

***SOVEREIGN WEALTH FUND  
INVESTMENT PATTERNS AND  
PERFORMANCE  
Or “Sovereign Waste Funds”?***

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MONITOR



# Sovereign Wealth Funds Defined

- **Term was coined only recently (Razanov, 2005).**
- **Can Be Defined Broadly, As In Truman (2008):**  
“A separate pool of government-owned or -controlled financial assets that includes international assets.”
- **We Define SWF as**
  1. An investment fund, not an operating company,
  2. Wholly owned by a sovereign government, but separated from central bank or finance ministry,
  3. That makes international and domestic investments in a variety of risky assets,
  4. Is charged with seeking a commercial return, and
  5. Which is wealth fund rather than a pension fund.

## List of SWFs Included in this Study (20 of 33)

Country	Fund Name	Total Assets US\$Bn	Launch Year	Source of Funds
Norway	Government Pension Fund – Global <sup>1</sup>	458.2	1990	Commodity (Oil)
UAE/Abu Dhabi	Abu Dhabi Investment Authority	395	1976	Commodity (Oil)
China	China Investment Corporation	297.5	2007	Trade Surplus
Kuwait	Kuwait Investment Authority	295	1953	Commodity (Oil)
Singapore	Government of Singapore Investment Corporation	179	1981	Trade Surplus
Singapore	Temasek Holdings	119.3	1974	Government-Linked Firmss
Qatar	Qatar Investment Authority	70	2003	Commodity (Oil & Gas)
Libya	Libyan Investment Authority	52	2006	Commodity (Oil)
Australia	Australian Future Fund	49.16	2006	Commodity (Various)
Russia	National Wealth Fund	33.99	2008	Commodity (Oil)
Brunei	Brunei Investment Agency	30	1983	Commodity (Oil)
Kazakhstan	Kazakhstan National Fund	26.5	2000	Commodity (Oil)
Malaysia	Khazanah Nasional Berhard	25	1993	Government-Linked Comps
UAE-Abu Dhabi	Mubadala Development Company PJSC	21.6	2002	Commodity (Oil)
UAE-Dubai	Investment Corporation of Dubai	19.6	2006	Government-Linked Firms
Republic of Korea	Korea Investment Corporation	17.8	2005	Trade Surplus
UAE-Abu Dhabi	International Petroleum Investment Company	14	1984	Commodity (Oil)
Bahrain	Mumtalakat Holding Company	14	2006	Government-Linked Firms
São Tomé & Principe	National Oil Account	12.2	2004	Commodity (Oil)
UAE/Dubai	Istithmar World	11.5	2003	Government-Linked Companies
Total, oil-based funds (US\$ billion)		\$1,466.60		
Total, non-oil based funds(US\$ bn)		750.3		
<b>Total, all funds (US\$ billion)</b>		<b>\$2,216.90</b>		

# Reasons for Concern About SWFs, Responses By Governments & Funds

- **Large (Estimated US\$ 3.3 trillion, March 2008).**
- **Growing Fast (Estimated US\$ 12 trillion By 2015 – but now somehow scaled down).**
- **Biggest Funds Based In Non-Democratic Nations**
- **Most Cited Concerns:**
  - Could be used for political purposes
  - Might induce volatility in financial markets
  - Could have a detrimental impact on governance
- **Regulators, SWFs responded To Concerns**
  - Santiago Principles signed October 2008
- **Market Meltdown Hit SWFs Very Hard**

**The  
Economist**

JANUARY 19-25, 2008

[www.economist.com](http://www.economist.com)

Romney's win in Michigan

Cloned food

Satellite wars

The global inflation scare

Democracy in retreat

# Invasion of the sovereign-wealth funds



**The Economist**

**January 19-25, 2008**

# Little Published Research On SWF Effects, Intentions, Behavior

- **Most Available Work Non-Academic, Descriptive:**
  - Monitor Group, Merrill Lynch, Deutsche Bank, SWF Institute, Peterson Institute, McKinsey Group
- **Little Yet In Major Finance Or Economics Journals**
- **JACF: Butt, Shivdasani, Stendevad, Wyman (2008)**
  - Descriptive paper, discusses implications for other investors, government, firms seeking financing.
- **Several Competing Working Papers**
  - Chhaochhria & Laeven (IMF, 2008); Dewenter, Han, Malesta (forth JFE); Fernandes (2009); Kotter & Lel (forth JFE); Knill, Lee, Mauck (2009)

# Our Empirical Research

- **We Collect And Describe SWF Investment Data**
  - investment size, financing methods, etc.
- **How Do SWFs Pick Investment Targets?**
  - Regional choices, Industries, Firm Characteristics
- **Market Reaction To Investment Announcement?**
  - Test abnormal return around announcement dates
- **Long-Run Returns On SWF Investments?**
  - Stress matched-firm adjusted return, but use others
- **Regression Analysis Of Short & Long-Run Returns**
  - Do SWFs create or decrease target firm value?
- **Analyze changes in Operating Performance**

# The FEEM-Monitor SWF Database Compiled From Three Sources

- **Monitor Group Dataset of Publicly Announced Deals**
  - 801 observations, worth \$260.6 billion
- **Bureau Van Dyck Zephyr Database of Global Mergers & Acquisitions**
  - 230 equity acquisitions, worth \$71.8 bn
- **Thomson Reuters SDC Platinum Global New Issues Database**
  - 239 equity issues, worth \$84.1 billion
- **Net Out 71 Overlapping Observations and Verify Key Data Yields Final Sample**





