

21-3 Sovereign Wealth Funds Are Growing More Slowly, and Governance Issues Remain

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The term “sovereign wealth fund”—coined 15 years ago by the British economist Andrew Rozanov (2005)—denotes funds accumulated by a government that are invested, for many funds mostly abroad, to benefit the country in the future. The purpose of these funds has been to smooth out revenues from fossil fuels and other natural resources, supplement pension funds, promote development, and/or save for a rainy day. Estimates of the assets under management of sovereign wealth funds (SWFs) at the end of 2007 ranged from \$2.6 trillion (Stone and Truman 2016) to \$3.2 trillion (Sovereign Wealth Fund Institute in Stone and Truman 2016) to \$4.0 trillion (Global SWF 2021).¹ Analysts predicted that total SWF assets under management would increase to as much as \$17.5 trillion by 2017 (Truman 2010). In the event, their total assets were much lower. The Sovereign Wealth Fund Institute estimate for the end of 2020 is **\$8.3 trillion**, essentially the same figure used in this Policy Brief for the SWFs it covers.²

SWFs have never been without controversy. In 2007, some analysts expressed concerns that these large pools of investible funds owned by governments, many of which were on the fringes of the global financial system, would be used for political purposes or that they could disturb the global financial system. The potentially distorting impact of SWFs on the economies of countries that owned them was also a source of concern, raising questions about their governance and possible politicization. Responding to these concerns, Truman (2007, 2008) developed a SWF scoreboard to assess the transparency and accountability of these funds and encourage funds to improve their public images.³

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- 1 These estimates differ partly because they are based on different definitions of SWFs. One major difference is the inclusion or exclusion of the investment portfolios of the People’s Bank of China and the Saudi Central Bank (previously called the Saudi Arabian Monetary Authority).
- 2 Global SWF had different estimates of assets under management at the end of 2020 for some of the 64 funds covered here. Using those figures would reduce the total for the 64 funds to \$7.3 trillion.
- 3 The scoring of the SWFs except for the 2007 scoreboard is for the year before the year for which the data on the size of funds were collected. The data for the 2007 scoreboard are from the end of 2007.

In 2008, representatives of the International Monetary Fund (IMF), the principal SWFs, and the major host countries to SWF investments drew up and published a set of principles and best practices—the Santiago Principles—for the governance, transparency, and accountability of SWFs.⁴ The formulation of the Santiago Principles was influenced by the first SWF scoreboard in 2007–08, which was modified slightly for the 2009 scoreboard after the principles were published. The representatives of funds that participated in drawing up the Santiago Principles, or formally Generally Accepted Principles and Practices (GAPP) of SWFs released in October 2008 (Truman 2010), established the International Forum of Sovereign Wealth Funds (IFSWF).

This Policy Brief presents the scores for 64 SWFs on the 2019 scoreboard and discusses the evolution of the universe of SWFs over time and the growth of their assets under management. It shows that the average scores continued to improve. New funds have emerged—many of them government holding companies or strategic investment funds—but the growth of assets under management by SWFs has slowed, in some cases partly because of withdrawals to help to finance expenses related to the COVID-19 pandemic, raising questions about their future role. The Policy Brief also compares the scoreboard results with simulations of the Santiago Principles and a Governance, Sustainability, and Resilience (GSR) scoreboard recently developed by other researchers.

RESULTS OF THE 2019 SWF SCOREBOARD

The scoreboard is based on publicly available information—from fund websites, annual reports, and ministries of finance, and other public sources such as IMF reports. Most of the information used in this scoreboard is from 2019, because funds tend not to release their annual reports for a given year until the second half of the following year, at the earliest.

The scoreboard has 33 elements, which are equally weighted and translated into a percent of zero to 100. Each element is scored on a 0–1 scale, with partial scores in quarters for some elements. In this and previous updates, we start from the previous SWF scoreboard and look for improvements. We do not systematically check implementation of policies.

The number of funds included in the SWF scoreboard analysis increased by 73 percent since the first scoreboard, rising from 37 in 2007 to 64 in 2019. The composition of that universe also evolved. SWFs deriving their resources from oil and gas revenues represented 62 percent of all SWFs in 2007; by 2019, their share had dropped to 45 percent. The share of funds deriving resources from other natural resource revenues remained about the same, at 16–17 percent over the dozen years. The increase in the number of SWFs came disproportionately from SWFs funded from budget revenues and from new government holding companies, such as Singapore’s Temasek and France’s

4 The purposes and development of the Santiago Principles are explained in Das, Mazarei, and Stuart (2010).

BPI France Investissement.⁵ SWFs funded by oil and gas revenues accounted for 66 percent of the \$2.6 trillion of assets under management in the first scoreboard and 54 percent of the \$8.1 trillion in the fifth scoreboard, even though several SWFs funded from oil and gas revenues have ceased to exist. Seven of the 10 funds included in at least one of the first four scoreboards that were not among the 64 funds in the fifth scoreboard were financed by oil and gas revenues, including 3 from the United Arab Emirates (UAE), 2 from Venezuela, and 1 from Oman.⁶

