

SOVEREIGN WEALTH FUND TRANSPARENCY AND ACCOUNTABILITY EXPLORED

*Edwin M. Truman**

INTRODUCTION

Sovereign wealth funds (“SWFs”) burst onto the international financial scene a decade ago.¹ They are government-controlled funds that generally invest in whole or in part outside their home country.² SWFs attract political and financial attention because of their substantial size.³ The funds often are controlled by governments that are not major participants in international finance or in the construction of the associated web of standards and behavioral conventions of international finance.⁴ In many cases, funds’ operations are substantially opaque.⁵ Such opacity, along with SWFs’ size, give rise to suspicions about the motives behind their investments and their potential to contribute to economic, financial, or political disruption.⁶

SWFs, in form if not in name, have been around for decades. They are a feature of government finance in many countries.⁷ Some funds are financed from fiscal surpluses, and some are loosely tied to long-term pension plans.⁸ Others operate as stabilization funds.⁹

The strong growth of foreign exchange reserves during the 2000s, from both the commodity price boom and heavy foreign exchange

* This Article is based on joint research with Sarah E. Stone and has benefitted from invaluable advice, encouragement, and assistance from Caroline Freund, Egor Goronstay, Zixuan Huang, Fredrick Toohey, and the members of the *Wake Forest Law Review* as well as from Tracy P. Truman’s proofreading.

1. EDWIN M. TRUMAN, SOVEREIGN WEALTH FUNDS: THREAT OR SALVATION? 1 (2010).

2. *Id.* at 9–10.

3. *Id.* at 32–33.

4. Sarah E. Stone & Edwin M. Truman, *Uneven Progress on Sovereign Wealth Fund Transparency and Accountability* 1 (Peterson Inst. for Int’l Econ., Policy Brief No. 16-18, 2016), <https://piee.com/system/files/documents/pb16-18.pdf>.

5. *Id.*

6. *Id.*

7. *Id.*

8. *Id.*

9. *Id.*

intervention, was a factor leading to the establishment of more SWFs and expansion of those that already existed.¹⁰

A decade ago, in response to the varied concerns about SWFs, I began to write about SWFs and designed a SWF scoreboard to examine the transparency and accountability of these funds within and outside of their countries.¹¹ The first full SWF scoreboard, for 2007, was released in April 2008 in *A Blueprint for Sovereign Wealth Fund Best Practices*;¹² the second, for 2009, in *Sovereign Wealth Funds: Threat or Salvation?*;¹³ the third, for 2012, in *Progress on Sovereign Wealth Fund Transparency and Accountability: An Updated SWF Scoreboard*;¹⁴ and the fourth, for 2016, in *Uneven Progress on Sovereign Wealth Fund Transparency and Accountability*.¹⁵

The motive behind designing the SWF scoreboard was to encourage funds to be more transparent and accountable and thereby to reduce concerns about their activities in the countries in which they invest. The Santiago Principles¹⁶ drew upon my work and were similarly motivated as a defensive initiative by the funds, the countries that sponsor them, and the countries that are recipients of their investment. Representatives of some of the latter groups of countries participated in the process. Although the scoreboard and the Santiago Principles were initially motivated by international concerns, domestic citizens have an even greater interest in the

10. *Id.*

11. See generally Edwin M. Truman, *A Blueprint for Sovereign Wealth Fund Best Practices* (Peterson Inst. for Int'l Econ, Policy Brief No. 08-3, 2008) [hereinafter Truman, *A Blueprint for Sovereign Wealth Fund Best Practices*], <https://piie.com/publications/pb/pb08-3.pdf>; Edwin M. Truman, *Sovereign Wealth Funds: The Need for Greater Transparency and Accountability* (Peterson Inst. for Int'l Econ, Policy Brief No. 07-6, 2007), <https://piie.com/sites/default/files/publications/pb/pb07-6.pdf>.

12. See Truman, *A Blueprint for Sovereign Wealth Fund Best Practices*, *supra* note 11, at 2.

13. See TRUMAN, *supra* note 1.

14. See Allie E. Bagnall & Edwin M. Truman, *Progress on Sovereign Wealth Fund Transparency and Accountability: An Updated SWF Scoreboard* 3–6 (Peterson Inst. for Int'l Econ, Policy Brief No. 13-19, 2013), <https://piie.com/sites/default/files/publications/pb/pb13-19.pdf>.

15. Stone & Truman, *supra* note 4, at 3–5. In preparing the 2015 scoreboard, the earlier scoreboard results were checked and scores were marked down on elements where there was no current evidence that the fund in question satisfied them. As part of this fourth edition, scores were adjusted in all past scoreboards (from 2012, 2009, and 2007). *Id.* In addition, to take account of the modification in the elements between the first and second scoreboards, funds scored in 2007 now receive credit for scores on four elements from the 2009 scoreboard that were not included in the 2007 edition: (2) legal framework, (10) role of the governing body, (13) internal ethical standards, and (30) risk management strategy. At the same time, four elements were dropped from the first scoreboard. This treatment probably biased the 2007 results upward slightly. This Article uses the adjusted scoreboards, which are available at www.piie.com.

16. Bagnall & Truman, *supra* note 14, at 1.

transparency and accountability of the funds that invest their countries' wealth. It is ultimately their wealth.

The subsequent SWF scoreboards and the comparison of those results with the Santiago Principles were intended to keep some degree of pressure on the SWFs to increase their transparency and accountability.¹⁷ I also wanted to monitor the efforts of the International Forum of Sovereign Wealth Funds ("IFSWF") to encourage adherence to the Santiago Principles.¹⁸

The scoreboard consists of thirty-three elements divided into four broad categories.¹⁹ The first scoreboard evaluated thirty-three funds that are still operational in twenty-eight countries.²⁰ The fourth scoreboard evaluated sixty funds in forty-two countries.²¹ The increase in the number of funds that have been scored attests to the increase in the size of the SWF community. Our list of SWFs could have been longer. It is a function of the definition used, the availability of information on the funds, and whether they generally invest abroad, at least in part.²² The Sovereign Wealth Fund Institute ("SWFI") lists seventy-nine SWFs,²³ while the Official Monetary and Financial Institutions Forum ("OMFIF") identifies

17. *Id.* at 7.

18. Allie E. Bagnall & Edwin M. Truman, *IFSWF Report on Compliance with the Santiago Principles: Admirable but Flawed Transparency* 1 (Peterson Inst. for Int'l Econ., Policy Brief No. 11-14, 2011) <https://piie.com/publications/pb/pb11-14.pdf>; Edwin M. Truman, *Implementation of the Santiago Principles for Sovereign Wealth Funds: A Progress Report* 1 (Peterson Inst. for Int'l Econ., Policy Brief No. 13-31, 2013), <https://piie.com/sites/default/files/publications/pb/pb13-31.pdf>.

19. *See infra* Table 2.

20. Truman, *A Blueprint for Sovereign Wealth Fund Best Practices*, *supra* note 11, at 17.

21. *See infra* Table 1.

