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Sovereign wealth funds 2018

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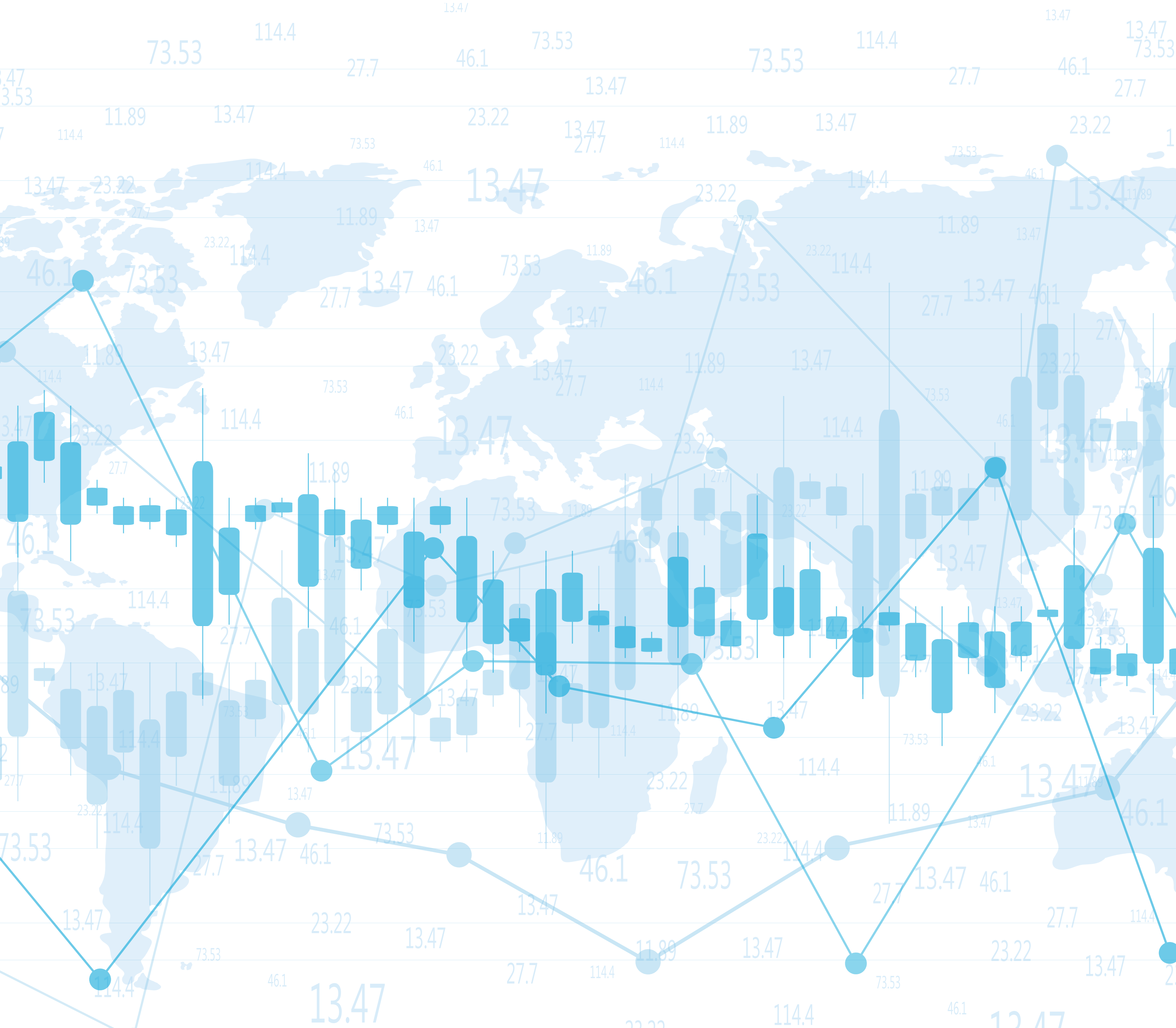
Preface



1. Preface

In 2018 the world economy continued the expansion begun two years earlier and grew by 3.7%,[1] a similar rate to the previous year. While the rate of economic activity worldwide is reaching cruising speed, on a global scale we are seeing even more signs of uncertainty, although their destabilizing capacity is difficult to gauge. Two, in particular, stand out. On the one hand, the trade war, which a few quarters ago was merely a hypothesis, and which has now begun to materialize in 2018. And on the other, the record debt levels of the world economy, which places a good number of economies in a situation of vulnerability in the face of the foreseeable hardening of financial conditions.

The advanced economies maintained their stable growth in the last financial year (2.3%) but are currently in thrall to the risk factors caused by the abandonment of outward-looking positions and the prioritization of national interests by some of the world's largest economies. So, in spite of the positive macroeconomic data from the United States, the ongoing trade war with China (which includes tariffs worth $200 billion) brings a significant element of uncertainty to the US economy. Similarly, the United Kingdom's departure from the European Union, whose negotiations took place throughout 2018 and whose first stage is due to be completed in 2019, also opens up another front of uncertainty on the Old Continent. The anticipated withdrawal of stimuli and the about-turn in monetary policy by the European Central Bank (ECB) could also have a cooling effect on economic activity in the Eurozone.

With their period of slowdown behind them, the emerging countries entered a new expansive stage and saw growth accelerate to 3.7% in 2017 and 2018. China continues to be the fastest-growing of the major economies and is gaining a share of economic power in many areas, while fears of a crash landing due to its high rate of indebtedness appear to have subsided. Latin America has some modest growth rates, and there is still a high degree of uncertainty about the economic outcomes, as its most important economies have embarked on new political cycles in 2018 and early 2019. The expected interest rate rise in the United States is also still generating significant pressure in countries with high external debt in foreign currency, as is the case of Argentina. Economies in the Middle East such as the United Arab Emirates, Qatar and Saudi Arabia underwent a marked slowdown in their growth –with some even slipping into recession in 2017– before rebounding and embarking on a path of positive growth fueled by the recovery of oil prices in 2018.

In this scenario, once again this year we present the report on sovereign wealth funds, a joint project by ICEX-Invest in Spain and the IE Business School, which has become a reference tool in the analysis of the sovereign funds industry worldwide. Our aim with the present work is to shed some light on the activity of some increasingly important actors in international investment by analyzing the strategies, operations and trends followed by these public investment vehicles.

[1] Forecasts by the International Monetary Fund (IMF), October 2018

In spite of the risks announced, the 2018 report on sovereign funds shows considerable continuity in the destination markets. In 2017 and until September 2018, the United States, United Kingdom, India and China are still the main investment markets for funds. By sector, 2018 saw a certain stagnation of investment in infrastructure and real estate after a record year in 2017. The business and financial services sector enjoyed significant growth, as did the chemical sector, thanks to several large-scale transactions. Most investments have a high technology component, with a particular focus on biotechnology, fintech, software and alternative urban transport services. This trend confirms the key role played by public instruments in sustaining or driving innovation and change.

In addition to the investment trends among sovereign funds in 2017 and the period from January to September 2018, this seventh edition also looks at various aspects of the funds such as the expected return on investment and the different strategies according to their three typical missions: stabilization, savings and economic development.

Sovereign funds are also analyzed in their role as co-investors with other vehicles and public and private entities, and there is evidence of increasing collaboration between sovereign funds, explained by their pursuit of size, reputation and market access. The report concludes with an interview with Adrian Orr, who spent more than ten years as the head of the New Zealand Superannuation Fund and occupied the post of Chair of the International Forum of Sovereign Wealth Funds, on the topic of SWFs' responsible investments. A final annex presents the Spain-Oman Private Equity Fund (SOPEF), a new co-investment fund created by the Spanish public-private entity Cofides and the Omani State General Reserve Fund (SGRF).

In short, we hope you will find the present document of interest and that it will continue to serve as a useful tool for public decision-makers and investment professionals.

María Peña Mateos
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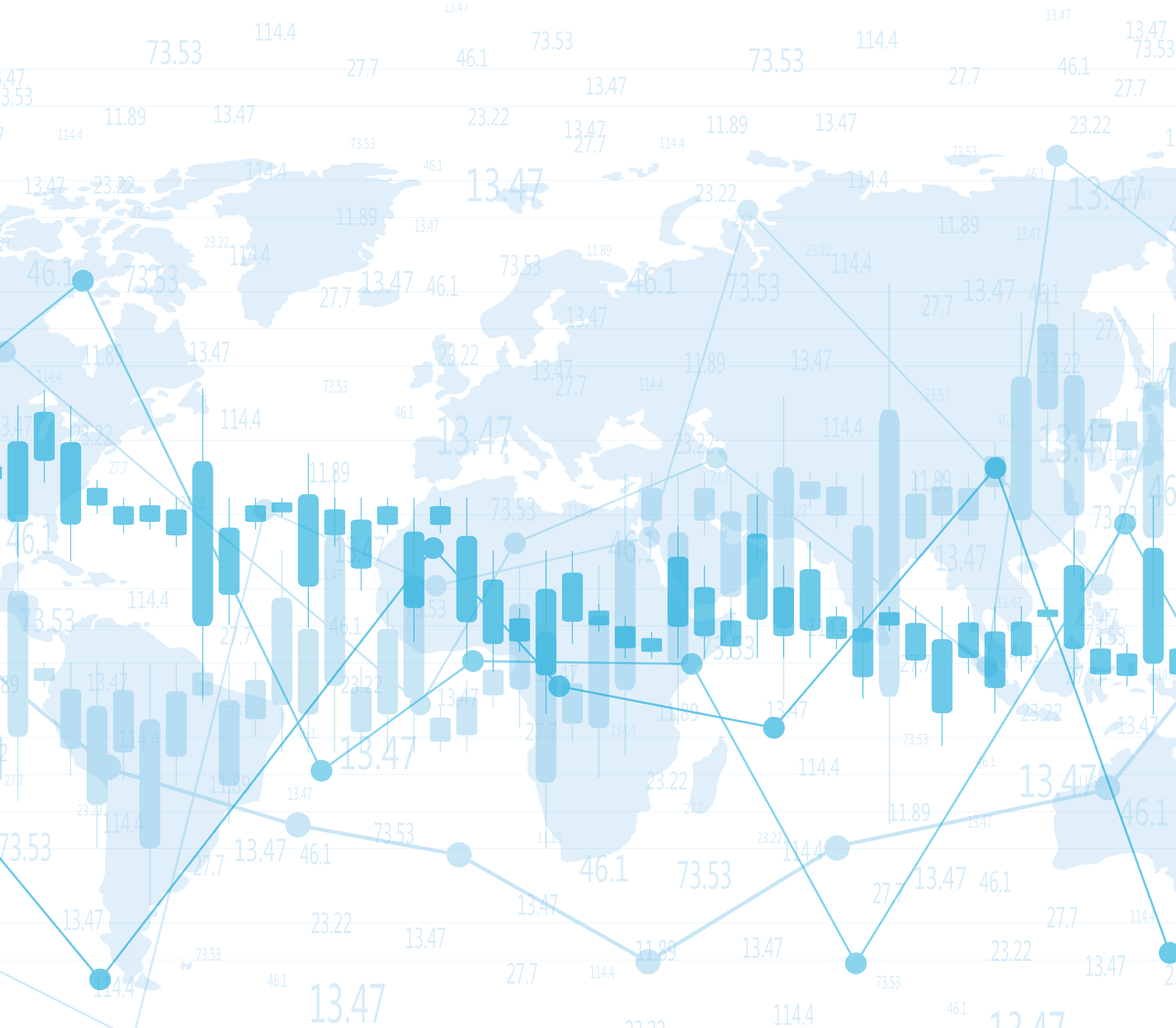
Executive Summary



2. Executive Summary

Beyond the Horizon: Sovereign Direct Investments in 2017-2018

This first chapter summarizes the activity of global Sovereign Wealth Funds across 2017 and through September 2018. Even though there has been distinct market volatility in 2018, SWF activity has remained consistent, when a decline was seen between 2016 and 2017. For 2017, we build upon transactional data of 21 funds across 197 transactions, leading to 2018 where our analysis covers 143 transactions across 19 funds, until September 2018.

Our research shows that the largest funds remain the most active, across sectors, and preferred geographies, which include developed market economies, together with China, covering more than 85% of the total invested value of approximately $185bn (in 2017 and 2018, until September).

There is a continuous strong focus on large investments in sectors such as financial services and real estate, but with quickly advancing capital allocations in cutting edge technologies, as well as health and life sciences. We see an accelerating trend of capital deployment to early stage technology companies, driven by economic and innovation parameters, as well as long-term growth potential, of the markets they operate in.

Target investment countries such as the United States, China, India remain the preferred target destinations. 2018 marks a record year for SWF investments in advanced technologies and life sciences.

Finally, we identify that SWFs are increasingly cooperating between them via mixed models of deal sourcing and risk sharing, showing that the institutional investment landscape is maturing because of the involvement of private market finance.

In this regard, the recently established Spain-Oman Private Equity Fund (SOPEF) is a good example of the maturity of the SWFs co-investment funds. With clearly defined missions, these funds foster business and economic relationships between countries, supporting the development plans of domestic companies going overseas in areas of mutual interest.

SWFs as grown up investors: Asset allocation, purpose and maturity

This chapter showcases the progression of sovereign wealth funds over the years, and their process of adjustment by evolving their investment selection criteria over time. We identify and present the opposing paths that SWFs have chosen towards their growth. We identify the main asset allocation differences, analysing a sample of 42 of the world's largest SWFs, and present how re-allocation strategies have evolved for several of them when choosing between liquid, illiquid and alternative asset strategies.