Table 1 presents the results of the 2019 SWF scoreboard.⁷ The average score for all 64 funds is 66. The range is 11–100. For the first time, a fund (the Norway Government Pension Fund–Global) scored a perfect 100.^{8, 9}

The average score for all funds has increased steadily with each scoreboard, as well as the average for each group of funds introduced in successive scoreboards (table 2).¹⁰ The authorities of the home countries of each fund tell a different story to explain the increase in transparency and accountability on the scoreboard. In a few cases, the SWF scoreboard induced the government owners and managers of the funds to increase their transparency and accountability. Two examples are the Norwegian Government Pension Fund–Global and the Abu Dhabi Investment Authority (ADIA). It is reasonable to conclude that the IFSWF, as the keeper of the Santiago Principles, also played a role, but the gap between the average scores of members and nonmembers of the IFSWF has been essentially unchanged in successive scoreboards (as discussed below). The important point is that on average, funds increased their transparency and accountability.

On average, sovereign wealth funds have increased their transparency and accountability.

5 The fifth SWF scoreboard rated 36 funds that are members or associate members of the IFSWF. Sixteen of those funds are founding members of the IFSWF; 20 joined later. New members include BPI France Investissement established in 2012, which is financed in part by the Caisse des Dépôts et Consignations founded in 1816.

6 Oman's State General Reserve Fund was included in each of the first four scoreboards. On June 4, 2020, the fund was combined with the Oman Investment Fund to become the Oman Investment Authority. Not enough information is available on the new fund to allow us to score it in the fifth scoreboard.

7 The scores for each element for each fund are available at <https://www.piie.com/sites/default/files/documents/pb21-3.zip>, along with the scores on the other four SWF scoreboards.

8 The scoreboard is intended to provide a benchmark, not a prescription for perfection. The circumstances, environment, and operational cultures surrounding each fund are different; it is unreasonable to expect that one size would fit all. Some of the elements in the scoreboard apply more precisely to some SWFs than others.

9 Between the fourth and fifth scoreboards, we clarified its policy on leverage. In earlier scoreboards we missed the [limit on leverage](#) that the Norwegian SWF adopted in 2011.

10 The four funds introduced in the 2012 scoreboard have not shown much improvement. They are the funds of Angola, which largely accounted for the increase in the average score between the 2012 and 2015 scoreboards; Ghana, whose scores have been essentially unchanged for three scoreboards, at 45–47; Libya, whose fund has been frozen; and Equatorial Guinea, whose fund once was but is no longer a member of the IFSWF.

Table 1
Results of the 2019 SWF scoreboard

Country	Fund name	Score
Norway	Norway Government Pension Fund-Global	100
New Zealand	New Zealand Superannuation Fund ^a	94
United States	Permanent Wyoming Mineral Trust Fund	93
Chile	Economic and Social Stabilization Fund	92
Azerbaijan	State Oil Fund of the Republic of Azerbaijan ^a	92
Canada	Alberta Heritage Savings Trust Fund	91
Timor-Leste	Petroleum Fund of Timor-Leste ^a	91
Chile	Pension Reserve Fund	89
United States	Alaska Permanent Fund Corporation ^a	88
Australia	Future Fund ^a	87
United States	New Mexico State Investment Council	87
Ireland	Ireland Strategic Investment Fund ^a	85
Korea	Korea Investment Corporation ^a	85
Palestine	Palestine Investment Fund ^a	85
Nigeria	Nigeria Sovereign Investment Authority ^a	83
United States	Alabama Trust Fund	82
Panama	Fondo de Ahorro de Panama ^{a, b}	82
Trinidad and Tobago	Heritage and Stabilization Fund ^a	81
Singapore	Temasek Holdings	79
Angola	Fundo Soberano de Angola ^a	77
Australia	NSW Generations Fund ^b	77
Spain	COFIDES ^{a, b}	77
United States	(Texas) Permanent University Fund	77
United Arab Emirates	Mubadala Investment Company ^a	75
China	China Investment Corporation ^a	74
France	BPIFrance Investissement ^a	74
France	Caisse des Dépôts et Consignations	74

Table continues

Table 1 continued
Results of the 2019 SWF scoreboard

Country	Fund name	Score
United States	Texas Permanent School Fund	73
Malaysia	Khazanah Nasional Berhad ^a	71
Nauru	Intergenerational Trust Fund for Nauru ^{a, b}	71
Kuwait	Kuwait Investment Authority ^a	70
Hong Kong	Exchange Fund	70
Italy	CDP Equity / Fondo Strategico Italiano ^a	70
United States	North Dakota Legacy Fund	69
Mexico	Budgetary Income Stabilization Fund ^a	68
Turkey	Turkey Wealth Fund ^{a, b}	68
United Arab Emirates	Dubai Holding	67
United Arab Emirates	Abu Dhabi Investment Authority (ADIA) ^a	65
Kazakhstan	Samruk-Kazyna JSC ^a	64
Singapore	GIC Private Ltd. ^a	64
United Arab Emirates	Investment Corporation of Dubai	64
Botswana	Pula Fund ^a	62
India	National Investment and Infrastructure Fund ^{a, b}	62
Rwanda	Agaciro Development Fund ^a	58
Cyprus	Cyprus Investment Fund ^{a, b}	57
Iran	National Development Fund of Iran ^a	56
Bahrain	Bahrain Mumtalakat Holding Company	55
Senegal	Fonds Souverain d'Investissements Stratégiques ^{a, b}	53
Kazakhstan	National Investment Corporation ^a	52
Russia	National Welfare and Reserve Fund	51
Mexico	Fondo Mexicano del Petroléo	48
Peru	Fiscal Stabilization Fund	48
Ghana	Ghana Petroleum Funds	47
Morocco	Ithmar Capital ^a	47