22. I use the definition of SWF adopted by the International Working Group of Sovereign Wealth Funds ("IWG") and have adjusted the information presented in previous SWF scoreboards to be consistent with this treatment. INT'L WORKING GRP. OF SOVEREIGN WEALTH FUNDS, SOVEREIGN WEALTH FUNDS: GENERALLY ACCEPTED PRINCIPLES AND PRACTICES: "SANTIAGO PRINCIPLES" 3 (2008), http://www.ifswf.org/sites/default/files/santiagoprinciples_0_0.pdf. That definition includes government pension reserve funds as SWFs. These funds are not directly linked to the financing of social security systems but are expected to be used for that purpose in the future. The definition does not include other forms of government pension funds. However, some information on such funds is reported in some of the tables that follow for comparison purposes. The IWG agreed: "SWFs are special purpose investment funds or arrangements that are owned by the general government. Created by the general government for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies the include investing in foreign assets." *Id.* The IWG noted that "general government includes both central government and subnational government." *Id.*

23. *See Sovereign Wealth Fund Rankings*, SWFI, <http://www.swfinstitute.org/%20sovereign-wealth-fund-rankings/> (last visited Nov. 10, 2017).

eighty-five sovereign funds.²⁴ Funds also cease to exist. Four funds that were included in the previous three scoreboards were dropped from the 2015 scoreboard: The National Fund of the Republic of Kazakhstan, São Tomé & Príncipe's National Oil Account, the Oil Revenue Stabilization Account of Sudan/South Sudan, and Venezuela's National Development Fund.²⁵ Both the Venezuelan and Kazakhstani funds were eliminated because they appear to be rapidly emptying, and there is little available information on them. In addition, we were unable to find any public information about the funds from Sudan/South Sudan and São Tomé & Príncipe. The civil war in Sudan probably has prevented its fund from operating in recent years, if it has any assets left.²⁶ The assets under management by all SWFs have increased substantially since 2007, but not to the extent that many observers once predicted,²⁷ and they have been essentially flat since mid-2014, at about \$7.5 trillion on the SWFI metric.²⁸

TABLE 1: 2015 SWF SCOREBOARD²⁹

Country	Fund Name	Score (%)
Norway	Government Pension Fund Global	98
New Zealand	New Zealand Superannuation Fund	94
United States	Permanent Wyoming Mineral Trust Fund	93
Azerbaijan	State Oil Fund	92
Canada	Alberta Heritage Savings Trust Fund	91
Chile	Economic and Social Stabilization Fund	91
Chile	Pension Reserve Fund	88
Timor-Leste	Petroleum Fund of Timor-Leste	88
United States	Alaska Permanent Fund Corporation	88
Australia	Future Fund	87
United States	New Mexico State Investment Council	84
Ireland	Irish Strategic Investment Fund	82
United States	Alabama Trust Fund	82
Trinidad and Tobago	Heritage and Stabilization Fund	81

24. *Global Public Investor*, OMFIF, www.omfif.org/analysis/global-public-investor/ (last visited Nov. 5, 2017).

25. See Bagnall & Truman, *supra* note 14, at 4–5; *infra* Table 1.

26. In addition, for the 2015 scoreboard the names of several SWFs have changed: Ireland's National Pension Reserve Fund was replaced by Ireland Strategic Investment Fund, Mexico's Oil Income Stabilization Fund was replaced by Budgetary Income Stabilization Fund, Singapore's Government of Singapore Investment Corporation was replaced by GIC Private Ltd., and Dubai International Capital was replaced by its parent Dubai Holding.

27. See Bagnall & Truman, *supra* note 18, at 2, 5; Bagnall & Truman, *supra* note 14, at 2.

28. See *Sovereign Wealth Fund Rankings*, *supra* note 23.

29. Stone & Truman, *supra* note 4, at 8–9. * indicates a fund that was included for the first time on the scoreboard.

Korea	Korea Investment Corporation	78
Palestine	Palestine Investment Fund*	77
Nigeria	Nigeria Sovereign Investment Authority	76
Singapore	Temasek Holdings	76
United States	Texas Permanent School Fund*	73
China	China Investment Corporation	70
United States	Texas Permanent University Fund*	70
France	Caisse des Depots et Consignations*	68
Hong Kong	Exchange Fund	68
Kuwait	Kuwait Investment Authority	68
Mexico	Budgetary Income Stabilization Fund	68
United Arab Emirates	Mubadala Development Company	68
Angola	Fundo Soberano de Angola	67
Italy	Fondo Strategico Italiano*	67
France	BPI France Investissement*	65
United States	North Dakota Legacy Fund*	64
Malaysia	Khazanah Nasional Berhad	61
Singapore	GIC Private Limited	61
Brazil	Sovereign Fund of Brazil	60
Botswana	Pula Fund	59
United Arab Emirates	Dubai Holding	59
United Arab Emirates	Abu Dhabi Investment Authority	58
Rwanda	Agaciro Development Fund*	57
United Arab Emirates	Investment Corporation of Dubai	55
United Arab Emirates	International Petroleum Investment Company	55
Bahrain	Mumtalakat Holding Company	52
Oman	State General Reserve Fund	52
Russia	National Welfare and Reserve Fund	49
Iran	National Development Fund	48
Kazakhstan	National Investment Corporation*	48
Mexico	Fondo Mexicano Del Petroléo*	48
Peru	Fiscal Stabilization Fund*	48
Kazakhstan	Samruk-Kazyna*	47
Morocco	Moroccan Fund for Tourism Development*	47
Ghana	Ghana Petroleum Funds	45
Venezuela	Macroeconomic Stabilization Fund	42
Qatar	Qatar Investment Authority	40
Vietnam	State Capital Investment Corporation	39
Russia	Russia Direct Investment Fund*	36
Kiribati	Revenue Equalization Reserve Fund	35
United Arab Emirates	Abu Dhabi Investment Council*	33
Brunei	Brunei Investment Agency	30
Algeria	Revenue Regulation Fund	26
Libya	Libyan Investment Authority	23
Average (60 SWFs)		62

My intention in designing the SWF scoreboard was not to suggest that every SWF should score perfectly on each element and, thus, 100% on the overall scoreboard. The scoreboard provides a benchmark, not a definition of perfection. Some of the elements on the scoreboard apply more precisely to some SWFs than to others. The circumstances, environment, and national cultures surrounding each fund are different. It is unreasonable to expect that one size would fit all.

Scores are based on publicly available information, such as summaries and annual reports on the funds' websites or from their countries' ministries of finance or central banks.³⁰ The scores also draw on the self-assessment reports that most members of the IFSWF have posted on the IFSWF's website.³¹ The sixty SWFs received an average score of 62% in the 2015 edition of the SWF scoreboard.³² The median was 62.5%.³³ The range of scores was 87 percentage points, distributed between 11% (Equatorial Guinea's Fund for Future Generations) and 98% (Norway's Government Pension Fund Global), with a standard deviation of 20.5 percentage points.³⁴ The range of these results emphasizes the fact that generalizations about the transparency and accountability of SWFs as a group are unfounded; the 2015 scoreboard demonstrates that funds differ widely.

30. See Bagnall & Truman, *supra* note 14, at 2.

31. The scores on the thirty-three elements, which range from zero to one in one-quarter increments, are summed and scaled to 100. See *supra* Table 1; *infra* Table 2.

