows (-1,+1) CARs regressed on firm characteristics: relative size, cash flows similarities, financial leverage, rivals valuation, and the degree of industry competition.

Insert Table 8 about here

Similar to Akhigbe and Martin (2000), *Relative size* is a dummy variable that equals one for relatively small rivals and zero otherwise. A rival firm is defined as relatively small if its market value is below the median of the sample.

Cash flows similarity is calculated using the correlation between stock returns of the target and the rival over the 200-days period prior to the SWF announcement.

Financial leverage is defined as the ratio of total long term debt to total equity of the rival.

Rivals' valuation aims to assess if a firm is undervalued or not. Similar to Otchere et al. (2006), we calculate Tobin' Q as the sum of the market value of equity, the value of preferred stock, and the value of short term liabilities plus the long term debt, all divided by the firm's total assets.

We use the Herfindahl index as a proxy for the degree of competition. We calculate the Herfindahl index as the squared sum of the fractions of industry market capitalization by the rival firms. An industry is considered less competitive with a greater Herfindahl index.

For targets stock price reaction, the (-1,+1) CAR for each target is calculated in the same manner as for rival firms.

In regression 2 (column 2), we add SWFs characteristics: cross border SWFs, level of transparency of SWFs, and commodity financed SWFs. Cross border SWFs is a dummy variable that equals one if the announcement involves a foreign SWF and zero otherwise.

Level of transparency of SWFs is a dummy variable built using the Linaburg-Maduell Transparency Index that comes from the SWF Institute. This index ranges from 1 to 10 (1 for low level of transparency and 10 for a high level of transparency). The dummy variable

equals 1 if the Linaburg-Maduell Transparency Index is higher than the median of the sample and zero otherwise. Finally, commodity financed SWFs is a dummy variable that equals 1 if the SWF is commodity financed and zero otherwise

In regression 3 to 5 (columns 3 to 5), we investigate the explanatory power of country characteristics: GDP growth, government efficiency, Rule of law, and Checks and balances whose construction and sources were detailed above.

Relative size of rival firms is found to be negative and significant at conventional levels. As hypothesized, the positive valuation effects are greater (smaller) for relatively large (small) rivals. The valuation effects are also greater for rival portfolios when their stock returns are highly correlated with the returns of the target. We thus conclude that rivals with similar cash flows may be candidates for future takeovers by SWFs.

Financial leverage is found statistically significant at conventional levels, and negatively related to the dependent variable. As expected, the positive valuation effects are greater (smaller) for low (high) leveraged rivals. Results also show that target valuation is not statistically significant, even if it has the right expected sign.

Table 8 shows that the positive valuation effects are greater (smaller) for rivals in less (more) competitive industries (i.e. industries with higher Herfindahl index). This relationship is statistically significant at conventional levels.

The same table does not show evidence that country specific characteristics are material in explaining the cross-sectional variations in rivals' valuation effects. In fact, GDP growth as well as the "Checks and balances" are not statistically significant at conventional levels. The variables "Rule of law" and "Government efficiency" only show a weak evidence

supporting the idea that the positive valuation effects are greater (smaller) for rivals in countries with high (low) levels of quality of legal and institutional environment.

Table 8 also shows that positive valuation effects are greater (smaller) when SWFs are more (less) transparent, are foreign (domestic), and are commodity (non-commodity) financed. These three relationships are consistent with our prior predictions and are statistically significant at conventional levels.

Overall, relatively large rivals, low leveraged rivals, rivals with similar cash flow as their corresponding targets, rivals in less competitive industries are more likely to benefit from SWFs announcements. These characteristics support the monitoring hypothesis since the positive market reactions of rivals following SWFs announcements seem to signal that these firms (rivals, for instance) may restructure their operations in order to reduce agency costs and create value. Cross border investments partially explain the cross-sectional variations in the positive valuation effects of rivals, as well as investments coming from commodity financed SWFs, and SWFs with high levels of transparency. Thus, transparent SWFs, commodity-financed SWFs, and foreign SWFs are perceived positively as far as rival valuation is concerned. Regarding country characteristics there is weak evidence supporting the ability of legal and institutional environments to explain cross-sectional variation in valuation effects. Finally, economic conditions have no explanatory power in the cross-sectional regression.

