The Impact of Sovereign Wealth Fund Investments on Listed United States Companies

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Sovereign wealth funds, as defined by the United States treasury, are government investment funds funded by foreign currency reserves but managed separately from official currency reserves. Basically, they are government funds set up to invest pools of reserves for profit. In the past, sovereign wealth funds generally acted as any other large institutional investor, buying small stakes in well diversified portfolios of equities from emerging and developed markets as well as fixed income securities. However, coinciding with the sharp increase in the price of oil from 2002-2007, sovereign wealth funds have recently become much more active investing in equity in the United States. The debate regarding the impact of sovereign wealth fund investments on listed companies in the United States really came to the fore at the beginning of the subprime mortgage crisis in the summer of 2007. The United States financial sector, desperately needing influxes of capital to mitigate the impact of toxic mortgage backed securities and prevent insolvency, turned to sovereign wealth funds from a variety of countries in order to tap their pools of cash. Sovereign wealth funds from the Middle East, as well as China and Singapore, jumped at the chance to purchase large stakes in some of the pillars of the American financial sector, buying $60 billion in newly issued equity from American and European banks at the height of the subprime mortgage crisis (Beck 2008).

These recent investments have raised a number of questions within the United States and around the world as to the impact of these sovereign wealth fund investments on listed companies. How important are sovereign wealth funds for financial markets in the United States? What effects do they have on the companies in which they invest? How, if at all, do they influence business practices? Existing literature has posited theories about the impact of large institutional investors, such as sovereign wealth funds, on firm performance. One theory is that their impact is positive, because they actively seek to monitor the actions of firm management. Another theory is that they hurt domestic

markets because they impose goals and agency costs not consistent with the best interests of the firm and other shareholders. A third view is that they have no effect on US markets, except perhaps through identifying underpriced securities.

This paper recreates the portfolio of all investments by sovereign wealth funds in the United States, and seeks to examine the investment behavior of these funds and test whether these funds create value for the companies in which they invest. I study the importance and market impact of sovereign funds using data on target companies' prices and returns. I use an event study approach and calculate the abnormal return earned by target companies subsequent to investments made by sovereign funds. The sign and magnitude of these returns over different horizons shed light on the different hypotheses regarding the impact of large shareholders on firm performance. The effect of sovereign wealth fund investments on firm performance is then related to specific rankings for governance and transparency developed by economists, as well as a "celebrity" binary variable for funds that are particularly well known.

My main findings are the following. Contrary to popular perception, the average stake that sovereign wealth funds purchase in United States companies is relatively small, while all sovereign wealth funds seem to favor stocks within the United States financial sector, which I interpret to mean that fears over recent investments are somewhat overblown. Abnormal returns on shares of equity targeted by sovereign wealth funds appear to be significantly negative, both on the day of the investment and for the time horizons subsequent to the day of the investment. This study interprets this result as evidence that sovereign wealth funds have a negative long run impact on firm performance, possibly through imposing additional agency costs, that is correctly anticipated by the market in the short run. Interestingly, this study reveals that high sovereign wealth fund rankings for governance and

transparency do not lead to improved firm performance, but that investments made by "celebrity" funds seem to perform better than investments made by their lesser known counterparts.

These results suggest that sovereign wealth funds impose agency costs on the firms in which they invest that lead to deteriorating firm performance. It seems that "celebrity" funds have particular skill at identifying underpriced securities, resulting in more positive returns for these funds. However, there is a puzzle that leaves room for further research. The 180 day abnormal return for the sovereign wealth fund investments is significantly positive, while the return for the three other time horizons is significantly negative. Perhaps this puzzle is merely due to the small sample size of sovereign wealth investments in the United States, or there may be reason to believe that the true effects of the agency costs imposed by sovereign wealth funds are not felt over a shorter time horizon.

This paper is structured as follows. Section I offers background about sovereign wealth funds. Section II provides a review of both sides of the sovereign wealth fund debate. Section III contains a review of applicable literature on sovereign wealth funds and the impact of large shareholders on company performance. Section IV develops testable hypothesis. Section V discusses data sources and methodology. Section VI presents an analysis of sovereign wealth fund investment patterns. Section VII provides empirical results. Section VIII provides results from the regression analysis. Section IX concludes.