Our research analyses the correlation between a fund's maturity and its asset allocation. **The traditional asset mix of fixed income and public equities is slowly being displaced with SWFs investing in more illiquid assets.** SWFs are also diversifying into private equities, with the most mature funds experimenting with hedge funds programs. Finally, we see there is no "typical" portfolio structuring in SWFs, given the variability between them.

Our analysis concludes that although there is no predominantly leading model for the future of SWFs, different structures will continue to be utilized for different purposes, with increasing frequency. SWFs are showing that their maturity levels are backed by stable, profitable and well-governed investment profiles.

Factors that explain SWF's strategic asset allocation strategies, include source of wealth, macroeconomic purpose, liabilities, governance, accountability, risk tolerance, target markets and return objectives.

The friends of sovereign wealth funds. SWFs co-investment strategies.

Based on our database, this chapter identifies core features of sovereign fund co-investment trends, main benefits and potential pitfalls. Given their scale, and strategic long-term positioning, reputation appears to be one of the main features when SWFs consider co-investment partners. Potential synergies, increased efficiency and market access were the other identified main considerations. By partnering with other SWFs and private and public global peers, SWFs obtain the co-investment benefits of scale, efficiency, reputation, industry access and knowledge.

Co-investment, which regularly focuses on private equities and real assets, is a growing form of active management that aims to enhance strategic asset allocation positioning. It requires extensive analysis and systematic approach due to its illiquidity and long-term commitment nature.

The scale of co-investments and the diversity of partnerships reflects the recognition and maturity of the SWF industry.

The co-investment models show different degrees of intensities. Some co-investments are merely coincidental, others, such as strategic alliances and partnerships are more demanding in terms of coordination costs. Our dataset, focused on deals above $1 billion, shows that SWFs have participated in 183 transactions and 122 unique co-investment deals between 2008 and 2017.

GIC, the Singaporean active investor, China Investment Corporation and Qatar Investment Authority were the three most active co-investors. **Showing the complexities of partnering, only 22 SWFs, out of the list of 91 active sovereigns, have engaged in some kind of co-investment activity.** Finance, real estate and infrastructure are the top preferred sectors for SWFs engaging in co-investing, representing 70% of deals executed over the last ten years. SWFs seem to be comfortable co-investing with other SWF peers.

Beyond sovereigns, other frequent partners, the "friends of SWFs", include regionally-focused asset managers, sovereign pension funds, and global alternative asset managers.

An Interview with Adrian Orr: Reflections on SWF Risks, Rewards and Collective Responsibility

We conduct an interview with Adrian Orr, ex Chief Executive Officer of the New Zealand Superannuation Fund and Chair of the International Forum of Sovereign Wealth Funds (IFSWF), currently the Governor of the Reserve Bank of New Zealand.

The conversation revolves around the increasingly important role that SWFs must play as responsible investors, focusing on climate change-related investment risks and opportunities.

SWFs are helping grow awareness in climate risk through their management of asset pools that diversify away from fossil fuels to low-carbon energy systems. The former Chair of the IFSWF discusses the responsibilities that countries and SWFs have in mobilizing investment resources towards 'green' alternative investment vehicles. Mr. Orr describes the emergence of the One Planet Group, created by 6 SWFs, which added 3 new principles linked to climate change investment risks and opportunities, as a natural extension of the Santiago Principles.

Specifically, Mr. Orr argues how the Santiago Principles are becoming progressively more relevant for sovereign funds, as the market requests more transparency in operations and reasoning around investment decisions.

The discussion focuses on the rising **complexities of the co-investment environment** given the current geopolitical tensions, and the need to consider specific market parameters before utilising a fund's capital in direct investing. The interview deals with the SWFs approach to early stage investments, where the pitfalls and benefits of investing in venture capital for large, long-term focused institutions are highlighted.

The interview concludes with the importance of the IFWSF's role in the future development of policies, best practises and knowledge distribution for sovereign wealth funds.

Beyond the horizon: Sovereign wealth fund direct investments in 2017-2018

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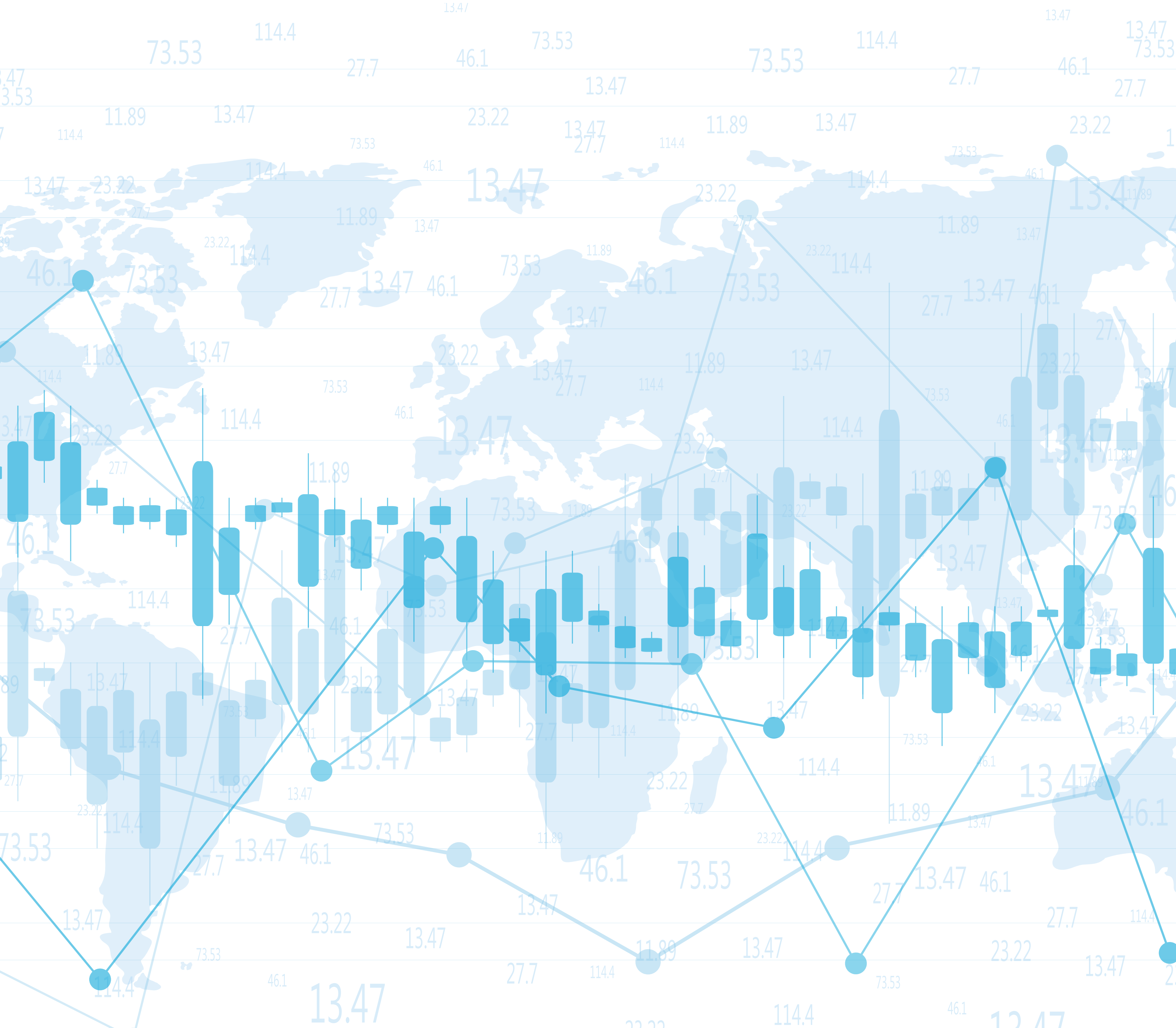


1. Beyond the Horizon:
Sovereign wealth fund direct investments in 2017-2018

The years 2017 and 2018 were marked by sharp contrasts in global markets as exceptional market returns in 2017 were followed in 2018 by the weakest performance since 2008. The prospects of slower growth and tightening monetary policy combined with global trade tensions and continuing political stress, particularly in the US, the UK, and Europe, to accentuate the risks posed to investors by politics both local and global. Sovereign wealth funds (SWFs) are by no means immune among global institutional investors, who are buffeted by such volatility across global markets. Many, however, are able to exploit their size and minimalist liability structures to maintain investment horizons beyond those that can constrain other public institutions, such as pension funds and sovereigns with policy-centric mandates.

In this review of SWF investment activity, we benefit from an extension of our typical analysis to share results from an expanded sample of nearly two years of direct transactions, spanning 2017 through Q3 of 2018. This has allowed us to glimpse "beyond the horizon" of 2017 to evaluate SWF investment patterns in distinctly different market contexts. It also affords us an ability to assess structural changes that may reflect shifts in investor sentiment and priorities, evolving changes in demographic and technological trends, and certainly discrete shifts in market conditions that all can influence sector and geographic preferences and flows.

Because funds vary considerably in size and mandate, many funds, in fact a majority, invest indirectly via third party managers in global, exchange intermediated markets. For clarity then, the transactions surveyed in this report include only publicly reported private transactions by SWFs, tracked by IE's Sovereign Wealth Research. The transaction data is derived from the Fletcher SWF Transaction Database, compiled by SovereigNET, The Fletcher School, Tufts University.[1] As is our custom, we approach data collection and analysis as a sampling exercise, recognizing that the full population of SWF transactions in any year is not observable.[2]

[1] This year we acknowledge the cooperation of Sovereign Wealth Research in assisting with data aggregation and enrichment.

[2] We attempt to identify and confirm reported transactions using – when possible - multiple independent sources. We enrich and normalize transaction details with entity, geography, and sector-level data. Importantly, we report aggregate transaction size, but do not infer or estimate the specific investment amount invested by individual SWFs when that variable is not reported. Because our objective is to understand trends at the transaction level, it is important that this include details of participating funds. Accordingly, we attempt to properly catalog details of investments by fund. This can result in multiple SWF investors participating as co-investors in the same deal. We filter these occurrences, but caution that they can sometimes distort deal count.

The activity of SWFs for the aggregated period, measured by deal counting, is summarized in the first three figures. Indeed, in 2017-2018, Temasek, GIC, Mubadala, the Australia Future Fund and Qatar Investment Authority were the five most active funds (See Figure 1). In terms of investment destinations, the US, China, India, UK and Singapore led the ranking showing continuity, with corrections in the case of the United Kingdom and India, and an increased interested for China (Figure 2). By sector, technology, finance (including fintech), real estate, biotechnology and consumer topped the ranking (Figure 3).

The Leaders and How They Invested in 2017

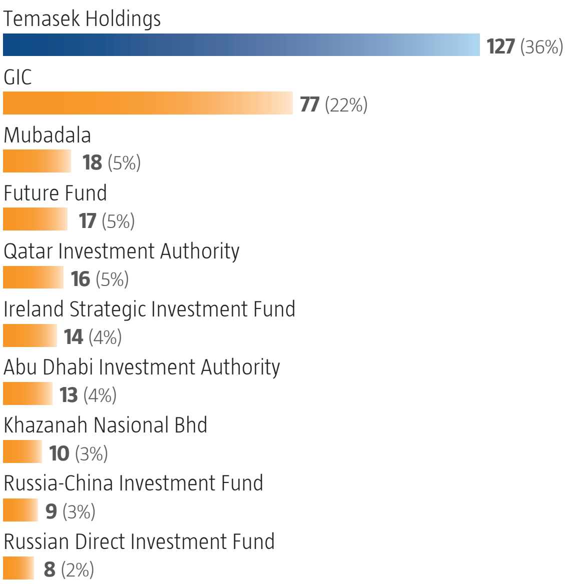
Our 2017 sample includes coverage of 21 funds across 197 transactions. While our full sample includes both acquisitions and divestitures, we report here investments only. For 2018 we report on a nine-month sample of investments through September 2018. This includes coverage of approximately 19 funds and 143 transactions. Year over year, 2017 represented a considerable decline from the 290 deals in our 2016 sampling.

In 2017, ten sovereign investors completed five or more deals. Among these are, for example, Temasek (72), GIC (44), Qatar Investment Authority (QIA) (11), Ireland Strategic Investment Fund (ISIF) (11), the Australia Future Fund (8), and the Abu Dhabi Investment Authority (ADIA) and Mubadala who each completed seven. In the aggregate, the top five SWF investors by deal count represented over 78% of transaction volume (see Figure 1). By way of comparison, 2017 reflects considerable continuity with 2016 when six sovereign investors, including Temasek, GIC, ADIA, QIA, ISIF, and the China Investment Corp (CIC), dominated transaction volume completing 72% of the deals. Similarly, Temasek and its affiliates led the way with 72 transactions.

SWFs pursue long-term investment strategies. Thus, we included aggregated data for 2017 and 2018 (up to September) in the Figures of this chapter. This helps to capture longer investment decisions. The analysis of the particular activity in 2018 is included in the next section in this chapter.

Figure 1
The most active Sovereign Wealth Funds 2017- 2018

Deal count and % of total deals.



Source: IE Sovereign Wealth Research based on SWF Transaction Database (Tufts University). The 2018 data for the nine-month period Jan to Sep.