V. CONCLUSION

In this paper, we studied the impact of SWFs activities on the performance of target firms' competitors. Our results record a positive and statistically significant impact of 1.20% on target firms' competitors around the announcement date. Our results imply that market participants clearly welcome SWFs investments from an industry perspective. Our results are shown to be robust to a battery of robustness checks, namely the use of an alternative definition of competitors, the use of different markets models and market indices, and the use of different estimation periods.

We run a cross-sectional regression that shows that relatively large rivals, low leveraged rivals, rivals with similar cash flow as their corresponding targets, rivals in less competitive industries are more likely to benefit from SWFs announcements. These characteristics support the monitoring hypothesis since the positive market reactions of rivals following SWFs announcements seem to signal that these firms (rivals, for instance) may restructure their operations in order to reduce agency costs and create value.

Our results also show that cross border SWFs investments partially explain the cross-sectional variations in the positive valuation effects of rivals, as well as investments coming from commodity financed SWFs, and SWFs with high levels of transparency. Thus, transparent SWFs, commodity financed SWFs, and foreign SWFs receive positive market signals as far as rival valuation is concerned.

Regarding country characteristics, empirics provide weak evidence about the ability of the legal and institutional environments to explain the cross-sectional variation in the observed positive valuation effects. Economic conditions have no explanatory power.

Our results have policy and regulatory implications. In fact, since our results clearly support the monitoring potential behavior of SWFs toward rivals, they also raise the question of the underlying rationality, and hence the legitimacy, of the protectionist measures that many countries have put in place as legal barriers to SWFs cross-border investment activities.

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Table 1: Sovereign Wealth Funds Size by Year, Region and Funding Source

Year	Fund Size (billion \$) *	SWF Size Distribution by Region *	
		Region	Distribution
1999	830	Asia	40%
2000	1123	Middle East	35%
2001	1058	Europe	17%
2002	1238	Americas	3%
2003	1467	Africa	3%
2004	1874	Other	2%
2005	2306	Total	100%
2006	2988	SWF Size Distribution by Funding Source *	
2007	3717		
2008	3863	Funding Source	Distribution
2009	3797	Oil & Gaz	58%
2010	3938	Non-Commodity	42%
2011	4737	Total	100%

This table reports the evolution of SWFs size during the 1999-2011 and their distribution by region and by funding source.