32. See *supra* Table 1.

33. See *supra* Table 1.

34. See *supra* Table 1.

TABLE 2: 2015 SWF SCOREBOARD ELEMENTS³⁵

		Element	SWF Avg. (%)
Structure	1	Objective stated	98
	2	Legal framework	85
	3	Changing the structure	83
	4	Investment strategy	75
	5	Source of funding	88
	6	Use of fund earnings	69
	7	Integrated with policies	64
	8	Separate from international reserves	64
		Subtotal	
Governance	9	Role of government	88
	10	Role of governing body	88
	11	Role of managers	65
	12	Decisions made by managers	54
	13	Internal ethical standards	53
	14	Guidelines for corporate responsibility	36
	15	Ethical investment guidelines	22
		Subtotal	
Transparency and Accountability	16	Categories	78
	17	Benchmarks	45
	18	Credit ratings	48
	19	Mandates	28
	20	Size	85
	21	Returns	63
	22	Locations	41
	23	Specific investments	48
	24	Currency composition	43
	25	Annual reports	82
	26	Quarterly reports	46
	27	Regular audits	89
	28	Published audits	58
	29	Independent audits	82
	Subtotal		60
Behavior	30	Risk management	67
	31	Policy on leverage	35
	32	Policy on derivatives	58
	33	Portfolio adjustment	11
		Subtotal	
	Total	All categories	62

Table 2 provides the average scores, scaled to 100, on each of the thirty-three elements and the four categories of the scoreboard:

35. See Stone & Truman, *supra* note 4, at 13.

structure, governance, specific aspects of transparency and accountability, and behavior.³⁶ On average, the SWFs score the highest on structure—perhaps because the elements in the structure category concern the basics of their organization.³⁷ The funds typically score about the same in the governance category as they do in the transparency and accountability category, and they score the least in the behavior category.³⁸

The governance elements focus on operations. The lowest scores in this section are on those elements regarding whether the fund has publicly stated policies with respect to corporate responsibility and guidelines for ethical investment.³⁹ The latter element concerns not the internal operations of the fund but whether it has public policies about where and in what types of activities it invests or does not invest.⁴⁰

The section on transparency and accountability includes fourteen elements that relate to the scope and content of public reports.⁴¹ On average, the funds publish a substantial amount of information about the categories of their investments but less about their location, currency composition, or specific investments.⁴² On average, however, almost half of the funds do provide some information on their specific investments. The same is true for whether funds state that they use benchmarks or credit ratings to guide their investments. The funds record the lowest scores on average on disclosing the names of the external asset managers who have mandates to invest all or part of the fund.⁴³

On average, a lower level of transparency is recorded on disclosure of funds' returns, and the improvement since the 2009 scoreboard is similarly meager.⁴⁴ In contrast, the average score with respect to regular auditing of funds is eighty-nine percent.⁴⁵ The average score for independent audits (those conducted by an outside

36. See *supra* Table 2. One of the principles underlying the SWF scoreboard during its design phase was to make sure that at least one SWF did what all funds were being asked whether they did. The average scores understate the absolute number of funds that provide some information on each element because for most elements partial credit is allowed. *Id.* But see Bagnall & Truman, *supra* note 14, at 6.

37. See *supra* Table 2.

38. See *supra* Table 2.

39. See *supra* Table 2.

40. See *supra* Table 2.

41. See *supra* Table 2.

42. See *supra* Table 2.

43. See *supra* Table 2.

44. See *supra* Table 2; see also TRUMAN, *supra* note 1, at 89.

45. See *supra* Table 2.

party, including any government audit authority) is similar.⁴⁶ However, funds do poorer with respect to publishing their audits.⁴⁷

TABLE 3: PROGRESSION OF SCORES OF THE SWFS: 2007—2015⁴⁸

Number of Funds	2007	2009	2012	2015	Change from 2007, 2009, or 2012 Score to 2015 Score
33 Funds	51	58	59	67	16%
40 Funds		56	57	66	10%
(of which 7 new funds)		46	48	61	15%
45 Funds			53	63	10%
(of which 5 new funds)			21	39	18%
60 Funds				62	N/A
(of which 15 new funds)				56	N/A

The 2015 scoreboard results point to overall improvement.⁴⁹ The thirty-three funds first scored in 2007 and still included in the Scoreboard show a cumulative increase of 16 percentage points to 67%.⁵⁰ Interestingly, about half of the increase came between 2007 and 2009.⁵¹ That makes sense because it was during that period that SWFs were in the spotlight and responding to both the scoreboard and Santiago Principles. However, after little change in the average score between 2009 and 2012, the 2015 edition revealed another jump.⁵² This result implies an encouraging increase in the transparency of many funds in recent years. The fact that the funds originally scored in 2009 and 2012 showed a similar pattern and that the fifteen funds first scored for 2015 had an average score only seven percentage points below the average of the other forty-five funds reinforces this evidence.⁵³

It would be encouraging to think that membership in the IFSWF had something to do with these improvements, and it probably did. The thirty-two funds that are members of the IFSWF do have a higher

46. See *supra* Table 2.

47. See *supra* Table 2. Performance on all three of these elements has improved since the 2009 scoreboard. TRUMAN, *supra* note 1, at 120. That study found 35% performance. Using the adjusted data, performance is 47%, compared with 58% in Table 2.

48. See Stone & Truman, *supra* note 4, at 23.

49. See *supra* Table 3.

50. See *supra* Table 3.

51. See *supra* Table 3.

52. See *supra* Table 3.

53. See *supra* Table 3.

average score on the 2015 scoreboard than the twenty-eight that are not members,⁵⁴ but the difference is not statistically significant. However, only twenty of the members mention their IFSWF affiliation on their websites.⁵⁵ About half of them mention the extent of their adherence to the Santiago Principles.⁵⁶ But only six funds post self-assessments of their adherence to the Principles.⁵⁷ The correlation between the average score on these three questions and how the funds rate on the scoreboard as a whole is only slightly positive.⁵⁸ We were forced to conclude that most IFSWF members “are either reluctant to trumpet their membership” or did not think it was important to do so.⁵⁹

For the record, an evaluation of the performance of the SWFs on the scoreboard and an examination of their performance on the Santiago Principles where there is some overlap between some of the scoreboard’s thirty-three elements and the Santiago Principle’s twenty-five elements demonstrated that the results are highly and significantly correlated.⁶⁰ Moreover, the scores on the less demanding Santiago Principles are not, on average, substantially higher than on the scoreboard.⁶¹

I. TRANSPARENCY AND ACCOUNTABILITY

Having outlined the raw material for this study, this Article will attempt to answer the question: what can be said about the funds’ transparency and accountability as distinct, rather than independent, concepts?

Most observers would accept that the two concepts are linked even if they might not subscribe precisely to how the Transparency and Accountability Initiative articulates these terms:

54. Stone & Truman, *supra* note 4, at 23.

55. *Id.*

56. *Id.*

57. *Id.*

58. Four IFSWF members have posted full self-assessments since Stone and Truman wrote in 2016. *Our Members*, IFSWF, <http://www.ifswf.org/our-members> (last visited Nov. 5, 2017). Only two members of the IFSWF have not completed self-assessments, the Libyan Investment Authority and Malaysia’s Khazanah Nasional Berhad. *Id.* The former’s failure to do so is understandable as its assets are still frozen. See Heba Saleh & Andrew England, *Libya Sovereign Wealth Fund Chief to Appeal to UN over Frozen Assets*, FIN TIMES (Apr. 19, 2017), <https://www.ft.com/content/a9be923c-2349-11e7-8691-d5f7e0cd0a16>. Malaysia is dealing with a scandal surrounding the 1MDB organization. See *Malaysia Controversy*, WALL STREET J., <http://www.wsj.com/specialcoverage/malaysia-controversy> (last visited Nov. 5, 2017). It is not a SWF, but its problems may be indicative.