Table continues

Table 1 continued
Results of the 2019 SWF scoreboard

Country	Fund name	Score
Qatar	Qatar Investment Authority ^a	46
Saudi Arabia	Public Investment Fund ^b	39
Russia	Russian Direct Investment Fund ^a	37
United Arab Emirates	Emirates Investment Authority ^b	36
Kiribati	Revenue Equalization Reserve Fund	35
Brunei	Brunei Investment Agency	30
Algeria	Revenue Regulation Fund	26
United Arab Emirates	Dubai World ^b	24
Libya	Libyan Investment Authority ^a	23
Equatorial Guinea	Fund for Future Generations	11
Average 64 funds		66

a. Member of the International Forum of Sovereign Wealth Funds (IFSWF).

b. Fund added since the 2015 scoreboard.

Source: Authors' calculations.

Table 2
Average scores on SWF scoreboards, 2007-19

Year first scored (number of funds)	2007	2009	2012	2015	2019
2007 (31)	55	62	63	70	72
2009 (4)		51	52	69	73
2012 (4)			17	36	39
2015 (14)				60	65
2019 (11)					59
Average score for all funds continuously scored	55	61	67	72	66
Average score for all funds scored	36	55	52	74	66

Source: Authors' calculations based on results of five SWF scoreboards.

ELEMENTS OF THE SCOREBOARD

Table 3 presents the average scores on each of the 33 elements of the SWF scoreboard. Among the 53 SWFs that were assessed in both 2015 and 2019, the average score was 68, a slight increase over the 2015 score (62). The 2019 average total score for the 11 funds covered in this scoreboard for the first time was just 59, pulling down the average for all 64 funds assessed.

Table 3
Scores on the 2015 and 2019 SWF scoreboards, by element

Element number	Element category and description	2019 scoreboard			2015 scoreboard
		All funds (64)	New funds (11)	Funds also assessed in 2015 (53)	
Structure					
1	Objective stated	98	100	98	98
2	Legal framework described	91	91	92	85
3	Clear procedure for changing the fund's structure	88	77	90	83
4	Investment strategy described	87	91	87	75
5	Source of funding stated	86	77	87	87
6	Use of fund earnings stated	70	45	75	69
7	SWF operations Integrated with other government policies	67	73	66	64
8	SWF resources separated from international reserves	66	73	65	64
	<i>Subtotal</i>	82	78	82	78
Governance					
9	Role for government defined	93	91	93	88
10	Role for governing body defined	91	100	90	88
11	Role for managers defined	77	95	74	65
12	Investment decisions made by managers	50	9	59	54
13	Internal ethical standards specified	61	77	58	53
14	Guidelines for corporate responsibility established	46	50	45	36
15	Guidelines for ethical investment stated	45	45	45	22
	<i>Subtotal</i>	66	67	66	58
Transparency and accountability					
16	Discloses investment categories	83	95	81	78
17	Discloses use of benchmarks	49	27	53	45
18	Discloses use of credit ratings	50	30	55	48
19	Discloses holders of mandates	30	18	32	28

Table continues

Table 3 continued
Scores on the 2015 and 2019 SWF scoreboards, by element

Element number	Element category and description	2019 scoreboard			2015 scoreboard
		All funds (64)	New funds (11)	Funds also assessed in 2015 (53)	
20	Discloses size of fund	88	73	91	85
21	Discloses returns on investments	68	50	72	63
22	Discloses location of investments	46	39	48	41
23	Discloses specific investments	51	55	50	48
24	Discloses currency composition of investments	45	9	52	43
25	Publishes annual reports	86	77	87	82
26	Publishes quarterly reports	46	9	53	46
27	Conducts regular audits	91	91	91	89
28	Publishes audits	65	64	65	58
29	Conducts independent audits	83	64	87	82
	<i>Subtotal</i>	<i>61</i>	<i>47</i>	<i>64</i>	<i>60</i>
	Behavior				
30	Reports risk management policies	81	91	79	67
31	Reports policy on use of leverage	35	18	39	35
32	Reports policy on use of derivatives	59	36	63	58
33	Discloses policy on adjusting portfolio	11	0	13	11
	<i>Subtotal</i>	<i>46</i>	<i>36</i>	<i>49</i>	<i>43</i>
	Total	66	59	68	62

Sources: Stone and Truman (2016) and authors' calculations.