* Updated in January 2012

Table 2: Largest Sovereign Wealth Funds by Assets Under Management ***

Country	Fund Name	Assets (\$Billion)	Inception	Origin	Linaburg-Maduell Transparency Index
Norway	GPF - Global	\$656.2	1990	Oil	10
UAE - Abu Dhabi	ADIA	\$627	1976	Oil	5
China	SAFE Investment Company	\$567.9**	1997	Non-Commodity	4
Saudi Arabia	SAMA Foreign Holdings	\$532.8	n/a	Oil	4
China	CIC	\$482	2007	Non-Commodity	7
Kuwait	KIA	\$296	1953	Oil	6
China - Hong Kong	Hong Kong Monetary Authority Investment Portfolio	\$293.3	1993	Non-Commodity	8
Singapore	Government of Singapore Investment Corporation	\$247.5	1981	Non-Commodity	6
Singapore	Temasek Holdings	\$157.5	1974	Non-Commodity	10
Russia	National Welfare Fund	\$149.7*	2008	Oil	5
China	National Social Security Fund	\$134.5	2000	Non-Commodity	5
Qatar	QIA	\$115	2005	Oil	5
Australia	Australian Future Fund	\$78.2	2006	Non-Commodity	10
UAE - Dubai	Investment Corporation of Dubai	\$70	2006	Oil	4
UAE - Abu Dhabi	IPIC	\$65.3	1984	Oil	9
Libya	Libyan Investment Authority	\$65	2006	Oil	1
Kazakhstan	Kazakhstan National Fund	\$61.8	2000	Oil	8
Algeria	Revenue Regulation Fund	\$56.7	2000	Oil	1
UAE - Abu Dhabi	Mubadala Development Company	\$48.2	2002	Oil	10
South Korea	Korea Investment Corporation	\$43	2005	Non-Commodity	9
US - Alaska	Alaska Permanent Fund	\$42.3	1976	Oil	10
Malaysia	Khazanah Nasional	\$34	1993	Non-Commodity	5
Azerbaijan	State Oil Fund	\$32.7	1999	Oil	10
Brunei	Brunei Investment Agency	\$30	1983	Oil	1
France	Strategic Investment Fund	\$28	2008	Non-Commodity	9
US - Texas	Texas Permanent School Fund	\$25.5	1854	Oil & Other	9
Iran	Oil Stabilisation Fund	\$23	1999	Oil	1
Ireland	National Pensions Reserve Fund	\$17.5	2001	Non-Commodity	10
Canada	Alberta's Heritage Fund	\$15.9	1976	Oil	9
New Zealand	New Zealand Superannuation Fund	\$15.5	2003	Non-Commodity	10
Chile	Social and Economic Stabilization Fund	\$14.7	2007	Copper	10
US - New Mexico	New Mexico State Investment Council	\$14.3	1958	Non-Commodity	9
Brazil	Sovereign Fund of Brazil	\$11.3	2008	Non-Commodity	9

Table 2 (continued ...)

Country	Fund Name	Assets (\$Billion)	Inception	Origin	Linaburg-Maduell Transparency Index
East Timor	Timor-Leste Petroleum Fund	\$10.2	2005	Oil & Gas	8
Bahrain	Mumtalakat Holding Company	\$9.1	2006	Non-Commodity	9
Oman	State General Reserve Fund	\$8.2	1980	Oil & Gas	1
Peru	Fiscal Stabilization Fund	\$7.1	1999	Non-Commodity	n/a
Botswana	Pula Fund	\$6.9	1994	Diamonds & Minerals	6
Mexico	Oil Revenues Stabilization Fund of Mexico	\$6.0	2000	Oil	n/a
Chile	Pension Reserve Fund	\$5.7	2006	Copper	10
US - Wyoming	Permanent Wyoming Mineral Trust Fund	\$5.6	1974	Minerals	9
Saudi Arabia	Public Investment Fund	\$5.3	2008	Oil	4
China	China-Africa Development Fund	\$5.0	2007	Non-Commodity	4
Trinidad & Tobago	Heritage and Stabilization Fund	\$2.9	2000	Oil	8
US - Alabama	Alabama Trust Fund	\$2.5	1985	Oil & Gas	n/a
Italy	Italian Strategic Fund	\$1.4	2011	Non-Commodity	n/a
UAE - Ras Al Khaimah	RAK Investment Authority	\$1.2	2005	Oil	3
Nigeria	Nigerian Sovereign Investment Authority	\$1	2011	Oil	n/a
Palestine	Palestine Investment Fund	\$0.8	2003	Non-Commodity	n/a
Venezuela	FEM	\$0.8	1998	Oil	1
US - North Dakota	North Dakota Legacy Fund	\$0.5	2011	Oil & Gas	n/a
Vietnam	State Capital Investment Corporation	\$0.5	2006	Non-Commodity	4
Kiribati	Revenue Equalization Reserve Fund	\$0.4	1956	Phosphates	1
Gabon	Gabon Sovereign Wealth Fund	\$0.4	1998	Oil	n/a
Indonesia	Government Investment Unit	\$0.3	2006	Non-Commodity	n/a
Mauritania	National Fund for Hydrocarbon Reserves	\$0.3	2006	Oil & Gas	1
Equatorial Guinea	Fund for Future Generations	\$0.08	2002	Oil	n/a
UAE - Federal	Emirates Investment Authority	n/a	2007	Oil	2
Oman	Oman Investment Fund	n/a	2006	Oil	n/a
UAE - Abu Dhabi	Abu Dhabi Investment Council	n/a	2007	Oil	n/a
Papua New Guinea	Papua New Guinea Sovereign Wealth Fund	n/a	2011	Gas	n/a
Mongolia	Fiscal Stability Fund	n/a	2011	Minerals	n/a
Total Oil & Gas Related		\$2 952.5			
Total Other		\$2,182.0			
TOTAL		\$5,134.5			