I. Background on Sovereign Wealth Funds:

The first example of a sovereign wealth fund as defined by economists today was founded in Kuwait in 1953. The motivation behind the establishment of the Kuwait Investment Authority was to protect the national standard of living from fluctuations in the price of Kuwait's primary export and source of revenue, oil. One of the first funds to follow the Kuwait Investment Authority, the Kiribati

Revenue Equalization Reserve Fund, was set up in the Pacific island nation of Kiribati in order to manage revenues from phosphate (guano) deposits (Truman 2007). Despite their humble beginnings, a variety of sovereign wealth funds have been developed since 1953 in countries as diverse as China, Trinidad and Tobago, and Norway. Sovereign wealth funds currently control only $3.3 trillion in assets, 2 percent of the global total of traded securities, but economists project that their total assets under management will reach $12 trillion by 2012, representing 10 percent of all global traded securities. Commodity stabilization funds, defined as funds deriving their reserves from commodities such as oil, currently account for 70 percent of total sovereign wealth investments. However, other sovereign wealth funds exist with varied aims, including preserving wealth for future generations, encouraging key domestic industries, or simply seeking higher rates of returns on foreign exchange reserves (Goff 2007).

The best known sovereign wealth funds come from Norway, Singapore, and the Middle East. Norway's Government Pension Fund (previously the Petroleum Fund of Norway) was founded in 1990 and today manages over $300 billion in assets. The Government Pension Fund invests in a variety of securities from emerging and developed markets. Until 1998, the fund only invested in a conservative portfolio of government bonds and other fixed income securities. The fund rarely seeks management control of its investments, preferring instead to buy small stakes of foreign companies. However, recently the Government Pension Fund has taken to purchasing larger shares (over 5 percent) in American biotechnology firms, seemingly attempting to gain access to cutting edge medical technology to treat an aging population.

Temasek is the strategic investment arm of the government of Singapore and was founded in 1974. Temasek makes direct long term investments in foreign equities and tends to take a more active approach managing its investments. Temasek has become more transparent about its investments since 2004, but complete financial data prior to that year is still unavailable. From its inception in 1974

Temasek has been controlled by chief executive Ho Ching, the wife of Prime Minister Lee Hsien Loong. However, Charles Goodyear, former chief executive officer of mining corporation BHP Billiton was named designate chief executive officer of Temasek on March 1, 2009 and will take over from Ms. Ho on October 1, 2009. Economists believe that this hiring signals a continued move away from close ties with government and towards more transparency.

Singapore's Government Investment Corporation was set up in 1981 to manage the country's foreign exchange reserves. The Ministry of Finance of Singapore determines the investment strategies of the Government Investment Corporation of Singapore, and the fund has had close ties to the government even though it was founded as a private company. Since then, the International Monetary Fund has continually urged the Government Investment Corporation to be more transparent about the target and size of their investments.

The Abu Dhabi Investment Authority, Investment Corporation of Dubai, Mubadala, and the Kuwait Investment Authority now manage over $1 trillion in assets, although their holdings have been reduced considerably by the recent fall in the price of oil. These funds, with the exception of the Kuwait Investment Authority, were all founded in the 1970s, a period characterized by high and increasing oil prices. All of these funds have made high profile investments in some of the largest companies in the United States, mostly within the financial sector. The Abu Dhabi Investment Authority purchased a ten percent stake in American conglomerate General Electric in 2008, becoming one of the company's ten largest shareholders. The funds from the United Arab Emirates are some of the best known as well as the least transparent about the holdings and investment strategies amongst all sovereign wealth funds to invest in the United States.

The two sovereign wealth funds causing the most debate in the United States are the funds from Russia and China. Russia's Oil Stability Fund, established in 2003, now manages over $200 billion in

assets, although this fund has yet to make an equity investment in the United Sates. The China Investment Corporation (CIC) was founded in 2007 and is charged with aggressively managing over $200 billion of China's $1.3 trillion foreign exchange reserves. The CIC made one of the highest profile investments in a United States company, purchasing a non-voting $3 billion stake before the much anticipated initial public offering of the private equity firm Blackstone Group in June 2007. The China Investment's Corporation's investment proceeded to lose $500 million as Blackstone's stock underperformed after its initial public offering, leading to heavy criticism of the CIC within the Chinese government for investing in foreign equities.