59. Stone & Truman, *supra* note 4, at 23.

60. *Id.* at 16.

61. *Id.* at 16.

Transparency and accountability need each other and can be mutually reinforcing. Together they enable citizens to have a say about issues that matter to them and a chance to influence decision-making and hold those making decisions to account. Each concept is part of a strategy used for and by citizens to have the means, resources and opportunities to influence decision-making and affect development outcomes. As a principle, public officials, civil servants, managers and directors of companies and organizations, and board trustees have a duty to act visibly, predictably and understandably to promote participation and accountability. Accountability means ensuring that officials in public, private, and voluntary sector organizations are answerable for their actions and that there is redress when duties and commitments are not met.⁶²

The Transparency and Accountability Initiative stresses that transparency is not just about making information available but also relevant, accessible, timely, and accurate.⁶³ Accountability involves standards of behavior, investigation of those who should be accountable, a process of answering, and, potentially, sanctions.⁶⁴

On the other hand, many analysts disagree about how these concepts are defined and implemented. Monika Bauhr and Marcia Grimes conclude, "Transparency, despite a surge of attention in policy and academic arenas, has received insufficient rigorous theoretical attention and therefore remains somewhat clouded in conceptual ambiguity."⁶⁵ They attempt to shed light on this ambiguity by measuring three dimensions: government openness, whistleblower protection, and publicity.⁶⁶

What we know is that transparency and accountability are related; they are complements. In a sense, transparency comes before accountability or is a necessary but not sufficient condition for accountability. When I designed the SWF scoreboard, I thought about the two concepts together. The way the scoreboard is structured, drawing upon publicly available information, suggests that it is more about transparency than accountability. I have been challenged to identify the elements of the scoreboard that are associated with each concept. A second step is to measure the strength of the association.

62. *Who We Are*, TRANSPARENCY & ACCOUNTABILITY INITIATIVE, <http://www.transparency-initiative.org/who-we-are/> (last visited Nov. 5, 2017).

63. *Id.*

64. *Id.*

65. Monika Bauhr & Marcia Grimes, *What Is Government Transparency? New Measures and Relevance for Quality of Government* 22 (Univ. of Gothenburg, Working Paper No. 20120:16, 2012), http://www.qog.pol.gu.se/digitalAssets/1418/1418047_2012_16_bauhr_grimes.pdf.

66. *Id.* at 23.

TABLE 4: TRANSPARENCY AND ACCOUNTABILITY⁶⁷

		Element	SWF Avg. (%)	Accountability on Transparency			
				I	II	III	IV
Structure	1	Objective stated	98	A	A	A	
	2	Legal framework	85	A	A	A	
	3	Changing the structure	83	A	A	A	
	4	Investment strategy	75	A	A	A	
	5	Source of funding	88	A	A	A	
	6	Use of fund earnings	69	A	A	A	
	7	Integrated with policies	64	A			
	8	Separate from international reserves	64	A			
	Subtotal		78				
Governance	9	Role of government	88	A	A		A
	10	Role of governing body	88	A	A		A
	11	Role of managers	65	A	A		A
	12	Decisions made by managers	54	A	A		A
	13	Internal ethical standards	53	A	A		A
	14	Guidelines for corporate responsibility	36	A	A		A
	15	Ethical investment guidelines	22	A			
	Subtotal		58				

67. * indicates significance at the 10% confidence level; ** indicates significance at the 5% confidence level; *** indicates significance at the 1% confidence level.

Transparency and Accountability	16	Categories	78	T	T		
	17	Benchmarks	45	T	T		
	18	Credit ratings	48	T	T		
	19	Mandates	28	T	T	T	T
	20	Size	85	T	T	T	T
	21	Returns	63	T	T	T	T
	22	Locations	41	T	T		
	23	Specific investments	48	T	T		
	24	Currency composition	43	T	T		
	25	Annual reports	82	T	T	T	T
	26	Quarterly reports	46	T	T	T	T
	27	Regular audits	89	T	T	T	T
	28	Published audits	58	T	T	T	T
	29	Independent audits	82	T	T	T	T
	Subtotal		60				
Behavior	30	Risk management	67	T	A		
	31	Policy on leverage	35	T	A		
	32	Policy on derivatives	58	T	A		
	33	Portfolio adjustment	11	T			
		Subtotal		43			
	Total	All categories	62				
Regression Result		Intercept		45.68	36.15	38.510	2.103
		Coefficient on Transparency		0.4159 ***	0.5099 ***	0.4461 ***	1.056 ***
		T-statistic		5.611	7.278	3.121	24.42
		Adjusted R-square		0.3406	0.4683	0.1290	0.9099
		F-test		31.48	52.97	9.740	596.4
		Number of observations		60	60	60	60

Table 4 presents the results of four attempts to answer these questions. Column I shows the simplest identification of the elements of accountability and transparency in the SWF scoreboard.⁶⁸

68. See *supra* Table 4.

Accountability in this test includes the first two categories of the scoreboard (structure and governance), indicated by an "A."⁶⁹ Transparency includes the other two categories of the scoreboard (transparency and accountability as well as behavior), indicated by a "T."⁷⁰ For each of the sixty SWFs, the scores on these two groups of elements are averaged and rescaled to 100.⁷¹ The result of a regression of this measure of transparency on this measure of accountability is displayed at the bottom of the table.⁷² The relationship is positive and highly significant.

When I developed the scoreboard and grouped the thirty-three elements into four broad categories, I did not consider which elements might be more indicative of accountability, narrowly defined, and which elements might be more indicative of transparency, narrowly defined. Indeed, I combined fourteen elements into one category of "transparency and accountability."⁷³ Therefore, a more sophisticated approach to the question of the relationship between elements of accountability and transparency in the scoreboard is appropriate. In implementing this approach, I identified elements in the scoreboard that provide information on how and why the SWF was established and how its governance and operations are managed as more closely related to accountability. In effect, these elements allow the public to know which officials can be held accountable for the operation of the SWF and in what respects they can be held accountable. On the other hand, the elements related to how and whether the SWF presents information on its activities to the public can be interpreted as more closely related to transparency.

Using this distinction and inspecting the elements in the first two categories, three appear to be less related to accountability: whether the policies of the SWF are integrated with other economic policies, whether the SWF's assets are included in the country's international reserves,⁷⁴ and whether the SWF has ethical guidelines on where it does or does not invest.⁷⁵ In addition, the first three elements of the behavior category appear to be related more to accountability than transparency: whether the fund has a risk management policy, a policy on the use of leverage, and a policy on the use of derivatives.⁷⁶ With respect to transparency, each of the elements in the category labeled transparency and accountability is somewhat related to how an SWF reports to the public on its operations.

69. *See supra* Table 4.