This table reports the list of the largest SWFs in terms of assets under management, the size of their portfolios, their inception date, their financing source and the Linaburg-Maduell Transparency Index, a rating index developed by the SWFs Institute to reflect the level of transparency of a SWF. The index ranges from 0 to 10, high values are attributed to SWFs with higher transparency levels and low values for lower transparency levels. Commodities mainly include oil, gas, diamonds, and copper.

*This includes the oil stabilization fund of Russia; **This number is a best guess estimation; ***Updated September 2012

Table 3 : Sample Distributions of rivals and targets by industry, country and year

Industry	Rivals		Targets		Country	Rivals		Targets	
	#	%	#	%		#	%	#	%
Construction	26	3%	22	5%	AUSTRALIA	113	13%	49	13%
Finance, Ins., & Real Estate	370	42%	151	39%	BRAZIL	1	0%	1	0%
Manufacturing	207	23%	85	22%	CANADA	56	6%	24	7%
Mining	168	19%	75	18%	CHINA	125	14%	62	15%
Retail Trade	13	1%	6	2%	COLOMBIA	2	0%	1	0%
Services	66	7%	39	10%	EGYPT	13	1%	6	2%
Transp. & Public Utilities	34	4%	12	3%	GERMANY	1	0%	1	0%
Wholesale Trade	6	1%	3	1%	HONG KONG	16	2%	7	2%
Total	890	100%	393	100%	INDIA	111	12%	53	14%
Year	#	%	#	%	INDONESIA	10	1%	4	1%
1994	11	1%	5	1%	ITALY	35	4%	12	3%
1996	1	0%	1	0%	JAPAN	3	0%	1	0%
1997	3	0%	1	0%	KUWAIT	1	0%	1	0%
1999	4	0%	2	0%	MALAYSIA	35	4%	13	3%
2000	1	0%	1	0%	PAKISTAN	3	0%	1	0%
2001	20	2%	9	2%	PHILIPPINES	3	0%	1	0%
2002	4	0%	2	0%	QATAR	1	0%	1	0%
2003	112	13%	57	14%	SINGAPORE	12	1%	4	1%
2004	71	8%	32	9%	TAIWAN	11	1%	3	1%
2005	24	3%	10	3%	THAILAND	30	3%	14	3%
2006	131	15%	61	16%	USA	306	34%	133	35%
2007	131	15%	59	15%	VIETNAM	2	0%	1	0%
2008	189	21%	68	18%	Total	890	100%	393	100%
2009	60	7%	29	8%					
2010	88	10%	39	10%					
2011	20	2%	8	2%					
2012	20	2%	9	2%					
Total	890	100%	393	100%					

This table presents the distribution of competitors and targets by country, industry, and year of the SWF event. The sample covers the period 1994-2012.