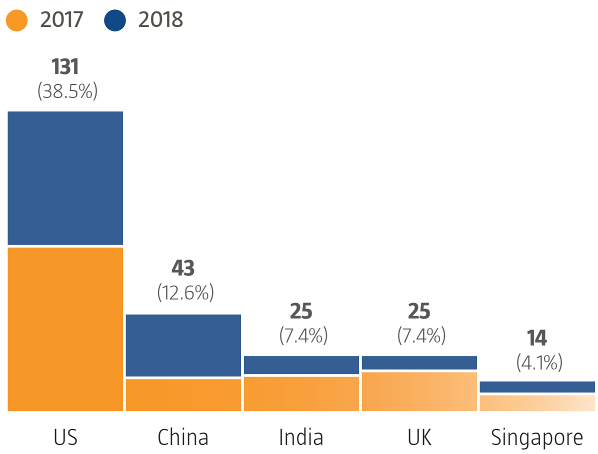
Continuity was also strongly evident in 2017 (Figure 2) with regard to investment destination. The dynamics of US domestic politics notwithstanding, particularly on matters of trade and investment, the US remained by far the most important destination for SWF deals, counting 72 transactions or over 36% of the volume. Among other key geographies, the US was followed by the UK (18), India (16), China (15), and Australia and Singapore (each with 8 deals). Together these top destinations amounted to 70% of the total 2017 transaction volume.

In terms of aggregate capital contributed by all investors, the 199 deals represented approximately $96 billlion in investment. This was distributed geographically across three primary destinations, including the UK ($21 billion), US ($16bn), and China ($11bn), which together amounted to more than 50% of total invested deal value (see Figure 4). However, other beneficiaries of SWF-linked flows included Australia ($10bn), Brazil ($6bn), India ($3.1bn), the Czech Republic ($2.6bn), and Spain ($2bn). The Ireland Strategic Investment Fund's domestic investment activities – either directly or as a catalyst – resulted in over $3.5 billion in investment activity in the Republic of Ireland.

At the sector level (Figure 3) approximately 45% of 2017 transactions were concentrated in several key sectors. These included finance and fintech (29), real estate (28), technology (19), biotech and communications each with 11, and consumer (9). While SWF investment activity in traditional sectors remained strong, deal volumes certainly reflect an evolving structural shift to earlier stage deals in technology (including software, hardware, storage, data analysis and management, and e-commerce) and life sciences. By deal volume (See Figure 5), utility deals ($19bn) garnered the largest percentage (19%) of new capital, followed by finance (excluding banks) at $16 billion, logistics real estate at $14 billion (discretely reflecting the Logicor deal), and communications ($6.6bn). Together these top five sectors represented over 70% of new sovereign-linked capital invested in 2017.

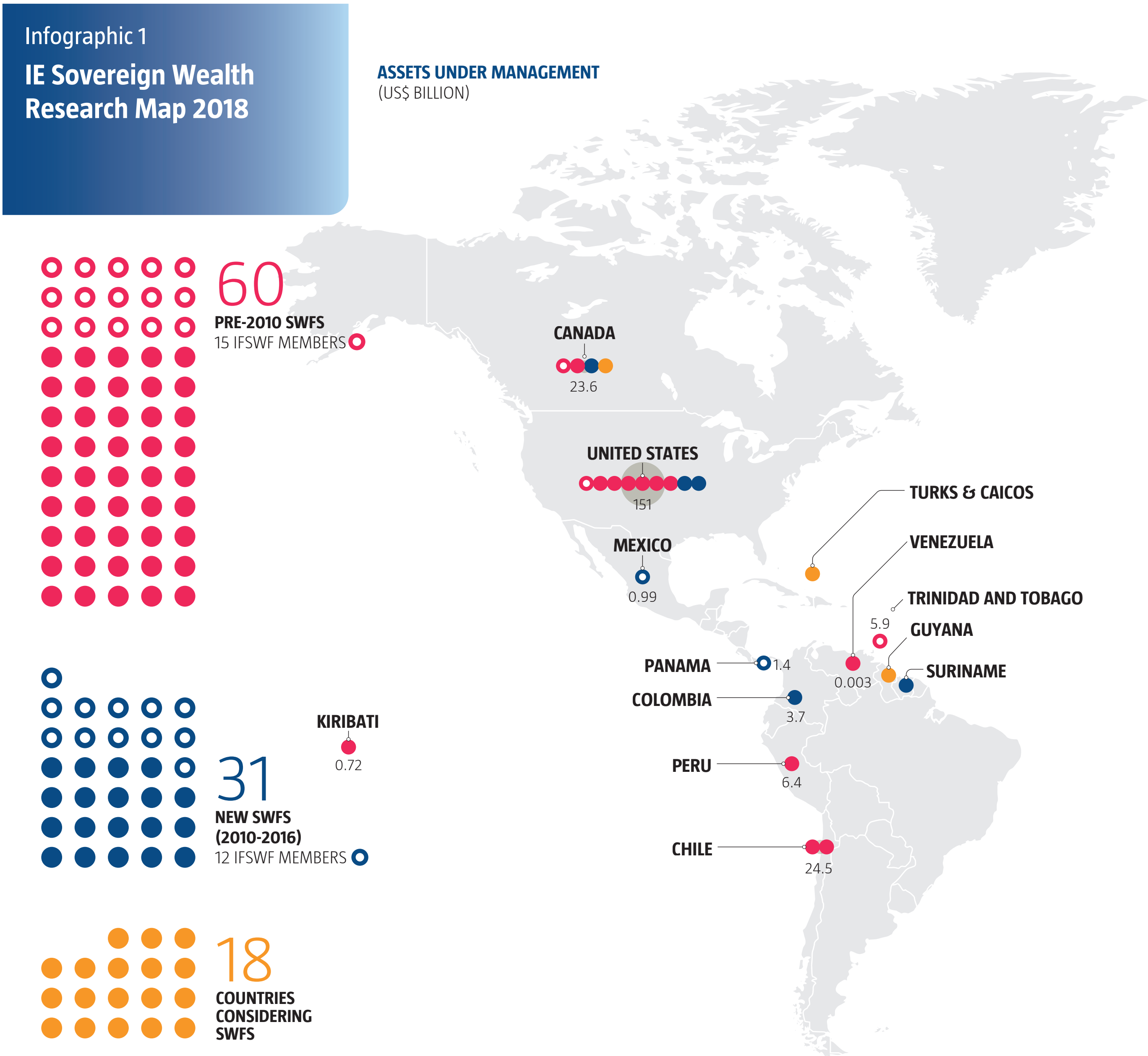
Figure 2
Top 5 destination countries in 2017-2018

Deal count and % of total deals.



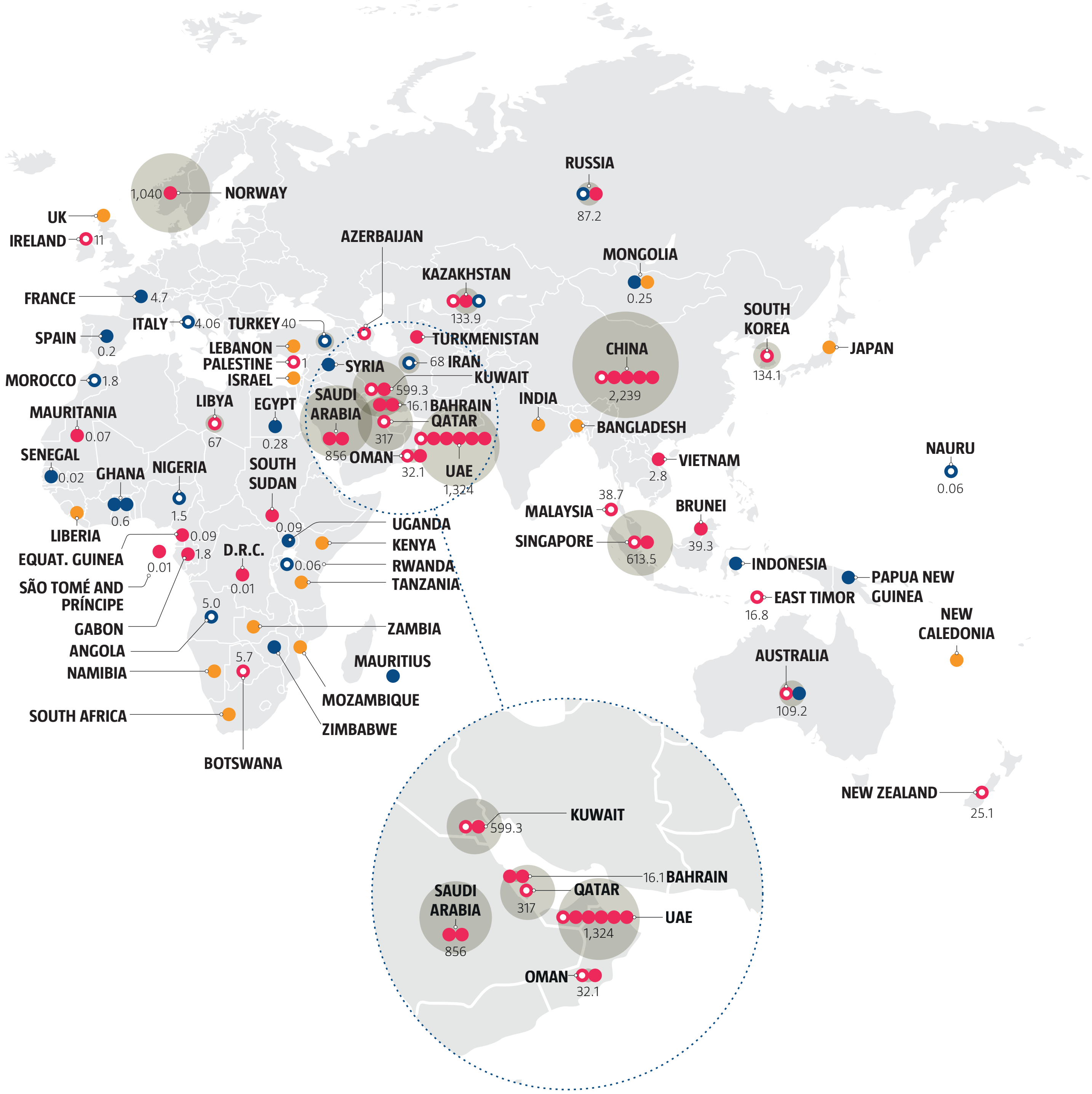
Source: IE Sovereign Wealth Research based on SWF Transaction Database (Tufts University). The 2018 data for the nine-month period Jan to Sep.

1. Beyond the Horizon: Sovereign wealth fund direct investments in 2017-2018



Currently, there are 91 active sovereign wealth funds, one less than in our 2017 Ranking. 61 countries have established at least one SWF, four more than a year ago. The Middle East, China, Southeast Asia and Norway are the four most active poles of SWFs. Assets under management totaled $8.1 trillion. SWFs have widely spread in recent years: since 2010, 31 new funds have been established. Other 18 countries are actively considering establishing a SWF. Debates over new SWFs are growing in Sub-Saharan Africa and the Caribbean. Thus, in 2018, there are more than 105 operating or prospective-SWFs. 27 SWFs are members of the International Forum of Sovereign Wealth Funds.

Source: IE SWLab SWF Tracker (2018).



RUSSIA
87.2
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UK
IRELAND
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AZERBAIJAN
MONGOLIA
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KAZAKHSTAN
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FRANCE
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SOUTH KOREA
134.1
JAPAN
ITALY
4.06
TURKEY
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SPAIN
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TURKMENISTAN
CHINA
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LEBANON
PALESTINE
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SYRIA
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IRAN
ISRAEL
KUWAIT
599.3
MOROCCO
1.8
LIBYA
67
EGYPT
0.28
SAUDI ARABIA
856
16.1
BAHRAIN
QATAR
317
INDIA
BANGLADESH
MAURITANIA
0.07
OMAN
32.1
UAE
1,324
VIETNAM
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NAURU
0.06
SENEGAL
0.02
GHANA
0.6
NIGERIA
1.5
SOUTH SUDAN
MALAYSIA
38.7
BRUNEI
39.3
LIBERIA
0.09
UGANDA
KENYA
EQUAT. GUINEA
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D.R.C.
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0.06
RWANDA
TANZANIA
SINGAPORE
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INDONESIA
PAPUA NEW GUINEA
EAST TIMOR
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SÃO TOMÉ AND PRÍNCIPE
GABON
5.0
ZAMBIA
NEW CALEDONIA
ANGOLA
5.7
MAURITIUS
AUSTRALIA
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NAMIBIA
MOZAMBIQUE
SOUTH AFRICA
ZIMBABWE
BOTSWANA
NEW ZEALAND
25.1
KUWAIT
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BAHRAIN
QATAR
317
SAUDI ARABIA
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1. Beyond the Horizon: Sovereign wealth fund direct investments in 2017-2018

In our last report, we highlighted a number of 2017 transactions that had been announced in the first six months of the year. In traditional industries, certainly the most prominent to reiterate is CIC's investment in Logicor, the European logistics firm with a large network of warehouses across the UK and continental Europe. Logicor was acquired from Blackstone for approximately $13.8 billion. At the time, Reuters reported the deal as the largest ever private equity real estate investment to be completed in Europe.[3] It was in fact the largest SWF investment in 2017, funded in part by equity and debt.

With respect to 2017 deal count and volume, we noted above the scale of SWF investment in utilities. The largest of these deals - Endeavor Energy - was completed by a consortium that included the QIA, the British Columbia Investment Management Company, Macquarie Infrastructure and Real Assets, and AMP Capital. The aggregate investment was approximately $8.6 billion for a 50.4% stake.[4] Other noted utility investments in 2017 included GIC's investment in the $5.2 billion deal involving the Brazilian gas pipeline company Nova Transportadora Do Sudeste and also the completed sale of a 61% stake in the UK gas distributor National Grid to an investor group that included the CIC and QIA.