70. *See supra* Table 4.

71. *See supra* Table 4.

72. *See supra* Table 4.

73. *See supra* Tables 2, 4.

74. *See supra* Table 4. They should not be included because, in general, the purposes of reserves and of SWFs do not overlap. Bagnall & Truman, *supra* note 14, at 10–11.

75. *See supra* Tables 2, 4.

76. *See supra* Tables 2, 4.

Column II of Table 4 summarizes this more sophisticated effort to differentiate in the scoreboard between elements of accountability and elements of transparency.⁷⁷ The result of a simple regression testing the strength of these composite representations of accountability and transparency is presented at the bottom of the column. The relationship is tighter than the first test, with a larger *T*-statistic on transparency and a higher adjusted *R*-square. The coefficient on the composite transparency variable is larger and highly statistically significant. But the difference between the two coefficients is not significant.

In a further refinement in column III, I use only the first six elements of the governance section to capture accountability and use only elements nineteen to twenty-one and twenty-five to twenty-nine to capture transparency.⁷⁸ The six elements of governance focus on how and why the fund was established.⁷⁹ The narrower set of eight elements representing transparency cover core information about the fund's activities, whether the fund publishes information about its operations, and how extensively and publicly the fund's operations are audited.⁸⁰

As shown at the bottom of column III, and somewhat to my surprise, the relationship between these two representations of accountability and transparency, while still positive, is weaker than in the crude first depiction.⁸¹ The coefficient on this representation of transparency is still significantly different from 0 at the 1% level, and between the other two coefficients on size, but, as shown by the adjusted *R*-square, the overall relationship is much weaker in this depiction of the relationship between accountability and transparency.⁸²

A final exercise shifts the focus of the representation of accountability from the structure and purpose of the SWF to the management or governance of the SWF, the first six elements in the governance category.⁸³ Higher scores suggest clearer lines of authority and an increased potential to hold the management of the SWF responsible for its decisions. The results presented at the bottom of column IV suggest that the relationship between this combination of six elements representing the core of accountability and eight elements representing the core of transparency is very tight.⁸⁴ The highly significant coefficient is not only significantly

77. *See supra* Table 4.

78. *See supra* Table 4.

79. *See supra* Table 4.

80. *See supra* Table 4.

81. *See supra* Table 4.

82. *See supra* Table 4.

83. *See supra* Table 4.

84. *See supra* Table 4.

different from 0 at the 1% level, it is not significantly different from 1.

These results do not speak directly to causality. The SWF scoreboard was developed to promote accountability through increasing transparency. No effort was made to evaluate how accountable each fund is in practice. However, the tight link between the narrow composite representation of transparency and the similarly narrow composite representation of potential accountability strongly suggests that SWFs that score higher on this small group of elements of transparency are likely to be more accountable in practice.⁸⁵

II. INFLUENCES ON THE FUND SCORES

The aim of this Part is to seek explanations for why some SWFs score higher on the 2015 edition of the SWF scoreboard. I try to distinguish between three types of influence: external pressure coming from the countries where the funds invest, peer pressure associated with the performance of other funds, and internal pressure associated with the home country itself. My hypothesis is that each type of influence is important, but it would be nice also to determine the relative weight of the three potential influences.

A. *Evidence on the Individual Funds*

As noted earlier, the 2015 SWF scoreboard covers sixty funds in forty-two countries.⁸⁶ The first step in analyzing the influences on each fund's performance on the SWF scoreboard is to consider each fund individually and how its score might be explained statistically by a set of variables. I examine three variables to represent potential external influences on the funds, one variable to represent peer pressure, and one variable to represent internal pressure. The results for the first two potential sources of pressure are summarized in Table 5.⁸⁷

85. See *supra* Table 4.

86. See *supra* Table 1.

87. See *infra* Table 5.

TABLE 5: SOURCES OF INFLUENCE ON INDIVIDUAL SWFs IN THE 2015 SCOREBOARD⁸⁸

Source of Influence	[1]	[2]	[3]	[4]	[5]	[6]	
External Pressure	Intercept	51.62	61.74	58.98	54.71	48.71	48.074 22969
	Size of fund larger than \$50 billion	0.0363 **					
	<i>T</i> -statistic	2.184					
	Dummy variable on size of fund larger than \$50 billion					-0.1664	
	<i>T</i> -statistic					-0.0258	
	Share of foreign assets less than 100%		0.1337				
	<i>T</i> -statistic		1.135				
	Dummy variable on share of foreign assets less than 100%					8.628**	8.992*
	<i>T</i> -statistic					1.574	1.689
	Log of full news count			0.8826		-0.0018	
	<i>T</i> -statistic			1.1176		-0.3542	
	Peer Pressure	IFSWF membership dummy				13.63 ***	15.68 ***
<i>T</i> -statistic					2.6815	2.8343	2.8583
Adjusted <i>R</i> -square		0.1586	0.0092	0.0042	0.0950	0.1124	0.1408
<i>F</i> -test		4.769	1.2885	1.2491	7.1907	2.8682	5.8362
Number of observations		21	32	60	60	60	60

88. * indicates significance at the 10% confidence level; ** indicates significance at the 5% confidence level; *** indicates significance at the 1% confidence level.

I was unable to identify a variable that could reliably differentiate among the funds with respect to internal pressure. With respect to external pressure, I considered three variables: the absolute size of the fund, the extent to which the fund invests abroad, and the number of times the SWF has appeared in news reports.

The argument that informed the first variable was that the larger the fund, the more likely it would be to generate concerns in the foreign countries in which it invested, to which the home country and fund might be expected to respond by being more transparent.⁸⁹ I tried several representations of this variable. The simple regressions of the 2015 scoreboard results on the size of all sixty funds either in billions of dollars or the natural log of billions of dollars failed to produce a significant coefficient.⁹⁰ Recognizing that many SWFs are quite small, I truncated the sample at \$50 billion, leaving twenty-one funds. As shown in column [1] of Table 5, that regression yielded a small positive coefficient that is significant at the 5% level.⁹¹ This result implies that an extra \$100 billion in assets would add 3 percentage points to the SWF's score. Not surprisingly, if Norway's Government Pension Fund Global, with its \$888 billion in assets as of 2016, is dropped from the regression, the coefficient on the size of the remaining funds is reduced by more than a third and is no longer significant.⁹²

A similar argument informed the second candidate variable for external pressure: the greater the extent to which the fund invests abroad rather than at home, the more likely it would be to generate concerns about its activities, to which it would respond by being more transparent.⁹³ A simple regression of each SWF's score on the share of its portfolio invested abroad yielded the wrong sign on the coefficient.⁹⁴ Reasoning that some funds, because of their structure, are required to invest exclusively outside their home countries, I limited the regression to the thirty-two funds that have at least part of their portfolios invested at home.⁹⁵ As reported in Table 5's column [2], this regression yielded a positive sign on the coefficient, but it was neither significant nor large.⁹⁶

The argument behind the third proxy for external pressure on a SWF to be more transparent is that the more news or publicity about the activities of a fund, the more likely the fund would be to respond by being more transparent about its activities. To implement this

89. *See supra* Table 5.

90. This result is not reported.

91. *See supra* Table 5.