II. The Sovereign Wealth Fund Debate:

Opinions differ as to the impact of investments by sovereign wealth funds on listed United States companies. Many economists, such as Christopher Balding, argue that there is no reason to believe that investments made by sovereign wealth funds are motivated by anything other than seeking the highest rate of return on their investments. Other economists believe that the United States economy owes a debt of gratitude to sovereign wealth funds for providing emergency cash infusions at a time when other sources of capital had run dry. Sovereign wealth funds tend to be well diversified investors, meaning that the large international equity investments in western companies that cause so much excitement are actually quite rare. Most sovereign wealth funds are set up to be distinct from their sponsoring governments to attempt to ensure freedom from political interference. Major sovereign wealth funds rarely choose to join the board of the companies in which they invest, and many times sovereign wealth funds intentionally purchase non-voting shares in companies to avoid public scrutiny.

However, questions persist as to whether sovereign wealth funds indeed follow best investment practices. Many economists, such as Lawrence Summers and Simon Johnson, and politicians see

potential problems with the increased size and activity of sovereign wealth funds. Some sovereign wealth funds are closely associated with state governments, in direct opposition to the idea of free market capitalism. Sovereign wealth funds have been characterized as "the return of state capitalism", a kind of new mercantilism designed to protect national interests in the global economy. Lawrence Summers, newly appointed director of the National Economic Council in the Obama Administration, wrote in the July 2007 edition of *Financial Times* that the concerns raised over sovereign wealth funds are, "profound and go to the nature of global capitalism" (Summers 2007).

One issue with sovereign wealth funds that troubles both sides of the debate is the lack of transparency in disclosing the size and target of their investments. Simon Johnson, research director at the International Monetary Fund, wrote in the fall 2007 edition of *Finance & Development*, "Unfortunately, there's a lot we don't know about sovereign funds. Very few of them publish information about their assets, liabilities, or investment strategies" (Johnson 2007). Funds that follow passive investment strategies such as Norway tend to be the most transparent, publishing their portfolios and strategies on fund websites, while the commodity funds from the Middle East tend to shroud their investments in secrecy. Increased transparency could help to alleviate many of the fears about sovereign wealth funds investing in companies in the United States.

III. Literature Review:

This empirical study of the effect of sovereign wealth funds on the performance of listed companies builds off a variety of previous literature. Andrew Razanov (2005) was the first to coin the term sovereign wealth funds, and provided the first definition of these funds. He defined sovereign wealth funds as, "neither traditional public pension funds nor reserve assets supporting national currencies but funds set up with the following objectives: insulate the budget and economy from excess

volatility in revenues, help monetary authorities sterilize unwanted liquidity, build up savings for future generations, or use the money for economic and social development." At that time, Razanov estimated the size of sovereign wealth assets under management to be more than $895 billion.

Economist Edwin Truman has provided some of the most salient literature analyzing sovereign wealth funds in general terms since 2007. Truman (2007) provides a history of sovereign wealth funds and disputes the United States Treasury's definition of sovereign wealth funds, distinguishing between stabilization funds, which are characterized by low risk investments, and sovereign wealth funds. Using his more stringent definition, Truman estimates total sovereign wealth assets under management to be approximately $2 trillion. Truman then provides a discussion of the problem of transparency, and assigns a composite score for governance, transparency, and accountability to each sovereign wealth fund that fits under his definition. Truman's scores for governance are based on the answer to the following four questions: 1) Is the role of the government in setting investment strategy clearly established? 2) Is the role of managers in executing the investment strategy clearly established? 3) Does the fund have in place and publicly available guidelines for corporate responsibility? 4) Does the fund have ethical guidelines that it follows in its investment strategy? Truman uses similar questions when establishing his rankings for transparency and accountability.

The Linaburg-Maduell Transparency Index, developed by economists at the Sovereign Wealth Fund Institute in 2007, provides additional transparency ratings for all sovereign wealth funds under the broader treasury definition. The rankings used for this study were the most recently available, given out in the fourth quarter of 2008. Norway, as expected, received the highest transparency ratings, while the Dubai Investment Corporation from the United Arab Emirates received the lowest scores of funds that have invested in equities in the United States. The Truman rankings for governance, transparency, and accountability in addition to the Linaburg-Maduell transparency index, will be helpful in assessing

whether or not sovereign wealth funds with better transparency and governance provide more value by monitoring and improving the governance of the companies in which they invest, leading to increased returns.