Among traditional sectors, real estate continued to attract extensive sovereign investment capital most notably from GIC, QIA, ADIA, and certainly too Norway's Government Pension Fund - Global, whose only permitted direct investments are in real estate. Among geographies, the US and UK were home to 16 of 28 transactions. Among emerging SWF investment themes in real estate especially notable is GIC's interest in student housing assets. These investments began in 2016, continued in 2017 with a $284 million investment in a complex at Aston University in Birmingham, England[5] and, as we indicate below, continued into 2018.

Beyond traditional sectors, it is unquestionably in industries and businesses centered on advanced technologies that SWFs have embraced long-term themes to liberate themselves from the vagaries of short term market movements. Biotech and life sciences, for example, featured prominently in SWF investment activity in 2017. The deal of note was certainly Temasek's $800 million commitment to Verily Life Sciences, a subsidiary of Alphabet. Verily, is not biotech, nor does it offer traditional healthcare solutions, but rather combines data science with technology to enhance care management.[6] The investment was one of several that Temasek completed in the sector in 2017. These were primarily in the US, China, and Singapore and included WuXi NextCODE, Orchard Therapeutics, Hangzhou Just Biotherapeutics, and CardioDx. Among other investors, the QIA and the Alaska Permanent Fund joined to invest in Codiak Biosciences, while Mubadala initiated an investment Recursion Pharma.

Broadly technology deals span a variety of subsectors, including applications in e-commerce. SWF participation was robust across these subsectors, which included for example, the funding of Improbable, a British AI company,[7] which completed a financing round with participation from SoftBank and Temasek that valued the company at $1 billion.[8] Fugue, a Maryland-headquartered startup which develops software to manage cloud-based workloads,[9] completed a $41 million round that included the Australia Future Fund.[10] VeloCloud, which develops software-defined wide area networks, received financing in a $35 million round that included Khazanah.[11]

Temasek clearly dominated this broad sector, investing across subsectors that included software, communications, and fintech. However, other SWF's participated actively. The Future Fund participated in 6 related deals including Databricks and

[3] See "Blackstone sells Logicor to China Investment Corporation for $14 billion", Reuters, June 2, 2017. Accessed at https://www.reuters.com/article/us-logicor-sale-blackstone-group/blackstone-sells-logicor-to-china-investment-corporation-for-14-billion-idUSKBN18T2E8

[4] See "MIRA, REST, bcIMC, QIA invest AUD 7.6bn in electric network", IPE Real Assets, May 11, 2017. Accessed at https://realassets.ipe.com/news/infrastructure/mira-rest-bcimc-qia-invest-aud76bn-in-electricity-network/realassets.ipe.com/news/infrastructure/mira-rest-bcimc-qia-invest-aud76bn-in-electricity-network/10018899.fullarticle

[5] See "GIC invests in $283M UK Student Housing JV", Mingtiandi, February 2, 2017. Accessed at https://www.mingtiandi.com/real-estate/outbound-investment/gic-invests-in-283m-uk-student-housing-jv/

[6] See Verily's website at https://verily.com

[7] See Improbable's website at https://improbable.io/company/about-us

[8] See "SoftBank leads $502 million investment in U.K. tech startup", Bloomberg, May 11, 2017. Accessed at https://www.bloomberg.com/news/articles/2017-05-11/softbank-leads-502-million-investment-in-u-k-tech-startup

[9] See https://www.crunchbase.com/organization/luminal

[10] See Fugue's press realese. Accessed at https://fugue.co/press/releases/2017-01-05-fugue-raises-41-million-in-funding-to-solve-cloud-operations-complexity.html

[11] See Velocloud's press release. Accessed at http://www.velocloud.com/news/2017/velocloud-raises-35-million-to-meet-demand-for-cloud-delivered-sd-wan

the previously noted Fugue. GIC also continued to exercise its expertise in the sector, participating notably in two sizeable deals – Meituan-Dianping, the Chinese internet-life service company, and the Norwegian software developer, Visma. In addition, GIC joined in a funding round by the Chinese peer-to-peer lending platform, Dianrong, as well as led a round by San Francisco-based Affirm. Founded in 2012 by PayPal co-founder Max Levchin, the company offers point-of-sale loans at checkout for online purchases.[12] Certainly representing well the SWF investment thesis, Airbnb, not to be outdone, closed a $1 billion funding round in March 2017 that included a $100M investment from CIC.[13]

Reflections on SWF Investment Activity - 2018

Beyond the 2017 horizon, we offer here a preliminary look at SWF investments through the three quarters ended September 2018. Our sample for these nine months includes 143 transactions distributed across approximately 19 funds. The top 5 funds participated in 80% of the transactions. These were again dominated by Temasek (55) and GIC (33), who together represented 58% of the total deal count (See Figure 1). Others all with over 5 deals were - previously noted - Mubadala (11), the Future Fund (9), and ADIA and Khazanah with 6 each.

By sector (Figure 3), technology (11), including also software (15), e-commerce (4), all continued to reflect strong SWF interest. Also, finance and fintech remained strong by deal count (12). Similarly, life sciences, including biotechnology (18) and pharmaceuticals (6), captured significant new SWF-linked capital, with Temasek leading 13 deals, including its $3.7 billion follow-on commitment to Bayer to help fund its acquisition of Monsanto.[14] Among traditional sectors, we note continued investment activity in the consumer sector (18), healthcare (9), real estate (8), and transportation (7). By geography, transactions were again concentrated in the US (59), followed China (28), India (9), the UK (7), and Singapore (6) who together captured 76% of sovereign deals.

Figure 3

Top 5 sectors in 2017-2018

Deal count and % of total deals.

Sector	Deals	% of total deals
Technology	49	14.4%
Finance&Fintech	41	12.1%
Real Estate	36	10.06%
Biotechnology	29	8.5%
Consumer	27	7.9%

Source: IE Sovereign Wealth Research based on SWF Transaction Database (Tufts University). The 2018 data for the nine-month period Jan to Sep.

With respect to transaction size, SWFs through Q3 2018 participated in investments with an aggregate value of over $89 billion, and 82% was concentrated in the top 5 destinations (Figure 4). These included the US ($26bn), then China ($21bn), the Netherlands ($12bn), Australia ($7bn), France ($6bn), Singapore ($5.4bn), Germany ($4.2bn), and Spain ($1.6bn). By sector, these included consumer-related industries, such as food processing, beverages, leisure, and commercial services, which received over $18 billion in SWF-linked capital. E-commerce ($14bn), chemicals ($12.5bn), real estate ($7.4bn), and energy ($7bn) rounded out the top 5 sectors by volume, together representing some 67% of aggregate deal value (Figure 5).

[12] See "Affirm Raises Another $200 Million, With Investment From Singapore's Sovereign Wealth Fund", Forbes, December 11, 2017. Accessed at https://www.forbes.com/sites/laurengensler/2017/12/11/affirm-raises-200-million-series-e/#52b271d5d8aa

[13] See "China Investment Corp commits $100m in Airbnb's $1b funding round", DealstreetAsia, March 13, 2017. Accessed at https://www.dealstreetasia.com/stories/airbnb-looks-to-see-more-expansion-grabbing-100-m-from-china-investment-corp-67378/

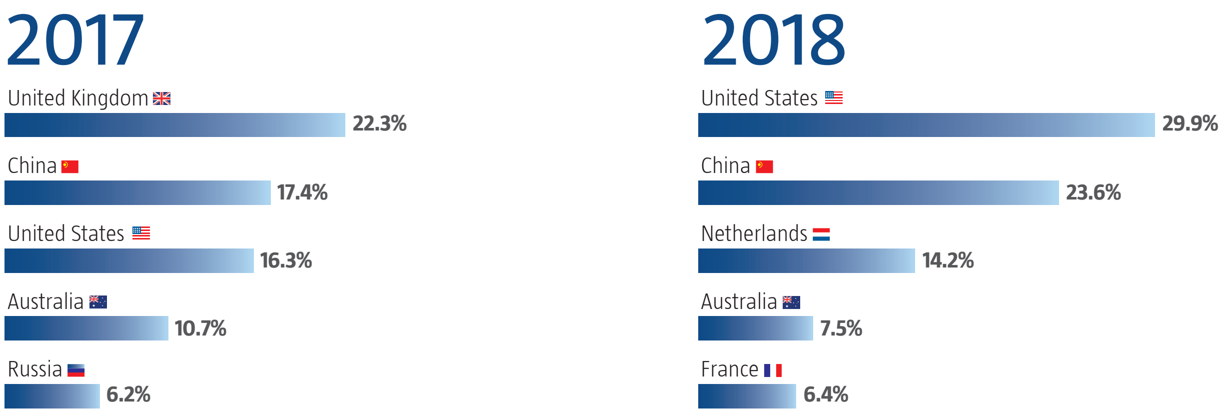
[14] See "Singapore's Temasek hikes Bayer stake in 3.7 billion share deal", Reuters, April 16, 2018. Accessed at https://www.reuters.com/article/us-bayer-temasek/singapores-temasek-hikes-bayer-stake-in-3-7-billion-share-sale-idUSKBN1HN2MV

1. Beyond the Horizon:
Sovereign wealth fund direct investments in 2017-2018

Figure 4

Top 5 country destinations in 2017-2018

Percentage of total deal volume.



Source: IE Sovereign Wealth Research based on SWF Transaction Database (Tufts University).

Among the most active sovereign investors in 2018, Temasek's deals through three quarters were primarily concentrated in technology (7), including also computer software (9) and fintech (2), and in life sciences, such as biotechnology (11), healthcare products and services (3), and pharmaceuticals (4). GIC's 2018 deals reflected considerable investment interest in consumer-related sectors (8), real estate (5), biotechnology (3), and finance (2).

Of the 59 SWF-linked transactions completed in the US through Q3 2018, 9 were in biotechnology, 13 in software and technology, and 5 in healthcare. All other subsectors counted three or fewer. Of the 28 deals completed in China, biotech (4) also led, followed by real estate, and technology each with 3. Of India's 9 deals 4 were in the software sector.

At the outset of our review, we noted the deepening trade tensions that have come to characterize 2017 – 18. These have become particularly acute in the US-China economic relationship. The Peterson Institute reports that Chinese foreign direct investment in the US is projected to have fallen by 86% year over year in 2018 from $29.4bn to $4.0bn [15]. With respect to our analysis of the directionality of SWF investment flows, this is consistent with our observation of CIC's investment activity in these two years. In 2016, CIC completed three deals in the US, including two real estate deals in New York City. In 2017, in addition to its earlier reported investment in Airbnb, CIC joined China Life, and TIAA Private Investments to acquire Chicago-based Interpark, the largest parking operator in North America. [16] Important to note, though not reported among

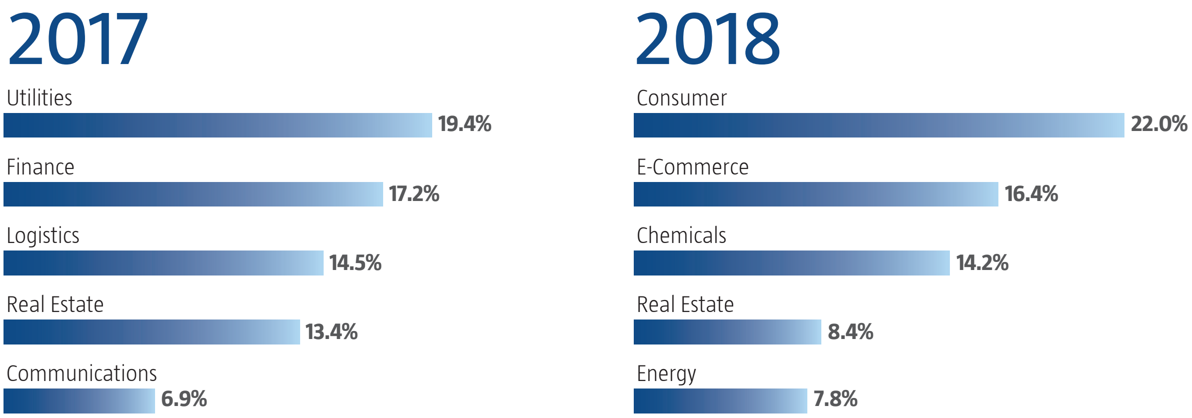
[15] See "Investment from China into the United States Has Fallen to Nearly Zero", Peterson Institute of International Economics, December 27, 2018. Accessed at https://piie.com/research/piie-charts/investment-china-united-states-has-fallen-nearly-zero

[16] CIC, China Life join TIAA in $1B US Parking Deal", Mingtiandi, July 3, 2017. Accessed at https://www.mingtiandi.com/real-estate/outbound-investment/cic-china-life-join-tiaa-in-1-1b-us-parking-deal/

Figure 5

Top 5 sectors in 2017-2018

Percentage of total deal volume.



Source: IE Sovereign Wealth Research based on SWF Transaction Database (Tufts University).

our completed deals, is the November, 2017 announcement by Sinopec, Bank of China and CIC Capital Corp to join the Alaska Gasline Development Corp in a major project to develop an integrated LNG system in Alaska, including a long-distance gas pipeline. We note no other CIC transactions completed in the US through Q3 of 2018.