# Norway

- We use Forms 13F to track US investments

# Overall And Average Investment Size And Stake Purchased

<b>Fund Name</b>	<b>Country</b>	<b>Number of Investments</b>	<b>Total Value \$US millions</b>	<b>Average value, \$US millions</b>
Government Pension Fund – Global	Norway	403	4,762	12
Temasek Holdings	Singapore	132	42,375	441
Government Investment Corporation (GIC)	Singapore	79	22,571	364
Khazanah Nasional Berhad	Malaysia	32	3,240	154
Qatar Investment Authority (QIA)	Qatar	31	15,297	1,177
Kuwait Investment Authority (KIA)	Kuwait	19	13,235	1,018
China Investment Corporation (CIC)	China	18	38,933	2,781
Abu Dhabi Investment Authority (ADIA)	UAE-Abu Dhabi	18	8,518	710
Libyan Investment Authority	Libya	17	1,519	127
Istithmar World	UAE-Dubai	16	2,788	232
Mubadala Development Company PJSC	UAE-Abu Dhabi	11	2,618	436
International Petroleum Investment Company	UAE-Abu Dhabi	10	14,651	1,628
Dubai International Financial Center	UAE-Dubai	6	2,386	477
Investment Corporation of Dubai	UAE-Dubai	4	6,430	1,607
Brunei Investment Agency	Brunei	2	112	112
Oman Investment Fund	Oman	2	2	2
Korea Investment Corporation	Korea	1	2,000	2,000
Mumtalakat Holding Company	Bahrain	1	170	170

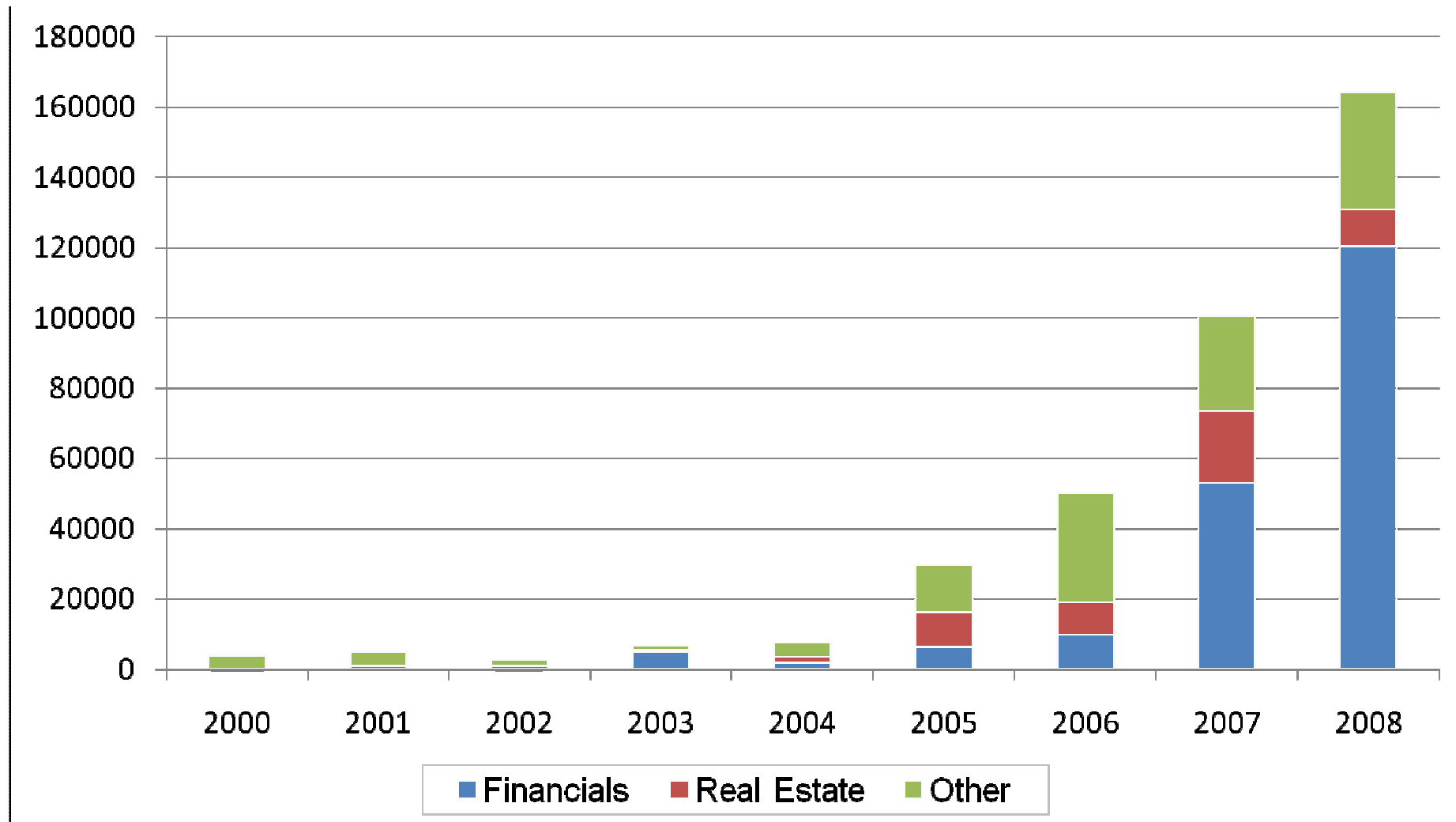
# Industrial Distribution Of SWF Investments

Industry	Number of Investments	Total Value, \$US mn	Average Value, US\$ mn
Banking	77	55,243	1,228
Real estate development and services	46	49,782	1,158
Financial services	59	43,322	850
Oil and gas producers	33	6,918	239
General industrials	10	5,850	585
Chemicals	24	5,807	264
Technology hardware and equipment	29	4,434	153
Construction and materials	17	3,740	249
Automobiles and parts	22	3,048	160
Electricity	20	2,609	137
Mining	10	2,424	269
General retailers	22	2,376	113
Industrial transportation	30	2,025	78
Real estate investment trusts (REIT)	20	1,791	90
Fixed line telecommunications	19	1,753	117
Unclassified	11	25,308	48
Others (23 industries)	376	11,275	35