The table groups the elements into four subcategories: structure, governance, transparency and accountability, and behavior. These groupings are somewhat arbitrary.¹¹ Although scores on the individual elements differ, the simple averages of the scores in the first two subcategories are similar: small increases in the 2019 average scores for the 53 funds that were also scored in the fourth (2015) scoreboard and essentially the same average scores for the 11 new funds

¹¹ The structure subcategory contains eight elements that describe the legal basis of the fund and how it is funded and used. The governance subcategory contains seven elements that describe how the fund operates. The transparency and accountability subcategory groups 14 elements covering the fund's presentation of information to the public. The behavior category contains four operational elements.

included in this scoreboard as the average scores for the 53 funds scored in the previous one. On average, funds score lower with respect to their governance arrangements than their structure.

On the elements in the subcategory of transparency and accountability, the average score for the 11 new funds is lower than that for the 53 funds previously scored. Fewer funds reported relying on benchmarks and credit ratings in their investment decisions, reported the currency composition of their investments (which for several funds are in the home country), issued quarterly reports, or conducted independent audits. Fifty funds reported that they published an annual report, and nine reported that they published a partial report.¹² Forty-one funds reported that they publish audits.¹³

The scores for the four elements in the behavior subcategory are low for both the 11 funds first included in this fifth scoreboard and the 53 funds covered by the previous scoreboard. The exception is a clear statement of their risk management policies.

EVOLUTION OF THE INTERNATIONAL FORUM OF SOVEREIGN WEALTH FUNDS

The 23 founding members of the IFSWF helped draft the Santiago Principles. Sixteen of the funds (70 percent) derive their resources from the extraction of natural resources. Seven of the 23 original members are no longer members, including 6 funds based on natural resources.¹⁴ All of these funds are still in operation.

Today the IFSWF has 35 members and 5 associate members. Of the 24 new members, including associates, 10 are funds that derive their financing from natural resources. The share of the forum's natural resource-based members has thus declined, reflecting the changing composition of the SWF universe. The 14 other new members include 5 funds financed out of budget resources, 6 holding companies, and 3 funds financed from a variety of sources. Sixteen of the 24 new members, including associate members, were established after 2008, when the Santiago Principles were released, including those of Angola, France, and India. Nine funds were established in or before 2008, including the SWFs of Malaysia, Morocco, and Spain.

The share of the IFSWF's natural resource-based members has declined, reflecting the changing composition of the SWF universe.

¹² We could not find a recent report for two funds that claimed they publish their reports (the fund of Equatorial Guinea and the United Arab Emirates' Dubai Holdings). In addition, 14 of the 49 "recent" annual reports, including one partial report, were for 2018.

¹³ We were unable to find one for Kazakhstan's National Investment Corporation and the United Arab Emirates' Dubai Holdings. Seven of the audits were for 2018 and one (by the Alabama Trust Fund) was for 2016.

¹⁴ The funds that withdrew from the IFSWF are the two SWFs of Chile (where the Santiago Principles were agreed to but the government declined to continue to finance membership), Norway (where the finance ministry indicated that it did not see the value of the forum), Canada (Alberta), Singapore's Temasek (which decided it was not an SWF), Bahrain's Mumtalakat Holding Company, and Russia's National Welfare and Reserve Fund. Russia's National Welfare and Reserve Fund was replaced in the IFSWF by Russia's Direct Investment Fund, which is financed out of the budget rather than directly out of the revenues for oil and gas sales, which flow into the National Welfare and Reserve Fund.

THE SWF SCOREBOARD AND THE SANTIAGO PRINCIPLES

Truman (2010) established a loose correspondence between the 24 Santiago Principles and their subcomponents and the 33 elements of the SWF scoreboard. Eight of the scoreboard's elements have no counterparts in the Santiago Principles. Eight of the principles have no counterparts in the scoreboard (these principles are of the "thou shalt" type, observance of which cannot be verified).¹⁵

The remaining 16 principles or their subcomponents roughly match up with 25 elements of the SWF scoreboard. We can use the ratings of the 64 funds on those 25 elements to score the funds on the Santiago Principles. We also can match the 16 principles with the 25 elements using a simple average of multiple elements, where necessary, to construct a score for a single principle. For both exercises we compare the scores of members and nonmembers of the IFSWF.¹⁶

Table 4 presents the results of these comparisons. The average score of all 64 funds is higher for the 25 elements of the scoreboard that match up with the Santiago Principles and their subcomponents than for all 33 elements of the scoreboard, but the correlation is very high at 0.976 (figure 1). The average for the 16 principles alone is slightly higher.

On the 2019 SWF scoreboard, the 36 members and associate members of the IFSWF have a slightly higher average (69) than the 28 nonmembers (62).¹⁷ The average for the 16 IFSWF founding members that are still members is higher (76) than the average for all current members; the average for the 7 founding members that dropped out is even higher (80).

These results suggest that membership in the forum was a factor in the transparency and accountability of member funds. In his analysis of the results of the fourth (2015) SWF scoreboard, Truman (2017) found that peer pressure (or perhaps self-selection), as proxied by membership in the IFSWF, did contribute significantly to higher scores. Internal pressure, as measured by the World Bank's ranking of the home country on the [indicator of voice and accountability](#), was a statistically stronger and a marginally more important factor.