Notwithstanding, the period January though September 2018 featured a number of deals that were distinguished by destination, target sector, and scale. We highlight several of the largest and most prominent here below beginning in the traditional real estate sector. Here of note is GIC's participation along with the Saudi PIF, Credit Agricole Assurances, Colony NorthStar, and Amundi, among others to acquire a majority 57.8% of the capital of AccorInvest, from AccorHotels. The firm is a global hotel real estate company with a portfolio of 891 properties, the majority of which located in Europe in the economy and midscale segments. The deal, reported at $5.6 billion, leaves operation of the properties to AccorHotels under 30-50 year management contracts.[17] Also in traditional real estate, we again highlight GIC continued accumulation of student housing units acquired via its partner GSA. In 2018 this included 1,900 beds in Berlin, Hamburg and Frankfurt. GIC has maintained a joint venture partnership with Global Student Accommodation through which it has steadily increased its participation in the student segment of the global real estate market. The German market has particular appeal as Germany has the highest density student population in Europe.[18]

[17] See GIC's press release. Accessed at https://www.gic.com.sg/news-and-resources/gic-and-a-group-of-investors-to-acquire-majority-stake-of-accorinvest/

[18] See GSA's website. Accessed at https://www.gsa-gp.com/news/gsa-acquires-330-million-euro-new-student-residences-germany/

ADIA expanded its footprint in Australian infrastructure by participating in a roadway consortium led by Transurban to acquire a 51% interest in the Sydney toll road system for $6.7 billion. The project is due to be completed in 2025, at which time the consortium will control most of the motorways surrounding Sydney. Along with ADIA, the consortium partners include Australian Super and the Canada Pension Plan Investment Board, who each hold 20.5% positions. ADIA is reported to hold a 9% stake.[19]

In technology and digital themes, we highlight several large transactions including what is arguable the largest fundraising globally by a private company, Ant Financial Services Group. The company, the operator of China's largest online payment platform, raised approximately $14 billion from global investors that included SWFs GIC, Temasek, and Khazanah, as well as private equity firms Warburg Pincus, Silver Lake, and General Atlantic.[20] Magic Leap, the developer of "mixed reality" headsets, based in Florida and founded in 2010, secured funding from the Saudi PIF, which committed $400 million, to join Google and Alibaba as Magic Leap investors. The financing extended an earlier round that also included Temasek. The deal values Magic Leap at about $6 billion, despite challenges that have resulted in considerable product delays. As of this writing, the company has still yet to release product.[21]

In 2018, Temasek extended its investment profile in China, joining Trustbridge Partners, SoftBank, the Vision Fund, and Hony Capital in a $500 million Series B round in WeWork China. With 20,000 members across 40 locations in three cities, WeWork China intends to use the capital to expand to six additional cities - Shenzhen, Suzhou, Hangzhou, Chengdu, Nanjing, and Wuhan.[22] Elsewhere in Asia, Temasek participated along with Google and China's Meituan-Dianping in a $1.2 billion fundraising in Go-Jek, the Indonesian ride-hailing firm. Go-Jek requires access to solid funding sources as it faces competition in Grab and Uber who are backed by the SoftBank Group. The 2018 round also included existing investors KKR and Warburg Pincus, as well Samsung Venture Investment Corporation.[23]

[19] See "Transurban secures control of Sydney's WestConnex with $9.3 billion bid", Financial Review, August 31, 2018. Accessed at https://www.afr.com/business/transurban-secures-control-of-sydneys-westconnex-with-93b-bid-20180831-h14rh5

[20] See "Ant Financial raises 14 billion in world's largest ever single fundraising", Reuters, June 8, 2018. Accessed at https://www.reuters.com/article/us-ant-financial-fundraising/ant-financial-raises-14-billion-in-worlds-largest-ever-single-fundraising-idUSKCN1J407Y

[21] See "Magic Leap confirms $400m investment from Saudi wealth fund", Financial Times, March 7, 2018. Accessed at https://www.ft.com/content/51baea84-2223-11e8-9a70-08f715791301

[22] See WeWork's blog post. Accessed at https://www.wework.com/blog/posts/investment-to-fuel-growth-of-wework-china

[23] See "Google, Temasek investing in Indonesia's Go-Jek as ride-hailing rivalry deepens", Reuters, January 18, 2018. Accessed at https://www.reuters.com/article/us-go-jek-fundraising-idUSKBN1F70GS

SOVEREIGN VENTURE FUNDS

The number of SWFs participating in investment rounds with other venture capital (VC) investors has grown exponentially over the last five years. Indeed, the last five years (2014-2018), have witnessed SWFs participating in 220 VC rounds. The previous five years (2009-2013), this figure had just been 14. Truly, 2014 marked the beginning of a new trend among SWFs with respect to technology and innovative companies. As explained in previous editions of this report, we can talk now about a group of "sovereign venture funds." In 2014, Temasek opened new offices in New York and London to cover the Americas and Europe, respectively. A year earlier, it initiated its Enterprise Development Group, as a tool to bring together its existing platforms and initiatives, including venture investments in early stage businesses. These two events seemed to catalyze the transition of government-backed investors into venture capital.

With the increased VC activity of both GIC and Temasek, the rest of SWFs slowly, yet consistently, started to join. Before 2014, only 7 different SWFs had participated in some sort of venture capital deal. Since 2014, this number has grown up to 17 different SWFs. Moreover, data shows that this trend only keeps growing. Indeed, 2018 showed an all-time record with 84 SWFs deals in 77 different venture capital rounds. Thus, in terms of activity and deal exposure, we can conclude that investment activity in venture capital has experienced an enormous push from Singaporean leaders GIC and Temasek (they jointly represented 60% of all VC deals in 2018). Also, we can identify a consistent group of sovereign venture funds which are following: including the Australia's Future Fund, Malaysia's Khazanah, UAE's Mubadala and the Ireland's ISIF. As observed, sovereign investors fostering and promoting innovation come from a wide array of latitudes including SWFs from Europe, the Middle East, Southeast Asia, the US and Australia.

Still, an analysis of the companies targeted in the last 5 years, shows a quite concentrated geographic target destination. Startups established in the United States received 60% of deals made in the last two years. The US has dominated the startup industry over the last years by total venture capital fundraising, number of startups founded, and closed investment rounds. Yet, the last two years have foreseen a substantial growth relative to the previous three years (2014-2016), when SWFs had a more diversified geographic activity focusing on Chinese, Indian, and British-based tech companies. China is the second preferred destination, averaging 21% of venture capital deals by SWFs over the last two years. Other countries, such as India, the UK or Singapore, have experienced a relative decline in the last years. India, for example, represented 20% of the total deal sample back in 2014 and 2015, yet the number has averaged just 4% in the last three years. Thus, the US and China, remain clear leaders as preferred destinations, with an aggregated share surpassing 80% in 2018. Yet, other parallel trend identifies a growing number of new destinations, though small by deal count, over the last three years: Germany, Brazil, South Korea, Spain or Indonesia have witnessed the landing of SWFs venture capital for the first time into their startups.

By sub-sectors, biotech and healthcare have dominated in the last five years, with 20% of total venture capital investment rounds. Yet, there is a growing interest in startups leading transformation of traditional sectors such as in fintech, mobility services and agriculture. E-commerce remains as a key preferred industry despite the number of deals have declined in favor of startups developing artificial intelligence, cybersecurity and cloud solutions. Again, as in the case of our geographic analysis, sectoral diversification within the technology industry is a fact, and sovereigns venture today into a wider array of sub-industries than they did only five years ago.

The push that SWF capital represents for the VC industry is another sign of the growing influence that government-backed investment instruments exert to foster national and international innovation and change. The success of the strategy, so far, will depend on the strength of public markets and their ability to secure a series of positive initial public offerings of SWF-backed startups. This may validate the strategy and increase the number of SWFs investments and deployment. All with permission of a supportive economic cycle that lasts now more than 10 years.

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Director, IE Sovereign Wealth Resarch

[1] See Santiso, J. "Sovereign Venture Funds", in J. Santiso (Ed.), Sovereign Wealth Funds 2015. Madrid: ICEX, ESADE, and KPMG.

1. Beyond the Horizon: Sovereign wealth fund direct investments in 2017-2018

Compass is a New York technology/media firm that offers a technology-enabled listing platform for property owners to market and sell properties. In 2018 the company raised $400 million in a round that was led jointly by the Vision Fund and the Qatar Investment Authority and valued the firm at $4.4 billion. The company has targeted to control 20 percent of all residential property sales in the top 20 US markets. QIA was apparently drawn to Compass through its interest in technology, media, and telecom assets and makes a logical strategic partner given the breath of its global real estate holdings, particularly in the US.[26]

Finally, in the wake of considerable controversy that linked the Saudi PIF to a major private investment in Tesla, the Saudi fund committed instead to a $1 billion investment in Tesla's rival Lucid Motors to enable the company to launch its electric vehicle in 2020. The investment is consistent with the PIF's broader "localization" agenda to promote innovation and sectoral diversification in the Saudi economy.[27]

Extending the SWF Investment Model

As is certainly evident from our analysis, sovereign investors continue to increase their exposures to alternative assets as direct investors. Further evident is that these are growing at both ends of the volume scale, i.e. as very large direct deals, such as CIC's investment in Logicor, but also as investments in comparatively smaller, innovative companies that are driving technological advancement and disruptive change to traditional business models. Sovereign investors have traditionally been very active co-investors both among each other and together with a wide variety of public and private investors, including operating companies (a detailed analysis of SWF co-investment activity appear in another chapter in this volume). In the past, institutional structures have emerged to facilitate such co-investment.[28] However, mostly recently, there has been an active emergence of other innovative investment platforms established by or invested in by SWFs specifically. As these have come to impact our approach to data collection and analysis, our attention here is drawn to four distinct types of structures that, among other things, lower costs and facilitate sovereign deal sourcing and risk sharing. These include 1) third party private equity platforms with major participation by SWFs that enable co-investment in scale, 2) venture platforms established by SWF's that build capacity across the private equity cycle, 3) joint investment vehicles established by SWFs to promote investment between countries, and 4) private investment platforms sponsored by sovereign or public entities designed to access equity participation in private equity general partnerships.

An example of the first structure is certainly SoftBank's Vision Fund among whose investors are most prominently the Saudi PIF and UAE's Mubadala. The Vision Fund, an unprecedent $100 billion technology fund run from offices in San Carlos (California, US), Tokyo and London, invests checks of $100 million or more in growth stage companies. It covers a variety of technology sectors that include artificial intelligence, robotics, communications infrastructure, telecom, computational biology, biotech, cloud technologies, internet-enabled consumer businesses, and fintech. We note here both the scale of SoftBank's target investments and also the investment themes defined for the fund as these both have consequences for and inform SWF direct investments. For purposes of our analysis, because the Vision Fund is not wholely owned or managed by a SWF, we did not include investments made by the fund as SWF transactions. However, we did acknowledge deals that represented SWF co-investments with the fund.

An interesting example of a sovereign venture platform is Mubadala Capital's Ventures business, which leverages Mubadala's newly established presence in Silicon Valley. [29] The unit's operations include three distinct elements: To invest directly, to manage a fund of funds program, and to provide oversight of Mubadala's $15 billion commitment to the Vision Fund. The thematic focus of its direct investments, not entirely unlike that

[26] See "Compass nabs $400M, valuing the real estate technology startup at $4.4B", TechCrunch, September 27, 2018. Accessed at https://techcrunch.com/2018/09/27/safe-as-houses-compass-400m-real-estate-unicorn/

[27] See "Saudi's PIF invests more than 1 billion in electric carmaker Lucid Motors", Reuters, September 17, 2018. Accessed at https://www.reuters.com/article/us-saudi-investment-auto/saudis-pif-invests-more-than-1-billion-in-lucid-motors-idUSKCN1LX1IG

[28] We note here for example the Co-investment Roundtable Of Sovereign And Pension Funds (CROSAPF) established in 2014.

[29] See Mubadala's' website. Accessed at https://www.mubadala.com/en/what-we-do/capital/ventures

of the Vision Fund itself, includes life sciences and digital health, cyber technologies, airspace security, the digitization of the enterprise, and insurance tech, fintech, and the application of blockchain to financial services. In conducting our transaction analysis for 2017 and 2018 it was interesting to note both the scale up and diversification of Mubadala's investment activity which we attribute in part to the operational emergence of the platform. For example, Mubadala's deal count in our sample increased from 7 to 11 between 2017 and 2018 with 9 of the 11 2018 transactions completed in the US and diversified across healthcare, business intelligence, cybersecurity, and aerospace.

The Russia-China Investment Fund (RCIF) is a private equity joint investment vehicle established in 2012.[30] The fund was capitalized via $2 billion capital commitments from the Russia Direct Investment Fund and the China Investment Corp and is open to investment by other international institutional investors. The fund targets to invest at least 70% of its capital in Russia and CIS countries and up to 30% in China. While not traditionally identified as a SWF, the RCIF's ownership and management at present is dominated by the RDIF and CIC. We included its 6 transactions in 2017 and 3 deals through Q3 2018 in our count.

WAFRA is the US private markets subsidiary of the Public Institution for Social Security of Kuwait, which is not generally identified as a SWF. In 2018, WAFRA was the catalyst in the establishment of Capital Constellation[31], an investment platform that joins WAFRA's parent, along with the Alaska Permanent Fund Corporation (APFC) and the UK pension fund RPMI Railpen in a partnership that takes equity stakes in private equity firms, participates in the funds they manage, and co-invests in specific ideas. For clarity, because Capital Constellation's investment decisions do not reflect the discrete strategy of, for example the APFC, its investments were not considered as part of our sampling.

Key Takeways

Despite the volatility that defined markets in 2018, SWF investment activity, while having declined between 2016 and 2017, remained generally consistent and quite robust between 2017 and 2018. Moreover, the investment profile of the largest sovereign investors, whose direct investments we study, continues to display considerable – in fact remarkable - continuity with the past in terms of participating investors, sectors, and preferred geographies. The largest funds certainly remain the most active. SWFs continue to demonstrate a strong preference for large scale investments in core sectors such as financial services and real estate but are also rapidly expanding capital allocation to advanced technologies and health and life sciences. Preferred geographies remain developed market economies, along with China and India. This reflects in part 1) the general economic and political stability of these markets, 2) their long-term growth potential, 3) their continuing appeal as gateway destinations, 4) their capacity to absorb large scale capital investment, and 5) their ability to foster innovation, to effectively commercialize new technologies, and to facilitate the emergence and development of new industries. This is very consistent with the most interesting trend to emerge from our glimpse "beyond the horizon": SWF's are accelerating deployment of capital to early stage technology companies in scale. While surveys suggest more caution as new capital enters private markets and valuations inevitably increase, funds are expanding their cooperation via creative, more institutionalized, approaches to deal sourcing and risk sharing. We view this as a key development in the institutional investment landscape with important implications for the intermediation in private market finance.