92. Using the natural log of the size of the funds whose assets exceed \$50 billion produced similar but slightly less significant results, with and without Norway's Government Pension Fund Global.

93. *See supra* Table 5.

94. This result is not reported.

95. *See supra* Table 5.

96. *See supra* Table 5.

idea, I performed a news count on Bloomberg of articles that mention each SWF by name. The responses include articles from twenty-five leading entities of the financial press, most of which are not purely domestic in their orientation.⁹⁷

TABLE 6: NEWS COUNTS OF SWFS FROM Q1 2005 TO Q4 2015⁹⁸

Country	Fund	Number	Percent
Qatar	Qatar Investment Authority	2,687	14.20%
Kazakhstan	National Investment Corporation	1,972	10.43%
Kuwait	Kuwait Investment Authority	1,807	9.55%
United States	North Dakota Legacy Fund	1,490	7.88%
Russia	National Welfare and Reserve Fund	1,443	7.63%
Singapore	GIC Private Ltd.	1,054	5.57%
Libya	Libyan Investment Authority	1,027	5.43%
Norway	Government Pension Fund Global	908	4.80%
China	China Investment Corporation	901	4.76%
United Arab Emirates	Abu Dhabi Investment Authority	712	3.76%
Australia	Future Fund	584	3.09%
Singapore	Temasek Holdings	448	2.37%
Russia	Russian Direct Investment Fund	412	2.18%
United States	Alaska Permanent Fund Corporation	389	2.06%
United States	New Mexico State Investment Council	376	1.99%
United States	Texas Permanent School Fund	345	1.82%
Nigeria	Nigeria Sovereign Investment Authority	286	1.51%
United States	Permanent Wyoming Mineral Trust Fund	267	1.41%
United States	Alabama Trust Fund	242	1.28%
New Zealand	New Zealand Superannuation Fund	189	1.00%
Italy	Fondo Strategico Italiano	163	0.86%
Korea	Korea Investment Corporation	153	0.81%
Malaysia	Khazanah Nasional Berhad	153	0.81%
United Arab Emirates	Abu Dhabi Investment Council	145	0.77%

97. For Singapore's Temasek, Italy's Fondo Strategico Italiano, France's BPI France Investissement and Caisse des Dépôts et Consignations, the Hong Kong Exchange Fund, and the funds in the United States and the United Arab Emirates, I limited the search to articles that both mentioned the name of the fund and the search term "sovereign wealth fund" because for these countries a large number of articles about these funds did not mention that they are SWFs. From the first quarter of 2005, when the data are first available via Bloomberg, through the fourth quarter of 2015, 28,216 articles mentioned the name of one or more of the sixty SWFs. The figure shrinks to 18,916 articles when the phrase "sovereign wealth fund" is attached to the names these funds.

98. Bloomberg news count from responses to queries with the name of the fund and in some cases "sovereign wealth fund."

TABLE 6: NEWS COUNTS OF SWFS FROM Q1 2005 TO Q4 2015
(CONTINUED)

Country	Fund	Number	Percent
Palestine	Palestine Investment Fund	100	0.53%
Ireland	Ireland Strategic Investment Fund	96	0.51%
Brunei	Brunei Investment Agency	61	0.32%
United Arab Emirates	Dubai Holding	59	0.31%
United Arab Emirates	Mubadala	52	0.27%
United Arab Emirates	Istithmar World	48	0.25%
Oman	State General Reserve Fund	43	0.23%
Chile	Economic and Social Stabilization Fund	37	0.20%
Iran	National Development Fund of Iran	31	0.16%
Equatorial Guinea	Fund For Future Generations	30	0.16%
Peru	Fiscal Stabilization Fund	30	0.16%
Azerbaijan	State Oil Fund of the Republic of Azerbaijan	29	0.15%
Chile	Pension Reserve Fund	25	0.13%
Angola	Fundo Soberano de Angola	20	0.11%
United Arab Emirates	Investment Corporation of Dubai	18	0.10%
Timor-Leste	Petroleum Fund of Timor-Leste	16	0.08%
Canada	Alberta Heritage Savings Trust Fund	15	0.08%
Trinidad and Tobago	Heritage and Stabilization Fund	15	0.08%
Vietnam	State Capital Investment Corporation	7	0.04%
Brazil	Sovereign Fund of Brazil	6	0.03%
Botswana	Pula Fund	5	0.03%
Venezuela	Macroeconomic Stabilization Fund	4	0.02%
France	BPI France Investissement	3	0.02%
Algeria	Revenue Regulation Fund	2	0.01%
Ghana	Ghana Petroleum Funds	2	0.01%
Hong Kong	Hong Kong Exchange Fund	2	0.01%
Kazakhstan	Samruk-Kazyna JSC	2	0.01%
Kiribati	Revenue Equalization Reserve Fund	2	0.01%
Rwanda	Agaciro Development Fund	2	0.01%
Mexico	Fondo Mexicano del Petróleo para la Estabilización y el desarrollo	1	0.01%
Bahrain	Bahrain Mumtalakat Holding Company	–	0.00%
France	Caisse des Dépôts et Consignations	–	0.00%
Mexico	Budgetary Income Stabilization Fund	–	0.00%
Morocco	Moroccan Fund for Tourism Development	–	0.00%
United Arab Emirates	International Petroleum Investment Company	–	0.00%
United States	(Texas) Permanent University Fund	–	0.00%

As shown in Table 6, the top ten funds on this metric account for 74% of the news counts and forty-five funds account for 2% or less of the total.⁹⁹ I explored whether news counts covering different periods starting closer to 2015, the year of the scoreboard being evaluated, or starting after 2005 were significantly related to the scores of the sixty SWFs. The answer was universally negative. The closest fit was for the data shown in Table 6, from the first quarter of 2005 to the fourth quarter of 2015, which is reported in column [3] of Table 5.¹⁰⁰

Turning to peer pressure, the news count data could also be a measure of peer pressure, but I think it is more credible to link such data to external pressure. It also could be said that the intercept in any equation is a measure of peer pressure, in the sense that this establishes a benchmark against which a SWF might measure itself. However, a more natural measure of peer pressure is membership in the IFSWF. This organization is identified within the Santiago Principles, which are closely related to many of the elements on the SWF scoreboard.¹⁰¹ Members are expected to adhere to those principles.¹⁰² As shown in the column [4] of Table 5, the coefficient on the dummy variable on membership in the IFSWF is highly significant.¹⁰³ Alone it is worth about 14 percentage points. However, it does not explain a substantial amount of the overall variation in scores.

With respect to internal pressure, it is difficult to identify variables that are uniquely associated with internal pressure on an SWF rather than on the home country of the SWF. One possible candidate is the source of the resources that finance each fund. In general, sources of financing can be distinguished between revenues from the production and export of commodities including, but not limited to, oil and gas and from other sources, such as foreign exchange reserves, fiscal surpluses, or government holding companies.¹⁰⁴ A few countries, including Russia and the United Arab Emirates, have funds that derive their financing from both commodities and other sources—although, for those two countries, it is somewhat problematic to distinguish funds that are directly funded by the revenues from commodities from those that may be indirectly funded by them.¹⁰⁵ In any case, the regression produced a negative adjusted *R*-square.¹⁰⁶ Consequently, I was unable to identify a variable associated with internal pressure on the individual funds to

99. See *supra* Table 6.

100. See *supra* Tables 5, 6.

101. TRUMAN, *supra* note 1, at 129.

102. In fact, based on comparisons such as those in *Uneven Progress on Sovereign Wealth Fund Transparency and Accountability*, the adherence is far from uniform or complete. Stone & Truman, *supra* note 4, at 19.