The main instrument through which sovereign wealth funds can affect company performance is by pressuring for changes that improve corporate governance. While a study of the specific impacts of sovereign wealth funds on corporate governance has yet to be completed, two contrasting theories about the impact of large institutional shareholders exist in previous literature. Shleifer and Vishny (1986) showed that small shareholders lack the right incentives to demand improved managerial performance since their holdings are so small the opportunity cost of monitoring managers and improving governance is not worth the increased returns. They suggest that large institutional investors present a partial solution to this free rider problem, since their large shares give them the incentives to monitor and improve managerial performance. On the other hand, Demsetz and Lehn (1985) found that large shareholders are not well diversified and therefore demand an unnecessary reduction of company risk, forcing the company to be overly conservative and possibly pass up new investment projects. They also hypothesized that large investors may create an agency problem, forcing the company to act solely in their interest and ignore the interests of other shareholders, employees, and even society as a whole. This theory, however, was discredited by Bergstrom and Rydqvist (1990) using empirical evidence from Sweden.

Two analyses of sovereign wealth investments have been done by economists in the past year. Christopher Balding (2008) from the University of California at Irvine, performed a portfolio analysis of global sovereign wealth investments, concluding that no evidence exists to suggest that sovereign wealth funds have acted as anything other than rational investors, diversifying their portfolio between fixed income, commercial real estate, and equity. Fotak, Bortolli, and Megginson (2008) from the University

of Oklahoma performed the only empirical analysis of global sovereign wealth fund investments to date. They showed that sovereign wealth investments around the world saw a negative abnormal return over a 240 day period, suggesting sovereign wealth equity acquisitions are followed by deteriorating firm performance. This empirical study of sovereign wealth fund investments in the United States builds upon this previous literature and seeks to determine whether sovereign wealth investments create value for the companies in which they invest by analyzing the market adjusted short and long term returns on the sovereign wealth investments in United States equity.

IV. Testable Hypotheses:

Do sovereign wealth funds add value to the companies in which they invest through improved governance and management? This paper recreates the portfolio of all investments in United States equities by sovereign wealth funds from Canada, China, Korea, Kuwait, Norway, Singapore, and the United Arab Emirates. This portfolio contains a total of 605 observations of sovereign wealth investments in the United States. The short and long run market reaction to sovereign wealth investments can be obtained by doing an event study of short and long term market adjusted abnormal returns. Short run is defined as the initial market reaction the day of the sovereign wealth investment. Long run is defined as 180, 360, and 720 days following the day of the original sovereign wealth investment.

Using the Truman ratings for transparency, governance, and accountability, as well as the Linaburg-Maduell Transparency Index, it is possible to hypothesize that sovereign wealth investments create value for the companies in which they invest by improving governance and managerial monitoring. This value would translate into higher stock prices and therefore positive abnormal returns for the company's investors. Using similar logic, the positive impact of improvements in governance

and transparency would have a more profound effect on returns the larger the stake in the company purchased by the sovereign wealth funds. On the other hand, considering all of the misgivings in the United States over certain high profile investment funds, termed "celebrity" funds in this paper, it is possible to hypothesize that the market would react negatively to investments made by Temasek, Mubadala, the Abu Dhabi Investment Corporation, Dubai Investment Corporation, Kuwait Investment Authority, and the China Investment Corporation, leading to negative returns in both the short and long run. Therefore, this study tests the following hypotheses for short and long term market reactions in the United States to sovereign wealth investments:

Short Run Hypotheses

H_{0a}: Sovereign wealth fund investments create positive abnormal returns on the day of the investment

H_{0b}: The magnitude of short run abnormal returns on the day of the investment is positively impacted by the size of acquired share of the United States target company

H_{0c}: The magnitude of the short run abnormal return is positively impacted by the governance of the sovereign wealth fund

H_{0d}: The magnitude of the short run abnormal return is positively impacted by the transparency of the sovereign wealth fund

$H_{0e:}$ The magnitude of the short run abnormal return is negatively impacted if the investment is made by "celebrity" funds

Long Run Hypotheses

H_{1a}: Sovereign wealth fund investments create positive long run abnormal returns over 180, 360, and 720 days

H_{1b}: The magnitude of long run abnormal returns is positively impacted by the size of the acquired share of the United States target company