Table 4: Univariate analysis

	Rivals	Targets	p-values for difference between rivals and targets
Leverage	0.122	0.109	0.08*
Total assets (\$M)	759.81	1134.12	0.13
Tangible assets (\$M)	564.37	895.34	0.04**
ROE	1.45	1.62	0.22
Tobin's Q	1.65	1.04	0.009***
<i>N</i>	890	393	

*** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level.

Table 5: Competitors Stock Market Reaction to SWFs announcements

	CAR (%)	T-Stat	Percent positive
Panel A: Entire sample of competitors			
(0,+1)	0.868%	(4.88)***	52%
(-1,+1)	1.207%	(6.34)***	57%
(-2,+2)	1.003%	(3.43)***	54%
Panel B: Sample of competitors of rivals targeted by SWFs with low level of transparency			
(0,+1)	1.151%	(4.08)***	54%
(-1,+1)	1.858%	(5.64)***	57%
(-2,+2)	1.617%	(3.24)***	51%
Panel C: Sample of competitors of rivals targeted by SWFs financed by Gaz & Oil			
(0,+1)	1.017%	(3.81)***	57%
(-1,+1)	1.731%	(5.56)***	60%
(-2,+2)	1.491%	(3.17)***	54%
Panel D: Sample of competitors of rivals targeted by SWFs during the financial crisis			
(0,+1)	1.878%	(4.82)***	60%
(-1,+1)	2.284%	(5.00)***	59%
(-2,+2)	1.086%	(1.67)*	45%
Panel E: Sample of competitors of rivals targeted by SWFs acquiring more than 5% of stakes			
(0,+1)	1.017%	(4.95)***	51%
(-1,+1)	1.460%	(6.12)***	57%
(-2,+2)	1.199%	(3.49)***	55%
Panel F: Sample of competitors of rivals targeted by SWFs doing Cross-border investments			
(0,+1)	0.869%	(4.80)***	52%
(-1,+1)	1.341%	(6.39)***	57%
(-2,+2)	0.984%	(3.30)***	54%

This table presents the initial stock market reaction of competitors to the announcements of SWF investments. Daily abnormal returns are market model adjusted using parameters estimated over a 160-day estimation period. The MSCI All Country World Index (ACWI) from DataStream is used as a proxy for market returns. Panel A presents CARs for the entire sample. Panel B presents CARs of competitors in reaction to SWFs with low transparency index (index value = 5 and lower). Panel C presents CARs of competitors in reaction to SWFs that are financed by oil and gas revenues. Panel D presents CARs of competitors in reaction to SWFs transactions during the 2007-2008 crises. Panel E presents CARs of competitors in reaction to SWFs transactions where more than 5% of the target stakes were acquired. Panel F presents CARs of competitors in reaction to cross-border investments. *** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level.

Table 6: Stock Market Reaction of Competitors, defined using the "Total Assets"

	CAR (%)	T-Stat	Percent positive
Panel A: Entire sample of competitors			
(0,+1)	0.731%	(4.55)***	52%
(-1,+1)	1.112%	(5.96)***	56%
(-2,+2)	0.785%	(3.00)***	54%
Panel B: Sample of competitors of rivals targeted by SWFs with low level of transparency			
(0,+1)	1.023%	(4.09)***	53%
(-1,+1)	1.667%	(5.70)***	57%
(-2,+2)	1.413%	(3.28)***	52%
Panel C: Sample of competitors of rivals targeted by SWFs financed by Gaz & Oil			
(0,+1)	1.404%	(5.17)***	57%
(-1,+1)	2.118%	(6.53)***	59%
(-2,+2)	2.186%	(4.50)***	55%
Panel D: Sample of competitors of rivals targeted by SWFs during the financial crisis			
(0,+1)	1.519%	(4.16)***	59%
(-1,+1)	1.771%	(4.17)***	56%
(-2,+2)	0.662%	(1.11)	45%
Panel E: Sample of competitors of rivals targeted by SWFs acquiring more than 5% of stakes			
(0,+1)	0.984%	(4.89)***	51%
(-1,+1)	1.401%	(6.00)***	57%
(-2,+2)	1.183%	(3.52)***	55%
Panel F: Sample of competitors of rivals targeted by SWFs doing Cross-border investments			
(0,+1)	0.727%	(4.38)***	52%
(-1,+1)	1.163%	(6.05)***	56%
(-2,+2)	0.743%	(2.75)***	53%