[30] See Russia China Investment Fund. Accessed at http://www.rcif.com

[31] See "Capital Constellation Partnership Preps Fund for Outside Investors", Institutional Investor, December 11, 2018. Accessed at https://www.institutionalinvestor.

SWFs as grown up investors: Asset allocation, purpose and maturity

Diego López
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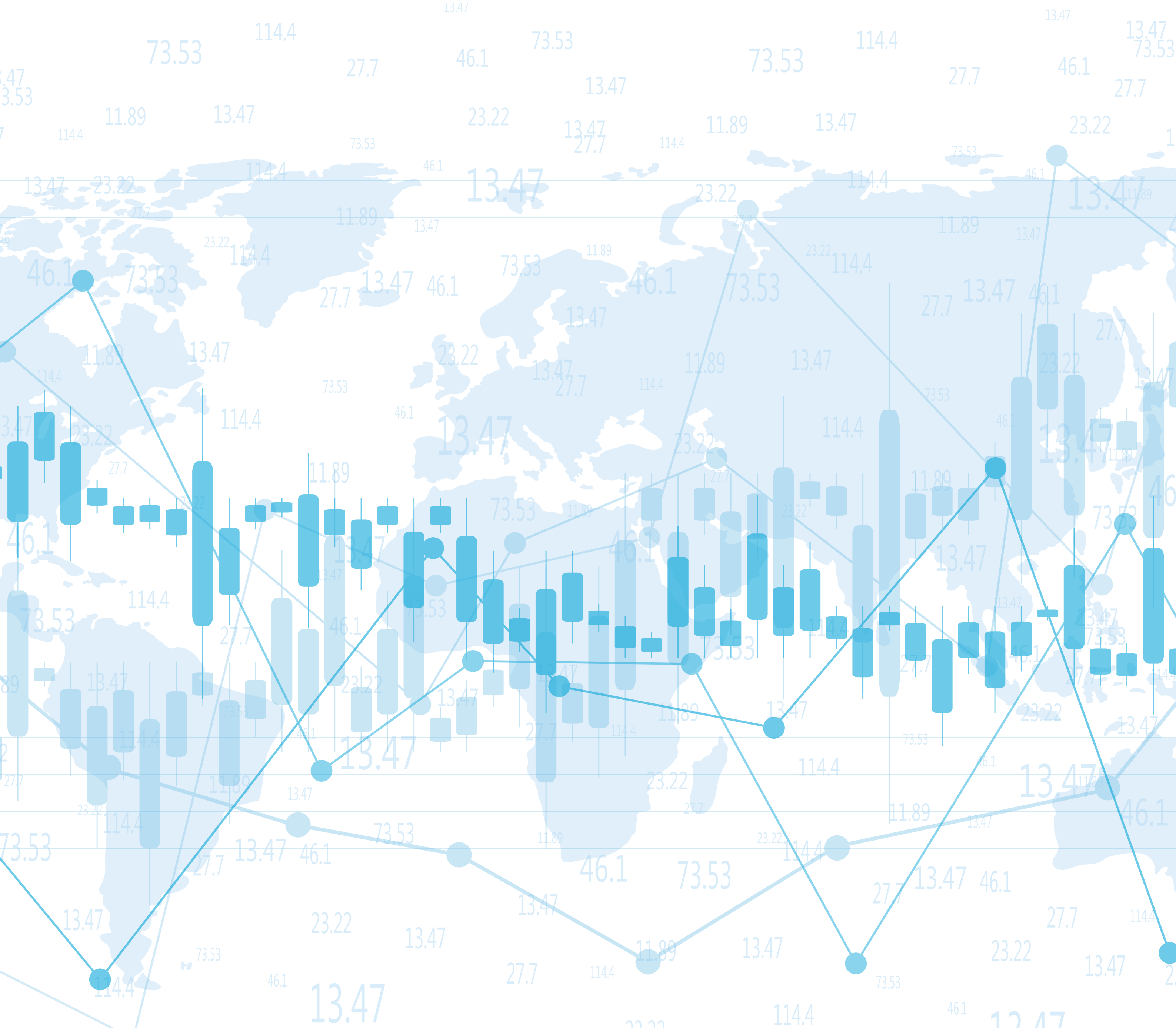


2. SWFs as grown up investors

We have been hearing the term Sovereign Wealth Fund ("SWF") for the past 13 years, but some of these investors have been around for much longer. And just like it happens with individuals, funds adjust their investment criteria with time. Some of these vehicles get comfortable with risk as they grow older and larger and are ready to invest in new asset classes. Some others become concerned about the world, focusing on aspects linked to the environment, social, and governance. Some others decide to form adult partnerships to invest together in the same assets[1].

One of the funds we have been hearing most about lately, is the Public Investment Fund (PIF), from Saudi Arabia. PIF is actually 47 years old and was established at the beginning of the 70's as a development fund to channel oil wealth into domestic, strategic projects. However, everything changed in 2015, with the Kingdom's succession into Salman al Saud (as king) and his son Mohammad (as crown prince). Together they developed Saudi Vision 2030, and envisaged PIF to change and become the "world's biggest SWF"[2].

Since then, the Saudi vehicle has deployed over $74.4 billion to real estate, infrastructure and private equities overseas, including commitments of $45 billion to Softbank's technology fund and $20 billion to Blackstone's infrastructure fund, and $6.5 billion investments to Silicon Valley firms Uber, Tesla and Lucid. This represents a third of its current asset base. For a fund that has had no previous experience beyond fixed income and public equities, and whose investment team is less than 2 years old, this may have been a rushed move.

The other extreme can be illustrated by the world's largest SWF, Norway's Government Pension Fund Global, managed by Norges Bank Investment Management (NBIM). The Norwegian leviathan is a mature investor that has been around for over 20 years but has barely invested in illiquid assets. For the past couple of years, it has been trying to increase its allocation to real estate from the current 3% to a target 7%, but it is a daunting task given its investment framework and its narrow criteria for city selection[3]. There have also been a number of propositions for the fund to allow it to invest in infrastructure assets and in unlisted equities, but Norway's Parliament has blocked them all. So even though the fund has grown mature and beyond the $1 trillion under management, it will primarily stay as a liquid, risk averse investor. On the pension fund space, almost the same comment can be made about Japan's $1.2 trillion Government Pension Investment Fund (GPIF), which has been advised to assign capital to alternatives but is still on a 50/50 (fixed income/equities) allocation.

Note on Methodology

We have analyzed the asset allocation of some of the world's largest SWFs – a total of 42 funds with $7.3 trillion of assets under management. The sample includes stabilization funds (e.g. HKMA, SAMA, LIA), savings funds (e.g. NBIM, CIC, ADIA) and development funds (e.g. Temasek, ICD, Mubadala). Given the difference in objectives, we deemed it necessary to analyze the three subsets separately.

The SWFs have been chosen based on size, importance and data availability. We include all 32 members of the IFSWF, except for 4 development funds (CDP Equity, Ithmar, RDIF, Samruk) and 4 funds that are smaller or newer (Mexico FEIP, Nauru, Rwanda and NIC). Data comes from IE's SWF Lab (Age, AUM), from the Sovereign Wealth Center (Asset Allocation) and other public sources.

The asset allocation is not weighted by size or age of the fund – we considered it more interesting to analyze the pure average, to reflect what different funds are doing irrespective of how big they are. Unless mentioned otherwise, the weights refer to the latest available, actual asset mix of the fund.

We have also analyzed a sample of 13 Pension Funds, which even if not subject to the main analysis, reported some interesting results: Pension Funds are on average, older, larger and more aggressive that the average SWF. This is especially true for the seven Canadian and the two Dutch Pension Funds.

The "standard" path for a SWF

In general terms, there is significant correlation between the fund's maturity and its asset allocation. The first investment step is fixed income, comprised of cash, bills and bonds. Assuming a balanced portfolio of T-bills, high-grade bonds and high-yield bonds, one can predict a 2.5% return for this asset class. The natural complement is public stocks, also considered

[1] See Chapter The friends of sovereign wealth funds. SWFs co-investment strategies in this report

[2] See "Saudi Arabia's Deputy Crown Prince Outlines Plans", Bloomberg, April 2016. Accessed at https://www.bloomberg.com/news/articles/2016-04-04/saudi-arabia-s-deputy-crown-prince-outlines-plans-transcript

[3] See "Strategic Cities", NBIM Real Estate Management. Accessed at https://www.nbim.no/en/investments/real-estate-management/

fairly safe given liquidity and diversification. For a weighted basket of small caps, large caps, developed and emerging market stocks, the fund could expect a 7% return, which is around the annual return of the S&P 500 for the past 70 years, adjusted for inflation[4].

Most emerging funds stick to fixed income and public equities, at roughly a 40/60 split, for the first few years of operations. It is important to distinguish not only the age and the size, but also the source and the purpose of the fund. A pension fund is accountable and liable to the population, so its risk profile is normally more moderate. Even among SWFs, despite the theoretical lack of liabilities, the purpose may call for higher risk aversion, especially in stabilization vehicles. Of the 42 SWFs analyzed, 12 of them allocate 5% or less to alternative asset classes. Six of these are stabilization funds.

The first illiquid asset SWFs normally consider is real estate. Not only is the expected yield aligned with that of public equities, but this is also a long-term asset class that investors have studied and bet on for many years. The early versions of Kuwait's KIA and Abu Dhabi's ADIA started investing in the property market in London as early as in 1974. KIO (Kuwait Investment Office) bought out St Martins Property Group (which would become its real estate subsidiary) for £107 million, while ADIB (Abu Dhabi Investment Board) acquired 44% of St. Helen's skyscraper for £36 million. The Emiratis eventually sold the tower to developer Simon Halabi in 2003 for £260 million, reflecting a yield of 6.3%. SWFs keen to keep liquidity and at the same time increase their exposure to real estate, invested in real estate investment trusts (REITs), as Qatar's QIA famously did in 2016 with a 10% acquisition of New York's Empire State Realty Trust.

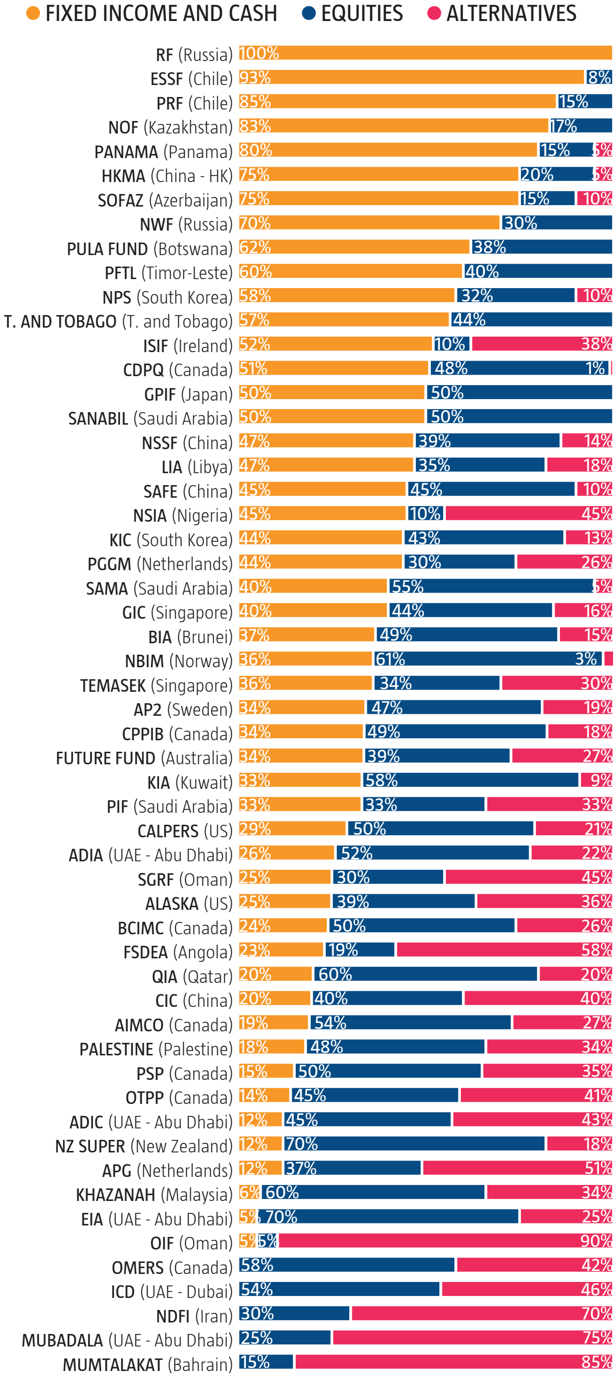
But real estate is becoming an increasingly complex asset class, with certain overlaps with Infrastructure. The latter covers a wide span in the risk-return spectrum for different sectors, including social infrastructure (health and education), power generation, regulated utilities, toll roads, airports, ports, freight rail and telecom towers. Depending on the cer-

[4] Jordà, Knoll, Kuvshinov, Schilarick, Taylor, The Rate of Return on Everything, 1870-2015 (National Bureau of Economic Research, 2017). Accessed at http://conference.nber.org/confer/2017/SI2017/EFGs17/Jorda_Knoll_Kuvshinov_Schularick_Taylor.pdf

Infographic 2

Sovereign wealth: Strategic asset allocation

Sovereign wealth funds and pension funds



Source: IE Sovereign Wealth Research. Based on data from: Sovereign Wealth Research, Preqin, Sovereign Wealth Center, IFSWF, SWFI, and SWFs' websites .