H_{1c}: The magnitude of the long run abnormal return is positively impacted by the governance of the sovereign wealth fund

H_{1d}: The magnitude of the long run abnormal return is positively impacted by the transparency of the sovereign wealth fund

H_{1e}: The magnitude of the long run abnormal return is negatively impacted if the investment is made by "celebrity" funds

V. Data Sources and Methodology:

The observations of sovereign wealth investment in public companies in the United States were recorded using a search of the Securities Database Corporation Platinum Mergers and Acquisition database, Bureau Van Dijk Zephyr merger and acquisition database, and a LexisNexis Academic search of SEC 13G filings. Each search sought a case in which a sovereign wealth fund was acquiring an equity stake in a publicly traded company with headquarters in the United States. The list of sovereign wealth funds and their subsidiaries used in this search was compiled by combining the list put together by Truman with those published on the website of the Sovereign Wealth Fund Institute. All variations in the spellings of the funds were used in the search and a complete list is attached in Appendix 1 at the end of this paper.

The event study was performed using abnormal equity returns as a proxy for company performance to attempt to determine if sovereign wealth funds add value to the companies in which they invest in the United States. Stock prices on the day of the investment in the listed company, as well as 180, 360, and 720 days after the initial investment for each 605 observations of a sovereign wealth fund investment in a public United States company were recorded using Datastream International and Wharton Research Data Services. The raw returns over these specific time periods were calculated, then normalized using the return of the S&P 500 Composite Index over the same time periods, resulting in the market adjusted abnormal returns for each sovereign wealth fund investment in a public United States company.

VI. Analysis of Investment Patterns:

The sample of 605 sovereign wealth fund investments in public United States companies provides some interesting insights before even considering the abnormal returns. The majority of the investments were made by sovereign wealth funds from Norway and Singapore, which is consistent with the idea that funds from those countries tend to buy smaller stakes in a more diversified portfolio of United States companies. The average stake purchased by sovereign wealth funds in the listed companies is 1.72 percent which is weighted by the small stakes purchased by the index funds from Norway, which purchased a .05 percent stake on average when making investments in the United States. The average stake purchased by funds from the United Arab Emirates was the highest at just slightly under 20 percent, with Dubai Investment Corporation and its subsidiaries leading the way with an average of 31.82 percent stake purchased when making investments in United States equity. Maybe the most telling result of the analysis of sovereign wealth investment patterns is that all sovereign wealth funds, not merely the high profile funds, seem to be making the majority of their investment in the United States in the financial sector, although there is certainly some disparity between funds in the stake purchased. 97 observations of sovereign wealth fund investments in the United States were made in which the target firm specializes in financial services, 16 percent of all observations and far higher than any other sector.

In summary, the average stake purchased by sovereign wealth funds in United States companies seems too small to actively affect the corporate governance and transparency of the target company. However, some sovereign wealth funds do buy large enough stakes in public companies to be able to exercise power over the decision making of the leadership of the target firms, though it appears they are hesitant to exercise this power, as large sovereign wealth investments are rarely followed by significant

changes in control or leadership. It seems that all sovereign wealth funds that have made investments in the United States have favored financial companies as their targets, which suggests that sovereign wealth funds saw profit opportunities investing in financial firms even before the financial crisis in the United States. Sovereign wealth funds seemed to continue that investment pattern even when the extent of the troubles in the United States financial sector became apparent, resulting in some very significant losses in terms of raw returns for the funds over the past 18 months.

VII. Empirical Results:

A. Short Run Market Reaction

The entire sample of 605 sovereign wealth fund investments in public United States companies was used to calculate the short run market reaction to those investments on the day the investment was made. The market adjusted abnormal return on the day of the event is -.52 percent with a standard error of 2.95, which is statistically significant at the 5 percent level. This result leads to the rejection of hypothesis $H_{0a,}$ suggesting that the market in the United States predicts that sovereign wealth fund investments will negatively impact firm performance. This market prediction is consistent with the fears that many Americans who invest in and analyze equity markets share over the long term goals and investment practices of sovereign wealth funds.