15 For example, principle 19.1 states, "The management of an SWF's assets should be consistent with generally accepted sound management principles."

16 The 2019 SWF scoreboard covers 34 of the 35 full members and 2 of the 5 associate members (Cyprus' National Investment Fund and India's National Infrastructure Investment Fund) of the IFSWF today. Insufficient information was available to score the other three associate members (the SWFs of Egypt, Guyana, and Mongolia). A lack of information also prevented us from scoring the Oman Investment Authority, which was formed on June 4, 2020 by combining the State General Reserve Fund and the Oman Investment Fund. The General Reserve Fund is still listed on the website of the IFSWF as a member.

17 This difference is also evident in comparisons of the SWF scoreboard and the Santiago Principles.

Table 4
Scores of sovereign wealth funds on the 2019 SWF scoreboard and the Santiago Principles

Country	Fund	2019 SWF scoreboard	Santiago Principles	
			25 elements	16 principles
Norway	Norway Government Pension Fund—Global ^a	100	100	100
<i>New Zealand</i>	<i>New Zealand Superannuation Fund^b</i>	<i>94</i>	<i>98</i>	<i>100</i>
United States	Permanent Wyoming Mineral Trust Fund	93	95	96
Chile	Economic and Social Stabilization Fund ^a	92	90	88
<i>Azerbaijan</i>	<i>State Oil Fund of the Republic of Azerbaijan^b</i>	<i>92</i>	<i>94</i>	<i>97</i>
Canada	Alberta Heritage Savings Trust Fund ^a	91	94	100
<i>Timor-Leste</i>	<i>Petroleum Fund of Timor-Leste^b</i>	<i>91</i>	<i>88</i>	<i>88</i>
Chile	Pension Reserve Fund ^a	89	88	88
<i>United States</i>	<i>Alaska Permanent Fund Corporation^b</i>	<i>88</i>	<i>90</i>	<i>94</i>
<i>Australia</i>	<i>Future Fund^b</i>	<i>87</i>	<i>93</i>	<i>99</i>
United States	New Mexico State Investment Council	87	88	85
<i>Ireland</i>	<i>Ireland Strategic Investment Fund^b</i>	<i>85</i>	<i>88</i>	<i>94</i>
<i>Panama</i>	<i>Fondo de Ahorro de Panama</i>	<i>82</i>	<i>86</i>	<i>91</i>
<i>Korea</i>	<i>Korea Investment Corporation^b</i>	<i>85</i>	<i>92</i>	<i>97</i>
<i>Palestine</i>	<i>Palestine Investment Fund</i>	<i>85</i>	<i>86</i>	<i>85</i>
<i>Nigeria</i>	<i>Nigeria Sovereign Investment Authority</i>	<i>83</i>	<i>86</i>	<i>88</i>
United States	Alabama Trust Fund	82	90	94
<i>Trinidad and Tobago</i>	<i>Heritage and Stabilization Fund^b</i>	<i>81</i>	<i>83</i>	<i>84</i>
Singapore	Temasek Holdings ^a	79	84	91
<i>Angola</i>	<i>Fundo Soberano de Angola</i>	<i>77</i>	<i>84</i>	<i>76</i>
<i>Spain</i>	<i>COFIDES</i>	<i>77</i>	<i>84</i>	<i>88</i>
United States	(Texas) Permanent University Fund	77	76	82
Australia	NSW Generations Fund	77	85	96
<i>United Arab Emirates</i>	<i>Mubadala Investment Company</i>	<i>75</i>	<i>79</i>	<i>88</i>
<i>China</i>	<i>China Investment Corporation^b</i>	<i>74</i>	<i>87</i>	<i>97</i>

Table continues

Table 4 continued
Scores of sovereign wealth funds on the 2019 SWF scoreboard and the Santiago Principles

Country	Fund	2019 SWF scoreboard	Santiago Principles	
			25 elements	16 principles
France	<i>BPI France Investissement</i>	74	74	79
France	Caisse des Dépôts et Consignations	74	78	85
United States	Texas Permanent School Fund	73	74	71
Malaysia	<i>Khazanah Nasional Berhad</i>	71	78	71
Nauru	<i>Intergenerational Trust Fund for Nauru</i>	71	84	76
Kuwait	<i>Kuwait Investment Authority^b</i>	70	81	81
Hong Kong	Exchange Fund	70	72	76
Italy	<i>CDP Equity / Fondo Strategico Italiano</i>	70	72	71
United States	North Dakota Legacy Fund	69	65	57
Mexico	<i>Budgetary Income Stabilization Fund^o</i>	68	76	71
Turkey	<i>Turkey Wealth Fund</i>	68	70	68
United Arab Emirates	Dubai Holding	67	67	63
United Arab Emirates	<i>Abu Dhabi Investment Authority (ADIA)^b</i>	65	80	91
Kazakhstan	<i>Samruk-Kazyna JSC</i>	64	67	75
Singapore	<i>GIC Private Ltd.^b</i>	64	82	91
United Arab Emirates	Investment Corporation of Dubai	64	67	60
Botswana	<i>Pula Fund^o</i>	62	68	71
India	<i>National Investment and Infrastructure Fund^e</i>	62	68	71
Rwanda	<i>Agaciro Development Fund</i>	58	60	65
Cyprus	<i>Cyprus Investment Fund^e</i>	57	65	57
Iran	<i>National Development Fund of Iran^b</i>	56	66	76
Senegal	<i>Fonds Souverain d'Investissements Stratégiques</i>	53	58	71
Kazakhstan	<i>National Investment Corporation</i>	52	61	66
Russia	National Welfare and Reserve Fund ^a	51	51	65
Mexico	Fondo Mexicano del Petroléo	48	48	47