103. See *supra* Table 5.

104. TRUMAN, *supra* note 1, at 20.

105. These results are not reported.

106. These results are not reported.

be more transparent. As with peer pressure, the news count proxy could be associated in part with internal pressure. In addition, one interpretation of the variable of the share of foreign assets less than 100% is that this may increase internal attention to the activities of the fund and pressure for it to be more transparent.¹⁰⁷

Table 5's column [5] is a multiple regression combining the four best performers among the proxies—three for external pressure and one for peer pressure.¹⁰⁸ I converted the variables for the funds larger than \$50 billion and with foreign assets less than 100% into dummy variables. The coefficient on the foreign assets dummy variable was significant at the 5% level and that on the peer pressure dummy variable for membership in the IFSWF was significant at 1%.¹⁰⁹ As shown in Table 5's column [6], dropping the two variables with insignificant coefficients maintained the significance of the coefficient on the peer pressure variable at 1% and lowered that of the coefficient on the external pressure variable to 10%.¹¹⁰ The overall significance of the relationship was boosted as well.¹¹¹

These results provide some support for the hypothesis that both external pressure and peer pressure are responsible for countries and their funds being more transparent and accountable about their operations and weak support for the hypothesis that funds are subject to meaningful internal pressure, if one wants to interpret the news story or asset share variables in this manner. Taking account of the value of the intercept, a fund that has less than 100% of its assets invested abroad and is a member of the IFSWF can be expected to score 72% on the SWF scoreboard, compared with an average score of 62%.

B. Evidence on the Countries with SWFs

In order to explore, to a greater extent, the influence of internal pressure on SWFs to become more transparent and accountable as measured by the 2015 SWF scoreboard, I combined the sixty funds into forty-two country funds by taking a weighted average of the scores of funds in countries with more than one fund (the weights are the relative size of the funds).¹¹² I also revisited the results for

107. See *supra* Table 5.

108. See *supra* Table 5.

109. See *supra* Table 5.

110. See *supra* Table 5.

111. See *supra* Table 5.

112. See Stone & Truman, *supra* note 4, at 3; *supra* Table 1. Chile, France, Kazakhstan, Mexico, Singapore, and Russia each have two funds that are included on the scoreboard. The United Arab Emirates and the United States each have seven funds. See *supra* Table 1. As can be seen from Table 1, some countries' funds score similarly (e.g., those in Chile, France, and Kazakhstan). See *supra* Table 1. Others are less similar (e.g., those in the United Arab Emirates and the United States). See *supra* Table 1. An earlier exercise in which

external pressure and peer pressure. Table 7 summarizes the results.¹¹³

the data were unweighted averages yielded broadly similar results but in most cases at a slightly lower level of significance.

113. *See infra* Table 7.

TABLE 7: SOURCES OF INFLUENCE ON COUNTRIES WITH SWFS IN THE 2015 SCOREBOARD¹¹⁴

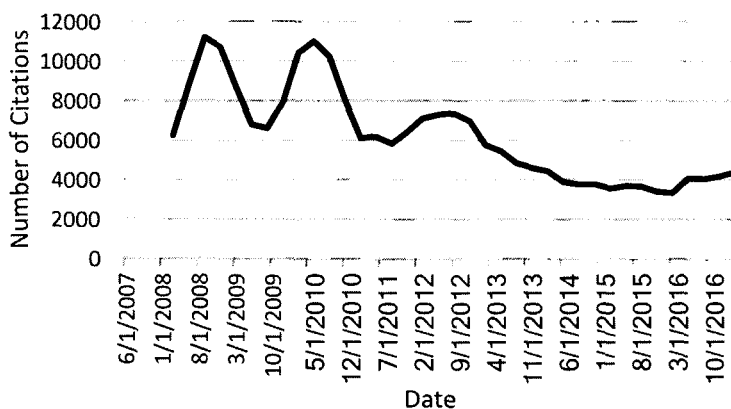
Source of Influence	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Intercept	59.11	56.60	46.08	45.01	42.70	37.88	54.86	41.89	60.82	59.11	25.57
Size of fund (\$ billions)	0.0210									1.333	
T-statistic	1.371									0.2791	
Share of foreign assets less than 100% dummy		9.719								0.0100	
T-statistic		1.504								0.8590	
Log of news count (2010-15)			3.023 ***							0.2398	1.056
T-statistic			2.790							0.2319	1.318
IFSWF membership dummy				24.98 ***						21.30 ***	21.18 ***
T-statistic				4.055						4.257	4.402
WGI of Voice and Accountability rank					0.4175 ***					0.3305 ***	0.3687 ***
T-statistic					4.763					2.933	5.1731

114. * indicates significance at the 10% confidence level; ** indicates significance at the 5% confidence level; *** indicates significance at the 1% confidence level.

With respect to external pressures, in simple regressions, neither the coefficient on the size of the fund nor on a dummy for fund size larger than \$50 billion was significant. The former coefficient was closest to significant, as shown in column [1].¹¹⁵ Neither the coefficient on the foreign asset share or on a dummy variable for the foreign asset share when it was less than 100% were significant.¹¹⁶ In these regressions, the latter coefficient came closest, demonstrated by column [2].¹¹⁷

On the other hand, the coefficients on several representations of the news count variable were significant. I investigated three types of counts. The most successful involved pairing queries for the country's name and the term "sovereign wealth fund."¹¹⁸ As shown in Figure 1, press stories about SWFs linked to the names of their home countries peaked in the 2007–08 period and again in the 2009–10 period.¹¹⁹ Alternatives involved grouping the name of the fund with that of its home country or, for some countries, grouping the name of the fund and the term "sovereign wealth fund" with the country's name. Some of the regressions used a simple count of the number of stories. The alternative regressions used the natural log of that count. The natural log formulation generally was more significant, suggesting a nonlinear relationship.

FIGURE 1: PRESS CITATIONS OF SWFs AND THEIR HOME COUNTRIES
(FOUR-QUARTER TOTALS)¹²⁰



The data were also sorted into four time periods: (1) the first quarter of 2005 to the fourth quarter of 2015 (as in Table 6); (2) the first quarter of 2007 to the fourth quarter of 2015; (3) the second quarter of 2010 to the fourth quarter of 2015; and (4) the first quarter

115. See *supra* Table 7.

116. See *supra* Table 7.

117. See *supra* Table 7.

118. See *supra* Table 1.

119. See *infra* Figure 1.

120. See *supra* Table 6.

of 2013 to the fourth quarter of 2015.¹²¹ Many funds were active in 2005 when the data collection began, but the searches did not find the term sovereign wealth fund until the second quarter of 2007. The best fit was on data starting in the second quarter of 2010, after the initial excitement concerning SWFs abated and after the global financial crisis had eased, as shown in column [3].¹²²

With respect to peer pressure, column [4] demonstrates that a simple regression of the average score for countries with SWFs on a dummy for membership in the IFSWF was again highly significant.¹²³ The relationship was stronger than in the simple regression on the scores of the individual funds in column [4] of Table 5.¹²⁴ This result is somewhat surprising given that the value of the dummy itself was diluted in countries where one fund was a member of the IFSWF and another was not. There is possibly reverse peer pressure for funds in countries with multiple SWFs.