2. SWFs as grown up investors

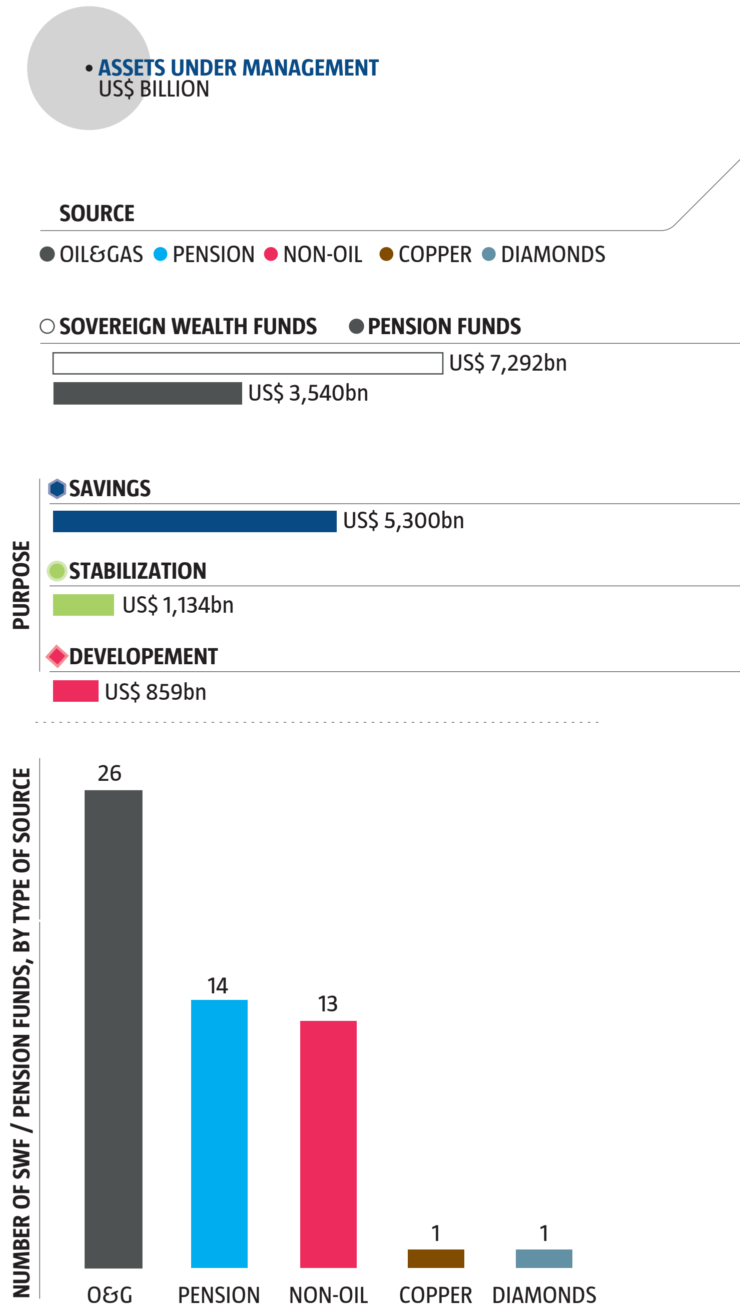
tainty of the cash flows, the expected returns for these assets used to range from 5% to 20%, with a median of 14%. However, due to the overcrowding of limited partners and general partners alike, keen to deploy their dry capital into a relatively secure asset class, this has now declined to a more realistic 10%[5]. Except for NBIM and Azerbaijan's SOFAZ, all the SWFs that invest in real estate, invest in infrastructure assets as well.

Lastly, some SWFs have dived into private equities. This is a whole different animal, as it implies collaboration with fund managers that have a very different investment behavior and cost structure. Private equity is not the asset class it used to be either, and the once promised 25% yield has now gone down to 15%. This encompasses a number of options, from fund investing / co-investing / direct investing, from buyout funds to venture capital, and from traditional tenures of 3-5 years to longer lifespans of 10-15 years. General partners are making a big effort to align better with SWFs, who will surely stick around in the near future[6].

Another factor playing into the asset allocation decision is timing, and rebalancing. With the financial crisis, a number of SWFs that had aggressive positions in US investment banks received a significant backlash by shareholders. The statement made by Korea's Investment Corporation former chairman, assuming its fault and accountability for the $2 billion investment in the now acquired Merrill Lynch, made the frontlines[7]: "I believe that it was a poor investment and apologize to the people of Korea." The fund now maintains a relatively moderate profile with a 44/43/13 (fixed income/public equities/ alternative) asset split.

Infographic 3

The Global Sovereign Wealth Industry: Purpose and Sources.



Source: IE Sovereign Wealth Research.

[5] See "Global Infrastructure Investment", Global Infrastructure Investment Association (GIIA), 2017. Accessed at https://www.pwc.com/gx/en/industries/assets/pwc-gi-ia-global-infrastructure-investment-2017-web.pdf

[6] See "Private Equity: An increasingly aligned asset class", López, PWC, 2015. Accessed at https://drive.google.com/file/d/1RK64l44j_p7oYNrIMaM-VLzrAPCOLJ4-/view

[7] See "SWF Apologizes to Citizens for Merrill Lynch Investment.", Chief Investment Officer Magazine, November 2014. Accessed at https://www.ai-cio.com/news/swf-apologizes-to-citizens-for-merrill-lynch-investment/

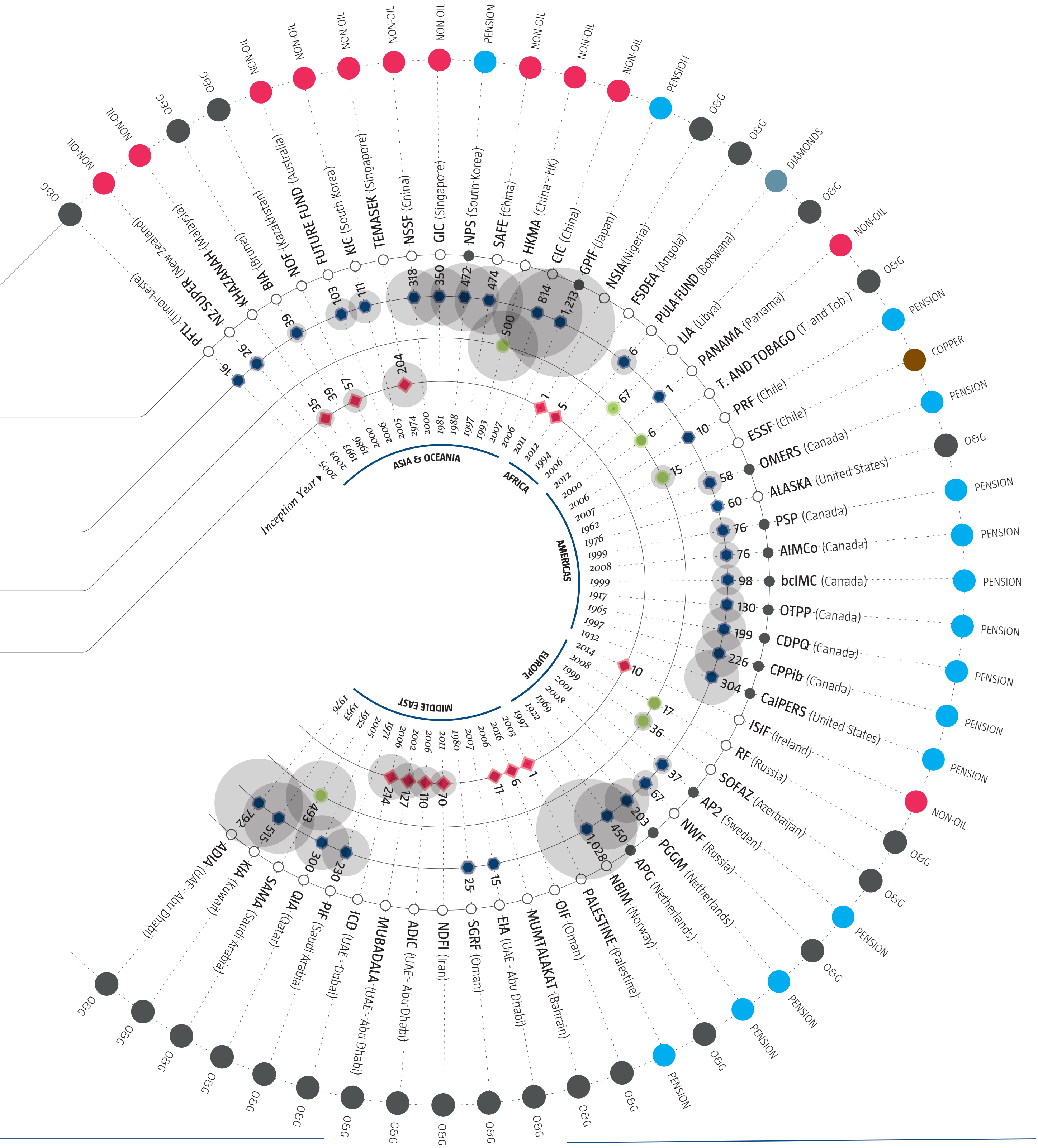


Table 1

Example of a balanced SWF portfolio and expected returns

Asset Class	Return	Allocation
Bonds	2.5%	30%
Equities	7.0%	50%
Real Estate	8.0%	10%
Infrastructure	10.0%	5%
Private Equity	15.0%	5%
Portfolio	**6.30%**	**100%**

Source: Author's elaboration.

Some of the most aggressive and mature funds have also been able to set up hedge fund teams and programs. However, the decision of CalPERS (California's Public Employees' Retirement System), one of the world's largest pension funds, to divest the $4 billion it had in hedge funds altogether in 2014, sent some signals to the industry and since then SWFs have been very conscious of costs and complexities. In short, returns must be very high to compensate costs and funds have tended to concentrate their positions in asset managers, using them only for their expertise niches.

An over simplistic matrix of the asset allocation for a mature fund, therefore, would have a significant allocation to fixed income and public equities. This mix would give a 6.3% return to the portfolio, beating the usual target of the average SWF (e.g. inflation + 2%, risk-free-return + 1%).

No two funds are the same though, and there is no such thing as a "standard" path or portfolio. The source of wealth, the macroeconomic purpose, the liabilities, the governance, the accountability, the risk tolerance, the target markets and the return objective are only some of the factors affecting the final mix.

Table 2

Asset allocation by type of Sovereign Wealth Funds

	Sample Size	Age (mean)	AuM in $bn (mean)	Average Allocation		
				Fixed Income	Public Equities	Alternatives
Stabilisation Funds	7	23	162	70%	25%	5%
Saving Funds	21	24	252	40%	43%	17%
Development Funds	14	14	61	24%	30%	46%
Sovereign Wealth Funds	**42**	**21**	**174**	**39%**	**36%**	**25%**

Source: IE Sovereign Wealth Research, Sovereign Wealth Center, and funds' websites. AuM= Assets under management.

The real case studies

We have studied a sample of 42 SWFs, who show an average allocation of 39% in fixed income, 36% in public equities and 25% in alternative asset classes, including real estate, infrastructure and private equities. It is necessary to differentiate the type of funds:

As we can see, it is not only a matter of age and size, but also of purpose and risk profile.

● Stabilization funds are, not surprisingly, the most conservative set of funds, with 95% on average invested in liquid assets. The Monetary Authorities of Hong Kong and Saudi Arabia, which are in effect central banks, present both a 5% target allocation to real estate and private equities.

● Savings funds (also known as Future Generations or Capital Maximization) show a greater balance between fixed income and public equities, and a moderate exposure to alternatives. They are the largest and oldest set of funds and present an increasing degree of sophistication. If we take the ten "largest players" (NBIM, CIC, ADIA, KIA, SAFE, GIC, NSSF, QIA, PIF and KIC), only NBIM presents a limited exposure (3%) to illiquid assets, for the aforementioned reasons.

● Lastly, Development Funds are a different story, given their double mandate of obtaining financial returns and developing the local economy. The 46% of the portfolio shown as alternative asset classes is in fact stakes in domestic, unlisted businesses. But they are the youngest, smallest and most difficult subset to analyze, given the different ecosystems in which they operate. For example, the Investment Corporation of Dubai (IC) and Temasek manage completely different portfolios, despite having similar purposes. While ICD is primarily focused at home with assets like Emirates, Emirates National Oil Company and Dubai Aluminum, Temasek has grown into a global diversified investor, with only a third of its portfolio in Singapore.

Adjusting to the new normal

In the past few years, SWFs – especially those that are commodity-driven – have had to react to lower oil prices and macroeconomic uncertainty. These funds were using the steady inflows from oil revenues and surpluses to rebalance their portfolios or to change the dynamic asset allocation over time, naturally increasing their risk and allocating more into alternative asset classes.

However, a new scenario of low oil prices and budget deficits means no inflows, and even worse, potential outflows. This may be the mandate of stabilization funds but is not consistent with the horizon of development or savings funds. Especially the latter have been tapped into by governments as a quick fix and have had to become prepared to give up a portion of their money market instruments.