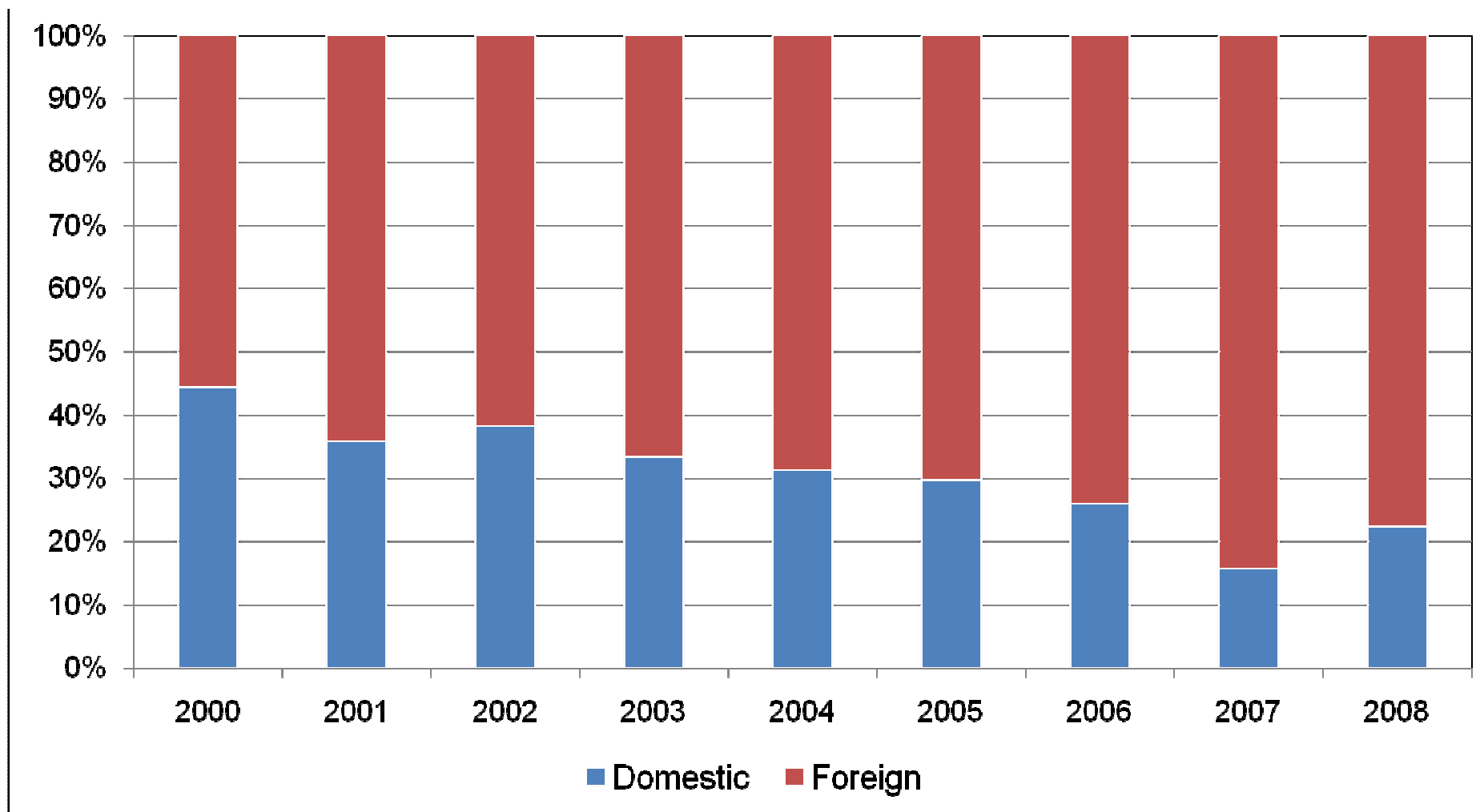
# Annual Value of SWF Public-Equity Investments

Year	Number of investments	Total value, \$US million	Average value, \$US million
1985	1	24	24
1987	1	--	--
1988	3	1,952	1,952
1990	1	24	24
1991	2	112	58
1992	2	65	33
1993	3	713	357
1994	9	373	41
1996	4	75	24.9
1997	2	100	100
1998	1	--	--
1999	4	116	39
2000	7	360	72
2001	13	850	95
2002	17	978	109
2003	20	5,641	313
2004	32	2,621	175
2005	42	4,337	181
2006	49	11,492	328
2007	198	61,162	336
2008	340	61,306	191
2009	50	29,306	733
<b>1985-2009</b>	<b>802</b>	<b>181,606</b>	<b>266</b>

# Annual Value, Industrial Distribution of SWF Investments, 2000-2008 (\$Mn)



# Percent Of Investments In Domestic Versus Foreign Deals, 2000-2008



# SWF Home Country And Investment Patterns

Country of Target Firm	Number of Investments	Total Value, \$US mn	Average Value, US\$ mn
United States	426	58,336	140
China	43	32,049	916
Singapore	39	10,936	377
Malaysia	38	2,195	100
India	34	1,386	53
United Kingdom	28	20,883	906
Canada	19	5,517	307
Indonesia	16	3,758	470
Italy	15	1,092	135
Thailand	10	2,458	351
France	10	2,376	396
Australia	9	1,026	128
Qatar	7	1,085	362
Sweden	6	5,238	1,310
United Arab Emirates	6	2,810	937
Switzerland	5	12,839	3,210
OECD countries	560	120,207	232
Non-OECD countries	242	61,399	372
BRIC countries	85	34,166	502
Foreign (cross-border) investments	723	141,252	224
Domestic (home country) investments	79	40,351	761

# What Kind of Firms do SWFs Invest in?

Variable	N	Mean	Median	% Above Industry Median	WSR	P-value
Book Value of Equity (USD M)	744	4,021	890	86.73%	20.30 ***	< 0.01
Market Cap (USD M)	636	7,898	2,270	89.59%	19.80 ***	< 0.01
Market to Book Ratio	652	3.47	2.26	65.54%	10.73 ***	< 0.01
Total Assets (USD M)	743	53,000	2,795	87.93%	20.39 ***	< 0.01
Debt over Assets	743	63.07%	61.65%	55.51%	3.50 ***	< 0.01
Cash Over Total Assets	561	36.72%	29.81%	48.12%	2.80 ***	< 0.01
Quick Ratio	566	1.55	1.03	47.95%	2.55 **	0.01
ROA	698	5.43%	6.10%	69.37%	11.94 ***	< 0.01
ROE	705	6.56%	15.32%	65.16%	10.23 ***	< 0.01
Tobin's Q	636	1.96	1.40	50.31%	2.94 ***	< 0.01
Dividend Yield	648	1.71%	0.87%	49.41%	8.58 ***	< 0.01