B. Long Run Impact

The entire sample of 605 sovereign wealth fund investments in public United States companies was used to calculate the long term impact of those investment on firm performance over time periods of 180, 360, and 720 days after the initial investment. The market adjusted abnormal return for 360 days after the initial investment is -5.09 percent with a standard error of 46.42, which is statistically significant at the 5 percent level. The market adjusted abnormal return for 720 days after the initial

investment is -2.88 percent with a standard error of 51.94, which is statistically significant at the 10 percent level. These results allow for the rejection of hypothesis H_{1a} for the time periods 360 and 720 days after the initial investment. The rejection of this hypothesis suggests that the initial market reaction to the investments was correct, and that sovereign wealth funds investments negatively affect firm performance in the long run due to conflicts of interest caused by agency problems.

However, the market adjusted abnormal return for 180 days following the initial sovereign wealth fund investment is positive, 2.28 percent with a standard error of 25.98, which is statistically significant at the 5 percent level. This result leads to the rejection of hypothesis H_{1a} suggests that over a six month time horizon sovereign wealth funds positively impact firm performance by monitoring governance and improving the transparency of the target firms. Therefore, it seems that the initial market and long term impact over 360 and 720 day are significantly negative, while the investments seem to outperform the market over a six month horizon, a puzzle that deserves further attention.

VIII. Regression Analysis:

Regression results are presented in tables for the time horizons of the market reaction on the same day of the initial investment, as well as 180, 360 and 720 days after the investment. The response variable used to run these regressions was the market adjusted abnormal returns for the aforementioned time horizons of sovereign wealth fund investments in listed United States companies. The regression results were compiled over the time horizons of the day of the initial sovereign wealth fund investment, and 180, 360, and 720 days after that initial investment. For each response variable this paper uses five explanatory variables. *Stake* refers to the percentage share of the company purchased, *Truman Governance* refers to Truman's rankings of the corporate governance of various sovereign wealth funds, *Truman Transparency* refers to Truman's rankings of the degree of transparency and accountability of

various sovereign wealth funds, *L-M Transparency* refers to a similar transparency ranking developed by Linaburg and Maduell of the Sovereign Wealth Fund Institute, and *Celebrity* is a binary variable set to one if the sovereign wealth fund is a high profile fund from the United Arab Emirates, China, Kuwait, or Singapore.

Y=Abnormal Returns: T=0-1						
Observations: 605						
Governance	**-0.589*** **		**1.26**			**-0.48***
	(0.09)		**(1.40)**			**(0.24)**
Transparency		**0.267*** **		**-3.2**		**-0.08**
		(0.049)		**(10.74)**		**(0.22)**
L-M Transparency			**-0.29*** **	**1.17**		**0.07**
			(.102)	**(1.31)**		**(0.28)**
Celebrity		**1.55*** **	**8.2**	**2.19**	**3.899**	
		(0.24)	**(9.23)**	**(2.70)**	**(9.63)**	
Stake	**0.0428*** **				**-0.34***	
	(0.012)				**(0.19)**	

Note: * = significance at .10 level
** = significance at .05 level
*** = significance at .01 level

Regression outputs for the short run market reaction produce some interesting results. A positive relation exists between the stake purchased and short run returns, significant at the 1 percent level, suggesting that when funds purchase a larger share of a target company, the market predicts that firm performance will improve, producing higher returns on the day of the investment, which allows us to accept hypothesis $H_{0b.}$ There is a negative relation between short run returns and all three governance and transparency rankings, all significant at the 5 percent level. This result suggests that the market does not believe that funds with better governance and transparency rankings will improve firm performance, allowing us to reject hypotheses H_{0c} and $H_{0d.}$ On the other hand, there is a positive

relation between the "celebrity" binary variable and short run returns, significant at the 5 percent level. This result causes us to reject hypothesis H_{0e}.

In summary, these regression results seem to suggest that when markets react to a sovereign wealth fund investments in the short run, the notoriety of the fund and the stake that the fund purchases in the company seem to elicit more positive reactions than if the investment is made by funds with high rankings for governance, transparency, and accountability.