Table continues

Table 4 continued

Scores of sovereign wealth funds on the 2019 SWF scoreboard and the Santiago Principles

Country	Fund	2019 SWF scoreboard	Santiago Principles	
			25 elements	16 principles
Bahrain	Bahrain Mumtalakat Holding Company ^a	55	57	66
Peru	Fiscal Stabilization Fund	48	47	47
Ghana	Ghana Petroleum Funds	47	54	56
<i>Morocco</i>	<i>Ithmar Capital</i>	<i>47</i>	<i>54</i>	<i>53</i>
<i>Qatar</i>	<i>Qatar Investment Authority</i> ^b	<i>46</i>	<i>56</i>	<i>56</i>
Saudi Arabia	Public Investment Fund	39	48	56
<i>Russia</i>	<i>Russian Direct Investment Fund</i>	<i>37</i>	<i>37</i>	<i>37</i>
United Arab Emirates	Emirates Investment Authority	36	44	56
Kiribati	Revenue Equalization Reserve Fund	35	44	56
Brunei	Brunei Investment Agency	30	35	22
Algeria	Revenue Regulation Fund	26	30	41
United Arab Emirates	Dubai World	24	25	31
<i>Libya</i>	<i>Libyan Investment Authority</i>	<i>23</i>	<i>26</i>	<i>38</i>
Equatorial Guinea	Fund for Future Generations	11	10	9
Average (64 SWFs)		66	70	73
<i>Of which:</i>				
36 are IFSWF members		69	76	77
28 are not IFSWF members		62	65	68

IFSWF = International Forum of Sovereign Wealth Funds

Note: IFSWF members and associates are in italics.

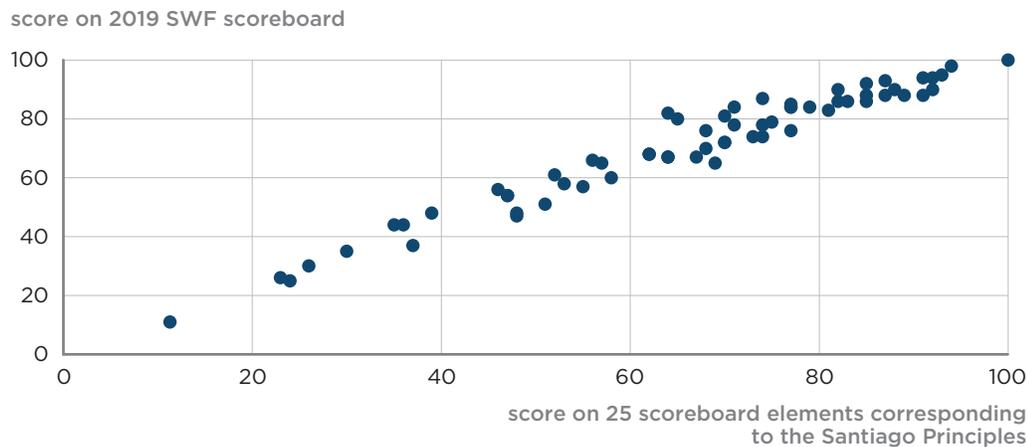
a. Founding member of IFSWF that is no longer a member.

b. Founding and continuing member of IFSWF

c. Associate member of IFSWF.

Source: Authors' calculations.

Figure 1
Correlation between scores on 2019 SWF scoreboard and 25 scoreboard elements corresponding to the Santiago Principles



Source: Authors' calculations.

THE SWF SCOREBOARD AND THE GOVERNANCE, SUSTAINABILITY, AND RESILIENCE (GSR) SCOREBOARD

Since the release of the Santiago Principles and the first SWF scoreboard, researchers have created other rating systems, including the [Linaburg-Maduell Transparency Index](#). Truman (2010) and Bagnall and Truman (2013) compare the SWF scoreboard results with other indexes and indicators of transparency.

This section compares the 2019 scoreboard with the Governance, Sustainability, and Resilience (GSR) scoreboard developed by López (2020). Megginson, López, and Malik (2020) present analysis using the GSR scoreboard.