# Target Firm Stock Returns Around SWF Investment Announcements

*Panel A: ALL observations*

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Positive	Negative	Patell $z$	CDA $t$	Generalized Sign $z$	Wilcoxon Sign Rank Test
(-1,+1)	688	1.25%	0.17%	368	320	< 0.01 ***	< 0.01 ***	< 0.01 ***	0.05 **
(0,0)	688	1.10%	0.00%	342	344	< 0.01 ***	< 0.01 ***	0.10	0.19
(0,+1)	688	1.29%	0.15%	358	329	< 0.01 ***	< 0.01 ***	< 0.01 ***	0.04 **

*Panel B: Excluding Norway*

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Positive	Negative	Patell $z$	CDA $t$	Generalized Sign $z$	Wilcoxon Sign Rank Test
(-1,+1)	293	2.91%	0.37%	168	125	< 0.01 ***	< 0.01 ***	< 0.01 ***	< 0.01 ***
(0,0)	293	2.14%	0.01%	148	143	< 0.01 ***	< 0.01 ***	0.07 *	0.08 *
(0,+1)	293	2.70%	0.56%	163	129	< 0.01 ***	< 0.01 ***	< 0.01 ***	< 0.01 ***

*Panel C: Norway Only*

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Positive	Negative	Patell $z$	CDA $t$	Generalized Sign $z$	Wilcoxon Sign Rank Test
(-1,+1)	395	0.02%	2.00%	200	195	0.66	0.97	0.23	0.90
(0,0)	395	0.32%	-1.00%	194	201	0.01 **	0.24	0.56	0.83
(0,+1)	395	0.25%	-2.00%	195	200	0.28	0.52	0.49	0.76

# Target Firm Stock Returns After SWF Investment Announcements

**Panel A: Local Index**

Interval	N	Mean Compounded Abnormal Return	Median Compounded Abnormal Return	Positive	Negative	Bootstrapped, Skewness Adjusted t	Generalized Sign Z	WSR
6 months	631	-1.36%	-3.13%	276	355	0.20	0.13	< 0.01 ***
1 year	617	-1.32%	-6.00%	275	342	0.25	0.27	< 0.01 ***
2 years	366	-4.50%	-8.51%	153	213	0.19	0.11	< 0.01 ***
3 years	165	-4.61%	-12.75%	71	94	0.32	0.41	0.02 **

**Panel B: Matched Firms, Country, Exchange, Size and Market-to-Book**

Interval	N	Mean Compounded Abnormal Return	Median Compounded Abnormal Return	Positive	Negative	Bootstrapped, Skewness Adjusted t	Generalized Sign Z	WSR
6 months	588	-1.86%	-2.75%	275	313	0.19	0.39	0.20
1 year	574	-3.68%	-2.02%	281	293	0.05 *	0.84	0.10
2 years	345	-6.37%	-11.82%	148	197	0.17	0.05 **	< 0.01 ***
3 years	158	-21.88%	-16.73%	61	97	0.04 **	0.02 **	0.03 **

**Panel C: Matched Firms, Country, Exchange, Industry and Pre-event Performance**

Interval	N	Mean Compounded Abnormal Return	Median Compounded Abnormal Return	Positive	Negative	Bootstrapped, Skewness Adjusted t	Generalized Sign Z	WSR
6 months	546	-3.74%	-2.40%	262	284	0.05 **	0.85	0.13
1 year	532	-8.39%	-2.50%	249	283	< 0.01 ***	0.51	0.08 *
2 years	325	-5.10%	-6.68%	145	180	0.26	0.22	0.06 *
3 years	149	-12.13%	-0.96%	74	75	0.16	0.71	0.74

# Target Firm Stock Returns After SWF Investment Announcements no Norway

**Panel A: Local Index**

Interval	N	Mean Compounded Abnormal Return	Median Compounded Abnormal Return	Positive	Negative	Bootstrapped, Skewness Adjusted	Generalized Sign Z	WSR
6 months	236	-2.94%	-4.17%	98	138	0.09 *	0.22	< 0.01 ***
1 year	222	-3.67%	-10.09%	91	131	0.15	0.18	0.01 **
2 years	201	-5.65%	-13.85%	80	121	0.26	0.11	< 0.01 ***
3 years	157	-4.22%	-12.04%	68	89	0.31	0.47	0.03 **

**Panel B: Matched Firms, Country, Exchange, Size and Market-to-Book**

Interval	N	Mean Compounded Abnormal Return	Median Compounded Abnormal Return	Positive	Negative	Bootstrapped, Skewness Adjusted	Generalized Sign Z	WSR
6 months	227	-0.83%	-4.09%	101	126	0.37	0.31	0.30
1 year	213	-1.58%	-5.43%	97	116	0.32	0.52	0.39
2 years	190	-4.37%	-16.07%	79	111	0.36	0.09 *	0.03 **
3 years	150	-22.19%	-16.73%	59	91	0.06 *	0.03 **	0.04 **

**Panel C: Matched Firms, Country, Exchange, Industry and Pre-event Performance**

Interval	N	Mean Compounded Abnormal Return	Median Compounded Abnormal Return	Positive	Negative	Bootstrapped, Skewness Adjusted t	Generalized Sign Z	WSR
6 months	213	-2.43%	-1.78%	103	110	0.18	0.99	0.61
1 year	199	-7.98%	-2.34%	96	103	0.07 *	0.99	0.33
2 years	177	-3.96%	-5.32%	83	94	0.42	0.75	0.27
3 years	141	-10.07%	-0.96%	70	71	0.23	0.73	0.88

**Panel A: Local Index, Market Adjusted**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	570	-1.60%	-1.27%	-2.87%	276	294	0.56	0.19	0.17	< 0.01 ***
1 year	557	0.68%	4.63%	-6.31%	302	255	0.86	0.10 *	0.18	< 0.01 ***
2 years	337	8.41%	10.57%	-0.45%	205	132	0.30	0.49	< 0.01 ***	< 0.01 ***
3 years	153	0.37%	12.49%	-1.58%	88	65	0.98	0.54	0.09	< 0.01 ***