This table presents the initial stock market reaction of competitors defined using the "Total Assets" criteria, to the announcements of SWF investments. Daily abnormal returns are market model adjusted using parameters estimated over a 160-day estimation period. The MSCI All Country World Index (ACWI) from DataStream is used as a proxy for market returns. Panel A presents CARs for the entire sample. Panel B presents CARs of competitors in reaction to SWFs with low transparency index (index value = 5 and lower). Panel C presents CARs of competitors in reaction to SWFs that are financed by oil and gas revenues. Panel D presents CARs of competitors in reaction to SWFs transactions during the 2007-2008 crises. Panel E presents CARs of competitors in reaction to SWFs transactions where more than 5% of the target stakes were acquired. Panel F presents CARs of competitors in reaction to cross-border investments. *** indicates significance at the 1% level, ** indicates significance at the 5% level, and * indicates significance at the 10% level.

Table 7: Using Alternative Benchmarks to Measure Competitors Stock Market Reaction to SWFs announcements

	1 st benchmark: DataStream's value-weighted national stock market indexes			2 nd benchmark: Fama & French (1998) model		
	CAR (%)	T-Stat	Percent positive	CAR (%)	T-Stat	Percent positive
Panel A: Entire sample of competitors						
(0,+1)	0.632%	(4.73) ^{***}	51%	0.681%	(4.81) ^{***}	54%
(-1,+1)	1.227%	(6.14) ^{***}	55%	1.169%	(6.29) ^{***}	58%
(-2,+2)	1.033%	(3.40) ^{***}	53%	0.909%	(3.52) ^{***}	56%
Panel B: Sample of competitors of rivals targeted by SWFs with low level of transparency						
(0,+1)	1.091%	(4.01) ^{***}	53%	1.057%	(4.11) ^{***}	53%
(-1,+1)	1.628%	(5.23) ^{***}	57%	1.648%	(5.45) ^{***}	57%
(-2,+2)	1.478%	(3.21) ^{***}	51%	1.446%	(3.20) ^{***}	51%
Panel C: Sample of competitors of rivals targeted by SWFs financed by Gaz & Oil						
(0,+1)	0.987%	(3.89) ^{***}	55%	1.196%	(3.68) ^{***}	55%
(-1,+1)	1.523%	(5.65) ^{***}	60%	1.820%	(5.52) ^{***}	61%
(-2,+2)	1.221%	(3.08) ^{***}	55%	1.703%	(3.09) ^{***}	55%
Panel D: Sample of competitors of rivals targeted by SWFs during the financial crisis						
(0,+1)	1.673%	(4.69) ^{***}	61%	1.596%	(4.89) ^{***}	59%
(-1,+1)	1.874%	(5.02) ^{***}	56%	1.823%	(5.06) ^{***}	59%
(-2,+2)	1.016%	(1.09)	50%	0.839%	(1.07)	48%
Panel E: Sample of competitors of rivals targeted by SWFs acquiring more than 5% of stakes						
(0,+1)	0.887%	(4.82) ^{***}	52%	0.936%	(4.88) ^{***}	51%
(-1,+1)	1.240%	(5.96) ^{***}	57%	1.320%	(6.04) ^{***}	58%
(-2,+2)	1.051%	(3.57) ^{***}	53%	1.117%	(3.41) ^{***}	54%
Panel F: Sample of competitors of rivals targeted by SWFs doing Cross-border investments						
(0,+1)	0.689%	(4.85) ^{***}	54%	0.708%	(4.76) ^{***}	53%
(-1,+1)	1.011%	(6.39) ^{***}	57%	1.087%	(6.07) ^{***}	57%
(-2,+2)	0.794%	(3.41) ^{***}	53%	0.769%	(3.39) ^{***}	55%