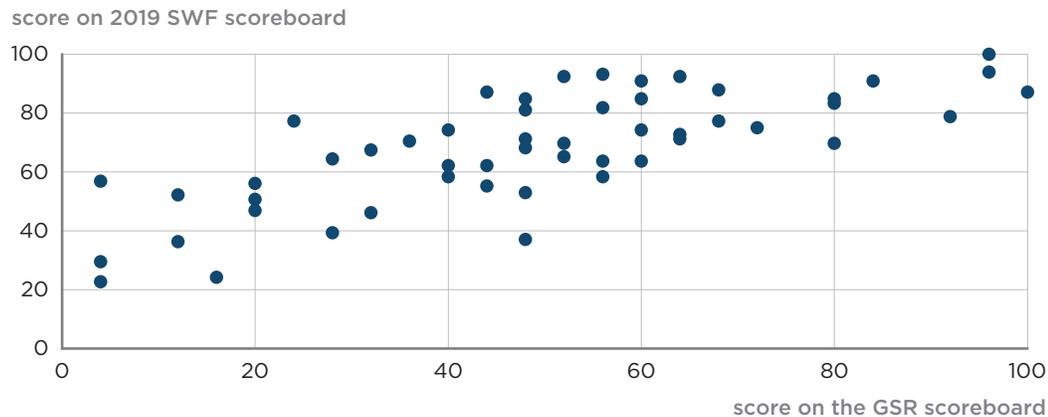
The GSR scoreboard covers public pension funds as well as SWFs.¹⁸ As its title suggests, it evaluates not only funds' governance (10 elements) but also their focus on sustainability with respect to economic development and the environment (10 elements) and their resilience (5 elements), as measured by their risk management policies and asset allocations. About half of the elements on the GSR scoreboard under governance correspond with elements of the SWF scoreboard in the governance subcategory; some of the elements in the sustainability and resilience portions of the GSR scoreboard match elements in other subcategories of the SWF scoreboard.

The two scoreboards measure different aspects of SWFs, but their results are broadly similar. The GSR scoreboard evaluates 52 SWFs included in the fifth (2019) SWF scoreboard.¹⁹ The range of scores is wider and the average score is lower on the GSR scoreboard (49) than on the SWF scoreboard (68). The scores

18 All editions of the SWF scoreboard have covered a small group of public pension funds, principally as a basis of comparison with nonpension SWFs. The 2019 scoreboard results for these public pension funds are not presented in this Policy Brief but are available on the PIIE website.

19 Technically, the GSR scoreboard evaluates 54 of the 64 funds included on the SWF scoreboard because the two funds each of Mexico and of Chile are combined in the GSR evaluation. For figure 2, we have averaged the scores of these two pairs of funds.

Figure 2
Correlation between the Governance, Sustainability, and Resilience (GSR) and 2019 SWF scoreboards



Source: Authors' calculations.

of the funds are, however, strongly correlated, at 0.75 (figure 2), although the correlation is weaker than that between the 25 elements of the SWF scoreboard and corresponding elements of the Santiago Principles (see again figure 1).

The differences in scores of groups of funds are indicative of differences in the orientations and contexts of some of the funds, including the sources of their funding. For example, the 4 US SWFs on both scoreboards score 85 on average on the SWF scoreboard, 28 percent higher than the 48 non-US funds. Their average score on the governance subcategory on the GSR scoreboard is 57 percent higher than that for the non-US funds. But on the sustainability component, their average score is 30 percent lower.

GROWTH AND FUTURE OF SOVEREIGN WEALTH FUNDS

Assets under management by SWFs have risen significantly over the years, albeit not as rapidly as analysts predicted. The assets under management of the 37 SWFs that were scored in 2008, on the first scoreboard, were estimated at \$2.6 trillion in Truman (2007, 2008). The assets of the 64 funds included in 2019, on the fifth scoreboard, are estimated at \$8.1 trillion.²⁰

Table 5 presents the compound annual growth rates of the assets of the 31 SWFs scored continuously since the first scoreboard both for those funds as a group and for four subgroups of those funds. For all 31 funds and subgroups, the compound annual growth rate from 2016 (the data used in the fourth [2015] scoreboard) until 2020 slowed substantially. For all 31 funds combined and all

20 Different classifications of SWFs record asset sizes at different points in time, yielding different figures. For example, as of February 2021, the website of the [Sovereign Wealth Fund Institute](#) listed 96 SWFs, with assets totaling \$8.3 trillion.

Table 5
Compound annual growth rates of assets managed by SWFs first scored on the 2007 scoreboard (percent)

Fund type (number of funds)	2008-10	2010-13	2013-16	2016-20
All funds (31)	4.1	11.5	8.7	5.2
Natural resource funds (22)	1.4	10.5	6.5	4.5
<i>Of which:</i>				
Oil and gas funds (17)	1.4	10.6	6.5	4.5
Other natural resource funds (5)	-0.6	6.0	8.9	4.8
Non-natural resource funds (9)	9.3	13.3	12.1	6.1

Note: Data on the size of funds are for the year in which the relevant SWF scoreboard was published. Sources: Data are from Truman (2008, 2010); Bagnall and Truman (2013); Stone and Truman (2016); and for 2020 data released by the funds and where not available from national sources, estimates by the Sovereign Wealth Fund Institute updated from Global SWF (2021).

but one of the subgroups, the peak period of growth was 2010-13. The exception is the group of five funds whose resources come from the production of natural resources other than oil or gas.²¹

Global SWF (2021) reports aggregate data on assets under management by its definition of SWF. Its data cover an expanding universe of SWFs that was larger in 2020 than the 64 funds included in the 2019 SWF scoreboard.²² It paints a similar picture, with an average annual growth rate of 11.1 percent for 2008-14 and 3.5 percent for 2014-20.