**Panel B Local Index, Market Model**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	570	-7.26%	-4.72%	-11.41%	258	312	< 0.01 ***	< 0.01 ***	0.48	< 0.01 ***
1 year	557	-9.31%	-4.93%	-22.63%	247	310	0.01 **	< 0.01 ***	0.24	< 0.01 ***
2 years	337	-18.45%	-12.18%	-34.94%	150	187	0.02 **	< 0.01 ***	0.56	< 0.01 ***
3 years	153	-57.25%	-23.45%	-57.19%	53	100	< 0.01 ***	< 0.01 ***	0.01 **	< 0.01 ***

**Panel C: Matched Firms, Country, Exchange, Size and Market-to-Book**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	546	-2.08%	-2.96%	-1.96%	253	293	0.51	0.23	0.02 **	0.17
1 year	533	-4.95%	-4.11%	-5.06%	250	283	0.27	0.06 *	0.04 **	0.02 **
2 years	320	-8.37%	-8.42%	-7.85%	140	180	0.35	0.04 **	0.01 **	< 0.01 ***
3 years	144	-5.77%	-6.10%	-0.67%	67	77	0.81	0.16	0.43	0.13

**Panel D: Matched Firms, Country, Exchange, Industry and Pre-event Performance**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	533	-3.32%	-3.26%	-3.80%	248	285	0.29	0.10	0.02 **	< 0.01 ***
1 year	320	-5.60%	-4.47%	-5.52%	243	277	0.21	0.04 **	0.03 **	< 0.01 ***
2 years	317	-8.16%	-8.33%	-1.93%	141	176	0.36	0.05 **	0.02 **	< 0.01 ***
3 years	143	-4.91%	-3.16%	4.04%	69	74	0.84	0.26	0.67	0.04 **

**Panel A: Local Index, Market Adjusted**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	217	-4.81%	-6.14%	-3.64%	92	125	0.42	0.14	0.06 *	< 0.01 ***
1 year	204	-8.65%	-6.94%	-6.35%	92	112	0.33	0.05 *	0.28	< 0.01 ***
2 years	185	-3.72%	0.75%	-1.18%	96	89	0.78	0.17	0.44	< 0.01 ***
3 years	145	-1.70%	11.33%	-1.70%	80	65	0.93	0.42	0.24	< 0.01 ***

**Panel B Local Index, Market Model**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	217	-13.31%	-8.37%	-12.25%	86	131	0.02 **	< 0.01 ***	0.14	< 0.01 ***
1 year	204	-25.11%	-15.11%	-22.75%	70	134	< 0.01 ***	< 0.01 ***	< 0.01 ***	< 0.01 ***
2 years	185	-40.39%	-19.23%	-35.82%	65	120	< 0.01 ***	< 0.01 ***	0.01 **	< 0.01 ***
3 years	145	-61.97%	-33.07%	-57.88%	48	97	< 0.01 ***	< 0.01 ***	< 0.01 ***	< 0.01 ***

**Panel C: Matched Firms, Country, Exchange, Size and Market-to-Book**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	207	-3.06%	-5.03%	-2.53%	88	119	0.67	0.25	0.07 *	0.10
1 year	194	-6.00%	-4.33%	-4.78%	85	109	0.57	0.13	0.16	0.05 **
2 years	172	-9.49%	-8.55%	-5.07%	77	95	0.56	0.05 **	0.27	0.05 **
3 years	136	-7.74%	-7.66%	-0.88%	61	75	0.76	0.12	0.27	0.23

**Panel D: Matched Firms, Country, Exchange, Industry and Pre-event Performance**

Interval	N	Mean Cumulative Abnormal Return	Median Cumulative Abnormal Return	Calendar Time AR	Positive	Negative	CDA t	Calendar Time t	Generalized Sign Z	WSR
6 months	206	-5.58%	-5.11%	-4.42%	90	116	0.43	0.11	0.10	0.09 *
1 year	193	-7.38%	-4.61%	-6.15%	84	109	0.48	0.06 *	0.11	0.04 **
2 years	171	-7.62%	-7.94%	-2.22%	77	94	0.64	0.06 *	0.25	0.11
3 years	135	-7.32%	-7.39%	3.62%	63	72	0.77	0.19	0.47	0.22

# Why the Under-Performance?

- **Bad Stock Picking**
  - SWFs might simply be unsophisticated investors who mis-allocate funds.
- **Lack of Monitoring (Constrained Foreign Investor Hypothesis)**
  - SWFs buy large stakes, but then are passive, for fear of upsetting media/politicians/regulators.

## Regression Analysis of Announcement Period Matched-Firm Abnormal Returns

- Positive impact of Governance and Norway, but negative on Accountability & Transparency

- Norway's positive sign is a bit of a puzzle – explained by the small stake generally purchased

- Weaker for OECD Targets  
 - Stronger for larger Stake  
 - Stronger for Foreign Targets  
 - Weaker for Direct Investments  
 - Stronger for Capital Infusions