Y=Abnormal Returns: T=0-180							
Observations: 605							
Governance		**0.4**		**0.26**			**-2**
		(0.82)		**(0.85)**			**(2.23)**
Transparency			**0.866****		**-3.27**		**1.38**
			(0.44)		**(6.26)**		**(1.94)**
L-M Transparency				**2.3****	**-0.15**		**0.86**
				(0.90)	**(0.79)**		**(2.57)**
Celebrity			**0.45**	**3.79**	**2.83***	**0.125**	
			(2.21)	**(5.57)**	**(1.63)**	**(0.11)**	
Stake	**0.076**					**6.48**	
	(0.11)					**(5.82)**	

Y=Abnormal Returns: T=0-360							
Observations: 605							
Governance		**5.44*** **		**5.63*** **			**-8.89****
		(1.46)		**(1.50)**			**(3.95)**
Transparency			**-1.05***		**-4.93**		**1.53**
			(0.78)		**(11.09)**		**(3.43)**
L-M Transparency				**1.79**	**-5.45**		**3.099**
				(1.61)	**(1.40)**		**(4.53)**
Celebrity			**15.95*** **	**5.42**	**11.35*** **	**5.91**	
			(3.90)	**(9.85)**	**(2.89)**	**(10.42)**	
Stake	**-0.1**					**-0.145**	
	(0.20)					**(0.21)**	

Y=Abnormal Returns: T=0-720							
Observations: 605							
Governance	**-4.41*** **			**-4.94*** **			**-9.55*** **
	(1.64)			**(1.69)**			**(4.43)**
Transparency		**-0.24**			**-4.96*** **		**2.67**
		(0.88)			**(1.57)**		**(3.85)**
L-M Transparency			**3.26**		**2.39**		**2.97**
			(1.80)		**(12.45)**		**(5.09)**
Celebrity			**15.83*** **	**14.82***	**11.44*** **	**0.17**	
			(4.38)	**(11.07)**	**(3.24)**	**(11.36)**	
Stake	**-0.38***					**-0.38***	
	(0.22)					**(0.23)**	

Note: * = significance at .10 level
** = significance at .05 level
*** = significance at .01 level

When analyzing regression results for long term abnormal returns, some differing conclusions are offered. For 180 days after the initial investment, the only significant result is a positive relation between Truman transparency rankings and abnormal returns, leading us to accept hypothesis H_{1d}, although the lack of robust results for this time period leaves a high degree of room for future consideration and research. For 360 and 720 days after the initial investment, there is a negative relation between the stake purchased and firm performance, although this result is only significant at the 5 percent level for the period 360 days after the initial investment. This result allows us to accept hypothesis H_{1b} for one year after the initial investment. The relationship between governance and firm performance continues to be negative for these two time periods, significant at the 5 % level, while the relation between the two transparency scores and firm performance is also negative but does not appear to be statistically significant. The most telling results from analyzing the regression output is the

relation between the "celebrity" dummy variable and returns over the 360 and 720 day horizon. For both time periods the relationship is very positive and significant at the 1 percent level, allowing us to reject hypothesis H_{1e}.

These regression results suggest that sovereign wealth funds with high scores for governance and transparency do not positively affect the performance of the companies in which they invest by improving the governance and transparency of the target firm. Indeed it seems that sovereign wealth funds with low rankings are more able to positively impact firm performance. These results also suggest that celebrity funds have a high profile not just because they make large investments that receive a lot of publicity, but in fact because they employ better investment strategies than other lesser known counterparts. Although it seems that sovereign wealth funds investments do lead to deteriorating firm performance in the short and long run due to agency costs, firms that are well known but are not necessarily as transparent and accountable as some other sovereign wealth funds seem to impose less agency costs on the firms in which they invest and seem to follow best practices when choosing their investments.

IX. Conclusion:

This paper is one of the first empirical analyses of sovereign wealth fund investments in public companies in the United States, and leaves us with some important lessons about sovereign wealth funds and their investment practices. It seems that fears over sovereign wealth funds are somewhat overblown, as the funds seem to purchase relatively small stakes in their target companies. All in all, this paper teaches us that there is little reason to fear the investments that sovereign wealth funds are making in the United States. There is almost no evidence to suggest that their investments are in any

way politically motivated, and their investment strategies are consistent with those of pension funds or other large institutional investors.

The quantitative analysis of sovereign wealth fund investments shows that on average, these investments lead to negative returns on the day of the announcement equal to -.52 %, suggesting that markets do not welcome sovereign wealth funds as investors. This pattern continues over one and two year horizons, showing that markets reacted correctly to the initial sovereign wealth fund investment. However, over the six month horizon, abnormal returns are positive, suggesting that sovereign wealth funds may improve fund governance through monitoring of management behavior over that time horizon. Is it possible that sovereign wealth funds take a more active role in monitoring governance during the initial stages of their investments, only to focus their attention on other projects after six months, resulting in a return to previous bad management practices? Or is the affect of the agency problem only felt after a longer period of time, with the initial goals and demands put in place by the sovereign wealth fund investors improving firm performance in the first six months, but eventually leading to conflicts that deteriorate that positive performance over a year long period? I believe that if an analysis using a larger sample size of sovereign wealth fund investments was possible, this would help to explain this puzzle.