Information on the extent to which countries have drawn down the assets of SWFs during the COVID-19 pandemic will not be available until annual reports are released in 2021 and later. Preliminary evidence from the annual report of Global SWF (2021) records withdrawals in 2020 from 18 SWFs included in the fifth SWF scoreboard. Some withdrawals are consistent with the mission of some of the SWFs that derive their resources from natural resources, which is to facilitate the stabilization of fiscal resources. Total reported withdrawals of about \$125 billion were not huge, but some of the withdrawals were large relative to the size of the funds. They included withdrawals of 100 percent of Peru's SWF, 60 percent of Ghana's fund, and 49 percent of Bahrain's fund. Withdrawals from Singapore's GIC and the Norway Government Pension Fund-Global reportedly were the largest in their histories (Global SWF 2021).

Table 6 illustrates the growth of the Norway Government Pension Fund-Global since 2007 and prior to 2020. This is the world's largest SWF, with a value at the end of 2020 of \$1,078 billion, down from \$1,148 billion at the end of 2019.

21 The combined assets of these funds are only \$58 billion. A large increase in the holdings of the New Mexico State Investment Council between 2013 and 2015 accounted for the rise in the growth rate for this subgroup of funds.

22 The Global SWF (2021) total is \$9.1 trillion; the total for the 64 funds included in the 2019 SWF scoreboard is \$8.1 trillion (see footnote 2).

Table 6
Inflows to and returns on the Norway Government Pension Fund-Global, 2007-19 (billions of US dollars)

Item	2007-10	2010-13	2013-16	2016-19
Net inflow to the fund	115	95	25	-1
Change in value of the fund	157	303	40	279
Investment return	42	207	15	280

Sources: Authors' calculations based on data from the annual reports of the Norway Government Pension Fund-Global.

From 2013 to 2019, the fund continued to increase, although net inflows of funds were minuscule compared with the previous five years. The increase in the fund during that six-year period was the result of substantial returns on investments, especially between 2016 and 2019.

The SWF scoreboard suggests that many countries are not institutionally committed to reporting withdrawals from their funds. Of the 64 funds on the 2019 scoreboard, 28 (44 percent) do not clearly identify the source of financing or the guidelines or rules for withdrawals. Information on withdrawals or the use of the earnings of the fund is often imprecise. This lack of a commitment to report withdrawals suggests considerable discretion for the owners of the funds. On the other hand, even where there are clear rules governing withdrawals, they should be able to be overridden, as long as ad hoc withdrawals are disclosed.

The growth rates of the SWFs based on oil and gas revenues could decline further, as reliance on fossil fuels declines, putting downward pressures on their prices, unless countries privatize some of their oil assets (as Saudi Arabia did with Aramco) and use the proceeds to fund their SWFs. Over time, the decline in the growth rates of the oil and gas SWFs would shrink the share and influence of those funds, including funds of the Gulf Cooperation Council (GCC) countries, in the SWF universe and expand the share and influence of funds deriving their resources from other sources and in other regions including China, Hong Kong, and other East Asian economies.

The SWF universe could expand further to include a larger number of state-owned investment structures of different types. A forthcoming World Bank report focuses on what it calls Sovereign Investment Funds (SIFs), which it defines as "special purpose investment" vehicles backed by governments or other public institutions that seek a "double bottom line" of financial and economic returns. SIFs invest in, and mobilize commercial capital to support, sectors and regions in which private investors would otherwise not invest or invest to a limited extent. Of the 31 SIFs identified in the report, 20 are included in the 2019 SWF scoreboard. Those 20 SIF/SWF had an average score of 60 on the 2019 SWF scoreboard, compared with 69 for the 44 other SWFs. Governance challenges are particularly great for funds that focus on a double bottom line of financial returns and the fulfillment of a policy objective, especially with respect to transparency and accountability. Investment decisions should be insulated from short-term political influence and focus on the longer term, but

it is unclear how such insulation can be accomplished where the autonomy and independence of the fund must be balanced with proper oversight and accountability.

The growth of the resources of SWFs of all types could continue to decline if countries draw on their resources to combat COVID-19 and its economic consequences. But Global SWF (2021) predicts that SWF assets will increase to \$15.8 trillion by 2030. An increase of this size would imply a compound annual growth rate of 5.7 percent, down only slightly from 6.5 percent over the past decade.

CONCLUDING REMARKS

The financial scale of the SWF universe has not expanded as much as analysts predicted a dozen years ago. Their expansion slowed in recent years, and growth is likely to remain at a slower pace in the coming years. The sources of financing of SWFs have shifted away from natural resources toward budgetary funds and holding companies and similar structures. Although the growth of total assets of SWFs has slowed, the number of funds continues to increase, as does membership in the IFSWF.

On average, SWFs steadily increased their scores on the SWF scoreboard. The citizens of countries with SWFs will continue to have an interest in the transparency and accountability of those funds—and this interest will intensify if growth of the funds' assets continues to be slower than in earlier years.

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