	CAR, Market Adjusted Vs. Local Market Index, Window (-1,+1)				
LM	-0.0008 <i>0.80</i>				
Truman Total		< 0.0001 <i>0.91</i>			
Truman Structure			0.0061 <i>0.44</i>		
Truman Governance			0.0064 * <i>0.1</i>		
Truman Accountability			-0.0060 * <i>0.09</i>		
Truman Behavior			-0.0046 <i>0.36</i>		
Norway				0.1001 ** <i>0.03</i>	
MENA SWF				0.0088 <i>0.58</i>	
BRIC Target	-0.0238 <i>0.72</i>	0.0169 <i>0.43</i>	-0.0568 <i>0.49</i>	-0.0362 <i>0.48</i>	-0.0669 <i>0.68</i>
OECD Target	-0.1164 ** < 0.01	-0.0936 *** < 0.01	-0.1792 * <i>0.04</i>	-0.1562 *** < 0.01	-0.1879 <i>0.23</i>
Stake	0.1002 <i>0.37</i>	0.2386 *** < 0.01	0.3367 *** < 0.01	0.2657 *** < 0.01	0.3451 ** <i>0.04</i>
First Investment	0.0087 <i>0.14</i>	0.0077 <i>0.19</i>	0.0089 <i>0.14</i>	0.0076 <i>0.19</i>	0.0089 <i>0.14</i>
Foreign Target	0.1263 *** < 0.01	0.1040 *** < 0.01	0.1717 *** < 0.01	0.1268 *** < 0.01	0.2554 <i>0.27</i>
Market Value	-0.0037 <i>0.28</i>	-0.0038 <i>0.26</i>	-0.0034 <i>0.31</i>	-0.0048 <i>0.16</i>	-0.0034 <i>0.33</i>
Leverage	-0.0021 <i>0.91</i>	-0.0016 <i>0.93</i>	-0.0027 <i>0.88</i>	-0.0046 <i>0.79</i>	-0.0026 <i>0.88</i>
Quick Ratio	0.0014 <i>0.55</i>	0.0014 <i>0.56</i>	0.0015 <i>0.53</i>	0.0013 <i>0.60</i>	0.0015 <i>0.53</i>
Closely Held	< 0.0001 <i>0.80</i>	< 0.0001 <i>0.83</i>	< 0.0001 <i>0.91</i>	< 0.0001 <i>0.83</i>	< 0.0001 <i>0.91</i>
Foreign Sales	< 0.0001 <i>0.99</i>	< 0.0001 <i>0.91</i>	< 0.0001 <i>0.96</i>	< 0.0001 <i>0.91</i>	< 0.0001 <i>0.96</i>
Direct Investment	-0.0752 <i>0.11</i>	-0.1127 *** < 0.01	-0.1436 *** < 0.01	-0.0141 <i>0.77</i>	-0.1478 ** <i>0.04</i>
Capital Infusion	0.0784 ** <i>0.01</i>	0.1042 *** < 0.01	0.1379 ** <i>0.04</i>	0.0729 *** <i>0.01</i>	0.0667 * <i>0.09</i>
Pre-Event BHAR 1 year	-0.0102 ** <i>0.04</i>	-0.0099 * <i>0.06</i>	-0.0103 ** <i>0.05</i>	-0.0113 ** <i>0.03</i>	-0.0103 ** <i>0.05</i>
Pre-Event BHAR 6 months	0.0043 <i>0.77</i>	0.0018 <i>0.90</i>	0.0029 <i>0.85</i>	0.0061 <i>0.63</i>	0.003 <i>0.85</i>
Pre-Event BHAR 1 month	0.0678 ** <i>0.02</i>	0.0678 ** <i>0.02</i>	0.0677 ** <i>0.03</i>	0.0637 ** <i>0.03</i>	0.0677 ** <i>0.03</i>
Intercept	0.0273 <i>0.54</i>	0.0145 <i>0.77</i>	-0.2697 <i>0.43</i>	-0.0336 <i>0.51</i>	-0.0136 <i>0.72</i>
N	239	242	242	244	244

## Regression Analysis of Long-Run Matched-Firm Abnormal Returns

- Negative on Stake
- Negative on Foreign Target
- Positive on Closely Held

### Which is consistent with the CFIH

- Negative on Market Value
- Negative on BRIC Target
- Negative on OECD target

### Truman's Scores:

- Positive on Total
  - Negative on Structure
  - Positive on Behavior
- Overall, difficult to interpret the impact of T's scores.