An analysis of regression outputs from this study suggests some rather strong contradictions between the perception and reality of sovereign wealth fund investments in the United States. Sovereign wealth funds that invest in diversified portfolios of United States equity and are generally welcomed by politicians and economists, which are given high rankings for governance and transparency by academics, are not influencing firm performance in a positive manner. It is sovereign wealth funds that have created the most fear within the United States due to their lack of transparency that see more positive returns. Sovereign wealth funds from the United Arab Emirates, China, Kuwait, and Singapore

seem to follow best investment practices, pursuing high returns on their capital investments and generally outperforming their more transparent counterparts. It seems that these funds are well known for a reason, because they were some of the first and are some of the best sovereign wealth funds when it comes to pursuing positive returns on their investments.

There are steps that can be taken on both sides of the aisle to allay fears of sovereign wealth fund investments in the United States. Regulators accepting that these funds generally follow best practices and do not seem to adhere to any political agenda when making their investments should help to ease fears of the possibility of these investments being used as political collateral. Particularly in current economic times, when capital has essentially been frozen and companies struggle to achieve lines of credit, sovereign wealth funds may act as lenders of last resort, which certainly has proved to be valuable over the last eighteen months and should not be eliminated by protectionist fears.

For sovereign wealth funds, the key to reducing fears over their investments is transparency. While this paper has suggested that it is unlikely that sovereign wealth funds are pursuing political aims with their investments, publishing holdings with the Securities and Exchange Commission and generally going about investments in a less secretive manner would go a long way towards regulators accepting sovereign wealth funds claims to be no different than any other large institutional investor. Moving away from direct ties to the government would also help to assuage fears. Following the example of Temasek would be a good start, which in early 2009 decided to replace the wife of the Prime Minister with a qualified westerner as chief executive officer. While sovereign wealth funds have shrunk during the recent global recession, they are a player in the global economy that will be present for many years to come and will only increase in size, meaning that research opportunities to try to monitor and determine their investment strategies will continue to be present. Fostering a spirit of cooperation,

rather than fear and protectionism, between regulators and sovereign wealth funds is the best way to for both sides to see the immense financial benefits of their deep pools of capital.

Appendix 1:

Sovereign Wealth Fund Search Terms

Country	Sovereign wealth fund
Algeria	Revenue Regulation Fund
Angola	Reserve Fund for Oil
Australia	Australia Future Fund
Azerbaijan	State Oil Fund
Bahrain	Mumtalakat Holding Company
Botswana	Pula Fund
Brunei	Brunei Investment Authority
Canada	Alberta Heritage Fund
China	China Investment Corporation
China	China-Africa Development Fund
Iran	Oil Stabilization Fund
Kazakhstan	Kazakhstan National Fund
Kiribati	Revenue Equalization Reserve Fund
Kuwait	Kuwait Investment Authority
Libya	Libya Arab Foreign Investment Authority
Malaysia	Khazanah National
Mauritania	National Fund for Hydrocarbon Reserves
Norway	Government Pension Fund
Oman	State General Reserve Fund
Qatar	Qatar Investment Authority
Russia	National Welfare Fund
Russia	Reserve Fund
Saudi Arabia	SAMA Foreign Holdings
Singapore	Government Investment Corporation
Singapore	Temasek Holdings
South Korea	Korea Investment Corporation
Taiwan	National Stabilization Fund
Trinidad & Tobago	Heritage and Stabilization Fund
United Arab Emirates	Abu Dhabi Investment Authority
United Arab Emirates	International Petroleum Investment Group
United Arab Emirates	Mubadala Development Company
United Arab Emirates	Dubai Investment Corporation
United Arab Emirates	Istithmar World
United Arab Emirates	Dubai International Capital
United Arab Emirates	Emirates Investment Authority
United Arab Emirates	RAK Investment Authority
Venezuela	FIEM
Vietnam	State Capital Investment Corporation

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