By examining the 2015 scoreboard results on a country-by-country basis, I explored their relationship with several potential proxies for internal pressure. In the simple regressions reported in columns [5] through [9], the strongest relationship was between the score for an SWF in a country (or the weighted average where there was more than one fund in the country) and the rank of the country on the World Bank's Worldwide Governance Indicator ("WGI") of Voice and Accountability.¹²⁵ This result is reassuring but not surprising. It is expected that countries with stronger records on various dimensions of voice and accountability of their governments would have funds that score higher on the SWF scoreboard for transparency and accountability.

However, I also identified several other variables that correlated strongly with the results on the 2015 scoreboard. The coefficients on the four variables in regressions [6] through [9] were significant at the 1% level. The strength of the relationships based on *T*-statistics, adjusted *R*-square, and *F*-test was very similar. One variable was the WGI of Government Effectiveness, shown in column [6].¹²⁶

It had been suggested to me that the results on the SWF scoreboard might be explained by different levels of income per capita in the funds' home countries. A test of this proposition yielded no significant relationship between the natural log of GDP per capita and the scoreboard results. This lack of significance may be because some countries with SWFs—those in the Persian Gulf region, for

121. See *supra* Table 7.

122. See *supra* Table 7.

123. See *supra* Table 7.

124. Compare *supra* Table 5, with *supra* Table 7.

125. See *supra* Table 7; see also *Worldwide Governance Indicators*, WORLD BANK, <http://info.worldbank.org/governance/wgi/#home> (last visited Nov. 12, 2017).

126. See *supra* Table 7.

example—are wealthy in terms of GDP per capita but less developed in terms of governmental institutions. This explanation was partly confirmed by the finding in column [7] that the coefficient on a dummy variable for countries that are classified by the International Monetary Fund as advanced was significant in explaining the SWF scoreboard results.¹²⁷

Column [8] presents the relationship between Transparency International's Corruption Perceptions Index ("CPI") for 2015 and the SWF scoreboard results.¹²⁸ The coefficient is positive and significant at the 1% level for the CPI scores of countries but not for their CPI rank. There are several sharp differences in the scores on the two variables. For example, many observers point to Azerbaijan as a particularly corrupt country.¹²⁹ Azerbaijan scores a low 19 on the CPI and ranks 119 out of 167 countries, but its SWF scores at 92% on the 2015 scoreboard.¹³⁰ Contrast that with Australia's Future Fund, which scores a few percentage points lower on the scoreboard at 87%, but ranks 13th on the CPI with a score of 79.¹³¹ This suggests that many influences are involved in setting up a SWF.

Another type of internal pressure may be the extent of democratization and stability in the government of a country with a SWF. To explore this potential relationship, I examined the correlation of the 2015 Polity IV indicator of democracy and autocracy sponsored by the Center for Systemic Peace.¹³² The positive relationship is quite strong. However, when I ran a multiple regression of a country's SWF's scoreboard results on its WGI of Voice and Accountability rank, its CPI score, and its Polity IV score the significance of all the coefficients washed out due presumably to a high degree of multicollinearity, which boosts standard errors.¹³³

127. See *supra* Table 7. Eleven of the forty-two countries are classified as advanced by the International Monetary Fund. *World Economic Outlook*, INT'L MONETARY FUND, <http://www.imf.org/external/pubs/ft/weo/2017/01/weodata/weoselco.aspx?g=110&sg=All+countries+%2f+Advanced+economies> (last visited Nov. 5, 2017).

128. See *Corruption Perceptions Index 2016*, TRANSPARENCY INT'L (Jan. 25, 2017), https://www.transparency.org/news/feature/corruption_perceptions_index_2016; *supra* Table 7.

129. *Azerbaijan Corruption Report*, GAN INTEGRITY, <http://www.business-anti-corruption.com/country-profiles/azerbaijan> (last updated July 2016).

130. *Id.*

131. See *Corruption Perceptions Index 2016*, *supra* note 128; *supra* Table 7.

132. "The 'Polity Score' captures this regime authority spectrum . . . scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy). The Polity scores can also be converted into regime categories in a suggested three part categorization of 'autocracies' (-10 to -6), 'anocracies' (-5 to +5 and three special values: -66, -77 and -88), and 'democracies' (+6 to +10)." See *About Polity*, CTR. FOR SYSTEMATIC PEACE, <http://www.systemicpeace.org/polityproject.html> (last visited Nov. 7, 2017).

133. The simple correlation of a country's rank on the WGI of Voice and Accountability and its CPI score is 0.701; the correlation of a country's rank on the WGI of Voice and Accountability and its Polity IV score is 0.844. See *About*

Column [10] in Table 7 reports on a multiple regression of each country's average SWF score on three possible external pressure variables, the peer pressure variable of IFSWF membership, and three internal pressure variables.¹³⁴ None of the coefficients on the external pressure variables are significantly different from 0.¹³⁵ The coefficients on two of the internal pressure variables are also insignificant.¹³⁶ The coefficients on the WGI of Voice and Accountability and IFSWF membership stand out as highly significant.¹³⁷

The equation in column [11] combines the peer pressure variable on IFSWF membership with the internal pressure variable on WGI of Voice and Accountability and the external pressure variable on news count, which performed best in the simple regressions.¹³⁸ The coefficients on the first two variables are again significant at the 1% level. The coefficient on the external pressure variable has the expected sign but is not significant. Overall, the results in column [11] are stronger than those in column [10], based on the *T*-statistics, adjusted *R*-squares, and *F*-tests.¹³⁹

Evaluating the results of equation [11] at the mean values of the independent variables plus the intercept yields a total of 61 points, essentially the mean of the 2015 SWF scoreboard.¹⁴⁰ The constant contributes 25.6 points, the internal pressure variable of WGI of Voice and Accountability contributes 16.6 points, peer pressure from IFSWF membership contributes 13.5 points, and external pressure contributes 5.4 points.¹⁴¹

CONCLUSION

These results support the basic hypothesis that the 2015 SWF scoreboard results can be explained by a combination of external pressure, peer pressure, and internal pressure. Based on the adjusted *R*-squares of the univariate regressions, internal pressure is the strongest, followed by peer pressure associated with membership in the IFSWF, followed by external pressure that is most significantly associated with news reports on the countries and their funds. Stepping back, these results are satisfying. Internal pressures on governments coming from their own citizens and societies should

Polity, *supra* note 132; *supra* Table 7. The correlation of a country's CPI score and its *Polity* IV score is a more moderate 0.327. *See About Polity*, *supra* note 132; *supra* Table 7.

134. *See supra* Table 7.

135. *See supra* Table 7.

136. *See supra* Table 7.

137. *See supra* Table 7.

138. *See supra* Table 7.

139. *See supra* Table 7.

140. *See supra* Table 7.

141. *See supra* Table 7.

count the most in pushing for the increased transparency and accountability of their SWFs.