Variable	Model 1			Model 2			Model 3		
	6 months	1 year	2 years	6 months	1 year	2 years	6 months	1 year	2 years
LM	0.0151 <i>0.52</i>	0.0333 <i>0.24</i>	0.0008 <i>0.98</i>						
Truman Total				0.0062 ** <i>0.01</i>	0.0051 <i>0.15</i>	-0.0047 <i>0.29</i>			
Truman Structure							-0.0225 ** <i>0.03</i>	-0.0439 *** <i>&lt; 0.01</i>	-0.0517 ** <i>0.01</i>
Truman Governance							0.0041 <i>0.75</i>	0.0013 <i>0.94</i>	0.0102 <i>0.68</i>
Truman Accountability							0.0031 <i>0.76</i>	0.0106 <i>0.40</i>	0.0004 <i>0.98</i>
Truman Behavior							0.0181 *** <i>&lt; 0.01</i>	0.0294 *** <i>&lt; 0.01</i>	0.0279 ** <i>0.02</i>
BRIC Target	-0.0043 <i>0.97</i>	0.0622 <i>0.68</i>	-0.0527 <i>0.78</i>	-0.0276 <i>0.80</i>	-0.0258 <i>0.87</i>	-0.2148 <i>0.27</i>	0.0229 <i>0.83</i>	0.0361 <i>0.77</i>	-0.2346 * <i>0.09</i>
OECD Target	0.128 <i>0.41</i>	-0.061 <i>0.78</i>	-0.1813 <i>0.44</i>	0.1255 <i>0.44</i>	-0.1044 <i>0.64</i>	-0.3211 <i>0.21</i>	-0.0891 <i>0.60</i>	-0.4995 ** <i>0.02</i>	-0.6977 ** <i>0.01</i>
Stake	-0.3336 <i>0.42</i>	-1.2909 ** <i>0.03</i>	-2.5688 *** <i>&lt; 0.01</i>	0.243 <i>0.62</i>	-0.7624 <i>0.29</i>	-2.8638 *** <i>&lt; 0.01</i>	0.3789 <i>0.38</i>	-0.7491 <i>0.22</i>	-2.3626 *** <i>&lt; 0.01</i>
First Investment	-0.0373 <i>0.45</i>	-0.0132 <i>0.81</i>	0.0936 <i>0.13</i>	-0.0309 <i>0.53</i>	-0.0087 <i>0.88</i>	0.0682 <i>0.27</i>	-0.0254 <i>0.62</i>	-0.0047 <i>0.93</i>	0.0907 <i>0.16</i>
Foreign Target	-0.1855 <i>0.23</i>	-0.5367 *** <i>&lt; 0.01</i>	-0.9635 *** <i>&lt; 0.01</i>	-0.168 <i>0.19</i>	-0.3868 ** <i>0.04</i>	-0.7637 *** <i>&lt; 0.01</i>	-0.1274 <i>0.46</i>	-0.2692 <i>0.21</i>	-0.5282 * <i>0.06</i>
Market Value	-0.0921 *** <i>&lt; 0.01</i>	-0.0377 <i>0.11</i>	0.0119 <i>0.77</i>	-0.0926 *** <i>&lt; 0.01</i>	-0.0406 * <i>0.08</i>	0.0118 <i>0.76</i>	-0.0950 *** <i>&lt; 0.01</i>	-0.0435 * <i>0.06</i>	-0.0008 <i>0.98</i>
Leverage	-0.0729 <i>0.57</i>	0.1392 <i>0.35</i>	-0.0794 <i>0.75</i>	-0.082 <i>0.52</i>	0.1188 <i>0.42</i>	-0.1087 <i>0.66</i>	-0.1013 <i>0.43</i>	0.0839 <i>0.56</i>	-0.1417 <i>0.56</i>
Quick Ratio	-0.0034 <i>0.87</i>	-0.0065 <i>0.75</i>	0.0364 <i>0.37</i>	-0.0046 <i>0.82</i>	-0.0091 <i>0.65</i>	0.0311 <i>0.44</i>	-0.0059 <i>0.77</i>	-0.0105 <i>0.60</i>	0.0312 <i>0.44</i>
Closely Held	0.0021 <i>0.11</i>	0.0028 * <i>0.07</i>	0.0027 <i>0.3</i>	0.0024 <i>0.07</i>	0.0029 * <i>0.06</i>	0.0027 <i>0.31</i>	0.0025 <i>0.06</i>	0.0031 ** <i>0.04</i>	0.0027 <i>0.29</i>
Foreign Sales	-0.0007 <i>0.35</i>	-0.0003 <i>0.70</i>	<0.0001 <i>0.98</i>	-0.0006 <i>0.38</i>	-0.0002 <i>0.76</i>	-0.0002 <i>0.87</i>	-0.0005 <i>0.55</i>	<0.0001 <i>0.96</i>	0.0002 <i>0.90</i>
Direct Investment	0.1432 <i>0.38</i>	0.0411 <i>0.85</i>	-0.2368 <i>0.22</i>	0.3538 <i>0.04</i>	0.1465 <i>0.54</i>	-0.4193 <i>0.11</i>	0.3468 ** <i>0.02</i>	0.116 <i>0.57</i>	-0.4096 * <i>0.07</i>
BOD	-0.0678 <i>0.65</i>	-0.3311 ** <i>0.03</i>	-0.3822 * <i>0.06</i>	-0.0252 <i>0.85</i>	-0.209 <i>0.14</i>	-0.3570 * <i>0.06</i>	-0.0705 <i>0.61</i>	-0.3369 ** <i>0.02</i>	-0.4338 ** <i>0.01</i>
Pre-Event BHAR 1 year	-0.0523 <i>0.28</i>	-0.0992 * <i>0.08</i>	-0.1640 ** <i>0.04</i>	-0.0542 <i>0.26</i>	-0.0974 * <i>0.08</i>	-0.1628 ** <i>0.05</i>	-0.0572 <i>0.23</i>	-0.1025 * <i>0.06</i>	-0.1582 * <i>0.05</i>
Pre-Event BHAR 6 months	0.035 <i>0.79</i>	0.1071 <i>0.52</i>	0.4676 ** <i>0.03</i>	0.0417 <i>0.75</i>	0.1248 <i>0.46</i>	0.4848 ** <i>0.02</i>	0.0478 <i>0.71</i>	0.1184 <i>0.47</i>	0.45148 ** <i>0.03</i>
Pre-Event BHAR 1 month	0.3048 <i>0.28</i>	0.1063 <i>0.71</i>	0.1825 <i>0.65</i>	0.2895 <i>0.31</i>	0.092 <i>0.75</i>	0.2533 <i>0.54</i>	0.2546 <i>0.37</i>	0.0528 <i>0.85</i>	0.1337 <i>0.73</i>
Intercept	0.6895 ** <i>0.02</i>	0.4552 <i>0.25</i>	0.9404 * <i>0.07</i>	0.2649 <i>0.39</i>	0.255 <i>0.58</i>	1.3503 ** <i>0.03</i>	1.2290 ** <i>0.01</i>	2.0206 *** <i>&lt; 0.01</i>	3.1321 *** <i>&lt; 0.01</i>
N	258	258	115	259	259	116	259	259	116





# Analysis of Operating Performance

		<i>Tobin's Q</i>				<i>Market to Book Ratio</i>				<i>Dividend Yield</i>			
		Year 0	Year 1	Year 2	Year 3	Y0	Y1	Y2	Y3	Y0	Y1	Y2	Y3
Target	Mean	-0.29	-0.35	-0.31	-0.16	-1.16	-1.00	-0.62	-0.09	0.70	0.79	0.66	0.47
	Median	-0.11	-0.15	-0.08	0.00	-0.47	-0.62	-0.38	0.08	0.00	0.28	0.51	0.00
	SE	1.61	0.96	1.13	1.02	4.83	3.28	2.45	2.45	2.97	3.28	2.76	3.57
	N	562	374	174	89	540	367	168	85	570	435	208	90
Match	Mean	-0.26	-0.23	0.20	0.15	-0.79	-0.59	0.04	0.40	0.77	0.56	1.02	0.56
	Median	-0.10	-0.10	-0.05	-0.02	-0.31	-0.42	-0.23	-0.15	0.00	0.00	0.11	0.00
	SE	1.60	0.95	2.96	1.19	3.41	2.36	2.24	2.75	2.80	2.86	3.22	2.94
	N	500	333	147	91	489	345	161	94	527	398	191	100
Difference	Mean	-0.04	-0.09	-0.50	-0.31	-0.12	-0.05	-0.45	-0.21	0.01	0.23	-0.33	0.12
	Median	0.01	0.00	-0.03	-0.03	-0.02	0.02	-0.11	0.18	0.00	0.00	0.00	0.00
	SE	1.51	1.12	3.30	1.31	2.85	2.51	2.50	3.01	3.27	3.82	2.82	4.45
	N	488	261	123	77	461	255	117	72	512	340	164	81
T-Test	Statistic	-0.54	-1.33	-1.67 ***	-1.31	-0.94	-0.29	-1.93 *	-0.60	0.04	1.13	-1.15	0.25
	p-value	0.59	0.18	0.01	0.20	0.35	0.77	0.06	0.55	0.97	0.26	0.13	0.40
WSR	Statistic	0.60	-0.42	-2.03 **	-1.12	-0.82	0.15	-1.63	0.65	-0.17	1.78 *	-1.25	-0.21
	p-value	0.55	0.68	0.04	0.26	0.41	0.88	0.10	0.51	0.86	0.08	0.21	0.84