This table presents the results of using two alternative benchmarks as robustness checks in measuring the initial stock market reaction of competitors to the announcements of SWF investments. The first benchmark consists on using DataStream's value-weighted national stock market indexes. The second benchmark consists on using the Fama & French (1998) model. Panel A presents CARs for the entire sample. Panel B presents CARs of competitors in reaction to SWFs with low transparency index (index value = 5 and lower). Panel C presents CARs of competitors in reaction to SWFs that are financed by oil and gas revenues. Panel D presents CARs of competitors in reaction to SWFs transactions during the 2007-2008 crises. Panel E presents CARs of competitors in reaction to SWFs transactions where more than 5% of the target stakes were acquired. Panel F presents CARs of competitors in reaction to cross-border investments. The definition of "Competitors" here is based on the "Market Cap" criteria. ^{***} indicates significance at the 1% level, ^{**} indicates significance at the 5% level, and ^{*} indicates significance at the 10% level.

Table 8 : Cross-sectional analysis of rivals stock price effects

Explanatory variables	(1)	(2)	(3)	(4)	(5)
Relative size	-0.150*** (0.0326)	-0.143*** (0.0392)	-0.168*** (0.0402)	-0.121*** (0.0291)	-0.172*** (0.0391)
Cash flows similarities	0.056* (0.0296)	0.044* (0.0252)	0.072* (0.0357)	0.064** (0.0282)	0.060* (0.0331)
Financial leverage	-0.149*** (0.0379)	-0.144*** (0.0376)	-0.159*** (0.0318)	-0.155*** (0.0385)	-0.146*** (0.0458)
Rivals valuation	-0.428 (0.1073)	-0.445 (0.2176)	-0.403 (0.1385)	-0.421* (0.1527)	-0.462 (0.2490)
Degree of industry competition	0.107*** (0.0320)	0.118*** (0.0288)	0.114** (0.0327)	0.141** (0.0416)	0.087*** (0.0314)
Cross border SWFs		0.896* (0.3802)	0.930** (0.2580)	1,037* (0.3622)	0.827** (0.2377)
Level of transparency of SWFs		0.368** (0.0812)	0.325*** (0.0808)	0.284*** (0.0885)	0.302*** (0.0795)
Commodity financed SWFs		0.608** (0.2126)	0.792** (0.3058)	0.662*** (0.2655)	0.631** (0.2381)
GDP Growth			0.103 (0.0782)	0.081 (0.0639)	0.121 (0.0932)
Government efficiency			0.142* (0.0630)		
Rule of law				0.085* (0.0389)	
Checks and Balances					0.068 (0.0521)
Constant	1.540*** (0.4362)	1.416*** (0.3316)	1.359*** (0.3437)	0.952*** (0.2511)	1.620** (0.4590)
Adj. R2	0.5020	0.4980	0.5199	0.5162	0.5178
Observations	890	890	890	890	890

This table reports our cross-sectional regression results. Relative size is a dummy variable that equals 1 for relatively small rivals (market value is below the median of the sample) and 0 otherwise. Cash flows similarities are proxied by the correlation between stock returns of the target and the rival over the 200-days period prior to the SWF announcement. Financial leverage is defined as the ratio of total long term debt to total equity of the rival. Rivals valuation is proxied by Tobin' Q. Herfindahl index is a proxy for the degree of competition and is calculated as the squared sum of the fractions of industry market capitalization by the rival firms. The (-1,+1) CAR for each rival if used for firm stock price reaction. Cross border SWFs is a dummy variable that equals 1 if the announcement involves a foreign SWF and 0 otherwise. Level of transparency of SWFs is a dummy variable equals 1 if the Linaburg-Maduell Transparency Index is higher than the median of the sample and 0 otherwise. Commodity financed SWFs is a dummy variable that equals 1 if the SWF is commodity financed and 0 otherwise. Government efficiency, Rule of law, and Checks and balances are defined by Kaufmann (2003), La Porta et al. (1998), and La Porta et al. (2004) respectively. The dependent variable is the (-1,+1) CAR for rivals. Standard errors are presented in parentheses and significance levels are presented in parentheses and significance levels are presented as follows: *** p<0.01, ** p<0.05, * p<0.1.