# Analysis of Operating Performance

		<i>ROA</i>				<i>ROE</i>				<i>Total Assets (USD M)</i>			
		Y0	Y1	Y2	Y3	Y0	Y1	Y2	Y3	Y0	Y1	Y2	Y3
Target	Mean	0.59	-2.99	-1.01	0.39	-9.30	-10.89	-9.77	-10.26	2,147	5,060	11,426	4,935
	Median	-0.54	-1.11	-0.83	-0.84	-1.33	-4.19	-3.92	-2.71	106	211	270	295
	SE	42.76	21.06	20.77	23.23	77.49	51.05	39.24	39.41	76,161	101,539	64,864	19,173
	N	613	397	186	93	597	393	187	91	660	444	210	105
Match	Mean	-1.59	-3.74	-3.76	-1.58	-6.34	-9.34	-6.43	-0.33	1,656	4,565	10,960	7,781
	Median	-1.01	-1.49	-1.04	-0.29	-3.10	-3.62	-6.36	-1.99	59	110	238	279
	SE	24.30	16.12	16.43	13.36	25.15	30.39	33.30	40.97	34,581	61,004	77,014	37,454
	N	577	389	176	102	526	342	170	91	636	447	222	112
Delta	Mean	2.43	1.57	2.59	-0.98	-2.15	-1.51	-8.35	-10.47	544	-1,391	-4,168	-2,238
	Median	0.54	0.05	-0.08	-0.47	2.01	1.37	-0.05	-1.73	35	64	65	102
	SE	50.50	22.33	25.87	15.29	80.96	41.50	47.29	53.76	65,414	109,232	70,667	34,943
	N	565	312	136	78	514	278	128	75	626	360	163	93
T-Test	Statistic	1.14	1.24	1.17	-0.56	-0.60	-0.61	-1.2 *	-1.69 *	0.21	-0.24	-0.75	-0.62
	<i>p</i> -value	0.25	0.22	0.25	0.57	0.55	0.55	0.05	0.10	0.84	0.81	0.45	0.54
WSR	Statistic	2.61 ***	-0.01	0.09	-1.25	2.09 **	0.28	-1.00	-1.23	3.00 ***	2.51 **	2.68 ***	2.65 ***
	<i>p</i> -value	0.01	0.99	0.93	0.21	0.04	0.78	0.32	0.22	< 0.01	0.01	< 0.01	< 0.01

# Analysis of Operating Performance

		<i>Debt Over Assets</i>				<i>Quick Ratio</i>				<i>Cash Over Total Assets</i>			
		Y0	Y1	Y2	Y3	Y0	Y1	Y2	Y3	Y0	Y1	Y2	Y3
Target	Mean	0.00	-0.01	-0.04	-0.09	0.04	0.17	0.11	0.31	-1.88	-1.58	-1.05	-0.91
	Median	0.00	0.00	-0.01	-0.01	-0.01	0.02	0.02	0.00	-0.38	-0.03	0.28	-0.46
	SE	0.29	0.34	0.40	0.54	2.68	2.27	1.40	2.90	15.09	20.35	22.84	19.94
	N	660	444	210	105	509	291	125	80	505	336	159	81
Match	Mean	0.17	0.10	0.09	0.17	-0.09	-0.03	0.11	-0.07	-1.19	1.58	-0.89	-0.32
	Median	0.01	0.01	0.00	-0.02	-0.09	-0.02	-0.04	-0.04	-0.65	-0.04	0.65	0.01
	SE	1.70	0.86	0.80	1.86	2.87	1.30	3.11	1.02	21.81	21.03	17.28	18.89
	N	607	406	192	105	467	282	144	79	453	300	143	74
Difference	Mean	-0.17	-0.03	-0.12	-0.24	0.28	0.19	0.16	0.43	-1.58	-2.76	-1.16	-2.28
	Median	-0.01	0.00	0.01	0.00	0.07	0.06	-0.04	-0.04	0.05	-1.47	-4.17	-3.09
	SE	1.72	0.39	0.89	2.01	3.47	2.72	1.43	3.77	25.43	27.11	22.78	21.87
	N	598	330	152	89	458	222	104	63	445	244	101	63
T-Test	Statistic	-2.44 **	-1.25	-1.70 *	-1.13	1.70 *	1.02	1.16	0.91	-1.31	-1.59	-0.51	-0.83
	<i>p</i> -value	0.01	0.21	0.09	0.26	0.09	0.31	0.25	0.37	0.19	0.11	0.61	0.41
WSR	Statistic	-3.60 ***	-0.85	-0.32	-0.18	2.86	0.35	-0.12	-0.25	-0.47	-1.03	-0.78	-0.80
	<i>p</i> -value	< 0.01	0.40	0.75	0.86	0.00	0.73	0.90	0.81	0.64	0.30	0.43	0.42

# Summary Of Findings And Conclusions

## Describe Patterns And Performance Of Public-Equity Investments Made By 33 SWFs, Jan 80 To Nov 09.

- A total of 802 transactions, for a value of USD 182 Bn.
- Most investments in USA and, in general, in OECD countries.
- Most investments are foreign.
- Tend to prefer large, profitable firms.

# Summary Of Findings And Conclusions

- **Positive market reaction to the news of a SWF investment (around 1%, 2% if we exclude Norway).**
- **Over the long term (3 years) SWF investments underperform.**
- **The underperformance is worst for foreign targets, large stakes, BOD seats**
  - The explanation is that SWFs are Constrained Foreign Investors.
  - Strong regulatory implications – SWFs should be ‘unshackled’, not subject to further regulation.

# Thank You

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