The problem comes when such withdrawals destabilize the strategic asset allocation, generating an overweight into illiquid assets and an increase of the overall liquidity risk. Risk and return targets are disregarded in the benefit of short-term liquidity needs, and the balance of the portfolio is compromised. This is clearly an investment governance and accountability issue, which has caused tensions between the different government entities, and goes to show how important asset allocation can be.

The solution is not straightforward. Some funds have considered the creation of a separate, liquidity account to cover public deficits. Some others have split the funds into a dual mandate, to serve both as a buffer in the bad years and as an investment pool in the good ones.

Take the Nigeria Sovereign Investment Authority, for instance. Despite its smaller size, with $1.2 billion under management, its mission is threefold: provide stabilization support in times of economic stress (stabilization fund, 20% of capital), invest in a diversified portfolio to provide future generations a savings base (savings fund, 40% of capital), and enhance the development of infrastructure, through investing in domestic projects that meet targeted financial returns (development fund, 40% of capital). All three sub-funds have different target returns, needs for liquidity, and hence, strategic asset allocation.

The reality is that not all SWFs can afford to change their mandate or to create different subsidiaries overnight. The proper solution should come in the form of rebalancing. Rebalancing of asset allocation is not given sufficient focus by SWFs, when in reality it can force a fund to have the discipline to follow its strategic allocation and to limit the risk of overconfidence in forecasting financial markets.[8] The adjustment to a new allocation may include the potentially costly redemption of some illiquid positions.

We have also seen the contrary – funds with very different mandates, being consolidated. Such is the case of Mubadala Development Company, which first merged with the International Petroleum Investment Corporation, into Mubadala Investment Company, and then absorbed Abu Dhabi Investment Council. The latter had inherited a portfolio of domestic financial institutions, but it was primarily a future generations fund. The combined entity, with assets worth $227 billion, will have a very different asset allocation than any of the three entities were previously representing.

We have also seen Saudi Arabia's PIF transitioning from a silent development fund into an active savings fund, and other investors such as Khazanah modifying its investment style, from open market transactions and fund investments, to joint ventures and co-investments. As we can see in the infographics, SWFs are as always, a heterogeneous group of investors with very different characteristics.

[8] See "Asset allocation trends of Sovereign Investors", Meert and Craddock, PWC, 2015. Accessed at https://www.pwc.com/gx/en/sovereign-wealth-investment-funds/publications/assets/pwc-asset-allocation-trends-of-sovereign-investors.pdf

What’s next?

It is difficult to assess what the future holds for SWFs, and what type of fund will prevail over the next few years. Governments continue to set up vehicles with different purposes, including “SOE funds” used to manage state-owned national champions (e.g. Turkey, Egypt), “FDI-driven funds” whose purpose is to attract and co-invest with foreign funds (e.g. Russian Direct Investment Fund, CDP Equity in Italy, CDC International in France, or the newly established SOPEF in Spain) and joint ventures such as Vision Fund, raising debt and equity from a variety of investors.

Setting up a fund has become “trendy” and new funds are trying to keep up with the investment industry. In September 2018, best practices organization IFSWF approved Rwanda’s Agaciro Development Fund as a new member, and invited new funds including Egypt, the Philippines and Uganda, to become members “very soon” [9]; they would share the platform with more established and significant larger funds such as ADIA, KIA, QIA, GIC and CIC (all savings funds). They all represent very different asset class mixes.

The current levels of macroeconomic uncertainty and volatility make us consider the possibility, that there could well be new periods of financial constraints and withdrawal demands from governments in the near future. In order to avoid any mismanagement of funds or cause any distress, SWFs need to ensure that the strategic asset allocation is aligned with the mandate of the fund and with any potential rebalancing. In the long term, the solution may include setting up a separate, stabilization fund that provides the necessary liquidity.

At the end of the day, SWFs are now grown-ups and should be able to show that they are not only large, but also well-governed, profitable and sustainable investors with a stable and robust investment profile.

[9] See “2015-18 Review. Speech from the outgoing chairman”, Adrian Orr, IFSWF, 2018. Accessed at http://www.ifswf.org/general-news/2015-18-review-speech-outgoing-chairman

The friends of Sovereign Wealth Funds: SWFs co-investment strategies

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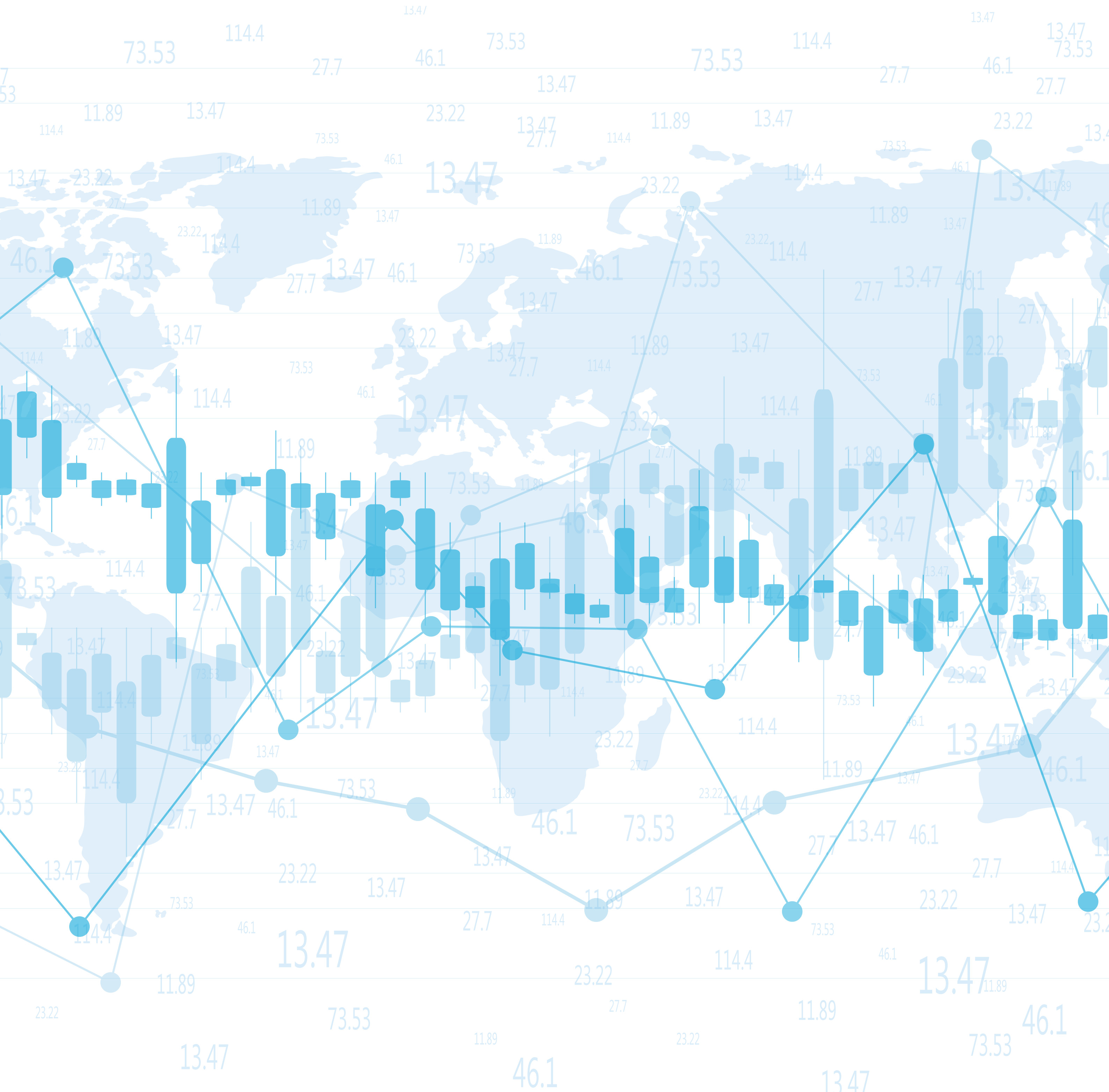


3. The friends of Sovereign Wealth Funds: SWFs co-investment strategies

INTRODUCTION

Sovereign wealth funds are becoming active co-investors. Data suggests that co-investments by SWFs have reached a new height in 2017-2018, showing a diverse set of investment partners, both public and private. This engagement with multiple partners in a wide set of sectors and geographies is helping SWFs to become better known, better understood and accepted into the global financial community. Thus, co-investment is helping to enhance SWFs' legitimacy and trust over time.

Throughout 2017 and 2018, SWFs were actively expanding their strategic asset allocations via higher return-risk investment vehicles, private equity/debt transactions, fund level co-investments and joint venture partnerships. This kind of asset diversification implies a more dynamic engagement with partner companies and demands stronger analytical frameworks and a long-term engagement mindset, rather than just traditional passive investment strategies. Clearly, co-investment is costly and multi stakeholder engagement results in sub-optimal decision making, due to the consideration of priorities of other co-investors. In detail, it requires extensive scenario analysis to assess the characteristics of the investments, including a broader risk estimation, additional assumption analysis, more frequent circumstance reviews, and the inclusion of co-investor investment priorities.

In spite of the aforementioned complexities, the dataset suggests that global sovereign wealth funds are increasingly more open to co-investment initiatives. Characteristics of the main co-investment goals include: i) price leadership on large scale transactions through combined power; ii) facilitating building lower correlated, more resilient and stable portfolios compared to portfolios that are solely focused on listed equities; iii) acquisition of investment know-how, market access and industry knowledge – which are necessary to stay up to date with advanced investment management trends, obtained through relationships with experienced investment managers. In a wider context, as a set of guidelines, SWF co-investments and joint venture partnerships, have increasingly focused on these nine key features (See Table 1).

Table 1

Nine factors to explain SWFs co-investments

Key Features	Description
Reputation	Increasing reputation by co-investing with reliable and mature partners.
Scale	Enhancing buying power through scalable partnerships and access to larger deals.
Strategic positioning	Discovery of new investments, which were unavailable without SWFs.
Synergy	Alignment of investment objectives and corporate strategy fit. It helps SWFs to build more disciplined and diversified investment portfolios.
Efficiency	Long term commitments to help reduce transaction costs.
Market access	Help enhancing market access, industry expertise, timely identifying investment opportunities and risks.
Enhance internal capability	Enhance knowledge and commitment by leapfrogging existing capacity and fostering industry expertise.
Fiduciary duty	Support the implementation of ESG and SDGs commitments.
Enrich inter-governmental relationships	Facilitate cross-border investment opportunities and improve country-to-country relationships.

Source: Authors' elaboration.

SWFs CO-INVESTMENT TRENDS

"Partnership investing" presents very different degrees of commitment by the engaged parties. Some co-investments represent a mere coincidence as shareholders. For example, during a pre-IPO process, shares are offered to a large group of qualified investors which may include several SWFs. Yet no coordination between participants in the co-investment process is expected most of the time. On the other hand, some deals involve the establishment of special purpose vehicles designed for specific asset opportunities, such as real estate, infrastructure, or the acquisition of a strategic stake in a given listed company. In these cases, the participation and coordination of the parties involved in the co-investment is much higher.

In this chapter we reviewed a dataset of large co-investment deals where there's participation from one or more SWF. The timeframe spans the last 10 years, covering multiple sectors and geographies. Only deals of $1 billion value and above and with sufficient publicly available information were considered. The initial raw dataset was provided by SovereigNET and further compiled and refined by the authors.

The dataset brings certain themes to the light. Over the last decade, SWFs have co-invested 183 times in 122 unique deals where the total capital deployed surpassed $1 billion. GIC, the Singaporean active investor, joined in 35 deals, China Investment Corporation (CIC) in 27 and the Qatar Investment Authority (QIA) in 24.

There are only 22 SWFs out of the total 91 SWFs in the investment community who have engaged in some kind of co-investment activity. The top 6 most active SWFs represent 72% of all co-investment activity, a concentration typical in several large deals and alternative investments. GIC, CIC, QIA, Temasek, Abu Dhabi Investment Authority (ADIA), and Kuwait Investment Authority (KIA), are all funds that have established industry-specific teams and/or attracted investment talent in order to participate in direct investment deals over the last few years. Yet, not all SWFs are equipped to invest or to co-invest directly. As described in the interview-chapter in this report with Mr. Adrian Orr, co-investments are labor-intensive, and extremely difficult to operate. This explains why only certain SWFs, with established in-house capacity, are able to endure successfully on co-investment strategies.

Table 2

Preferred SWFs co-investment sectors (2008-2017)

Sector	Co-investment deals	Co-investment deals (%)	Total deal volume(%)
Finance	**45**	36.89%	48.33%
Real Estate	**27**	22.13%	16.75%
Infraestructure	**13**	10.66%	11.08%
Natural Resources / Commodities	**8**	6.56%	7.69%
Services	**8**	6.56%	4.18%
Industry	**8**	6.56%	4.11%
Technology	**6**	4.92%	3.55%
Utilities	**5**	4.10%	3.64%
Manufacturing	**1**	0.82%	0.24%
Oil	**1**	0.82%	0.44%
Total	**122**	100%	100%

Source: IE Sovereign Wealth Research based on authors' analysis of SovereigNET data.

3. The friends of Sovereign Wealth Funds: SWFs co-investment strategies

Co-investment sectors and deal size analysis

Sector analysis reveals certain patterns in the co-investment activity of SWFs (Table 2). The most frequent co-investment sector is finance, with co-investments in funds, representing 22% by deal count, banks (12%), and insurance companies (5%), are the three main sub-sectors SWFs have gained exposure to. This pattern also shows an investment legacy linked to the initial years of SWFs international activity. Certainly, finance deals are concentrated between 2008 to 2011, during the post crisis period, representing 60% of the co-investment capital deployed in finance over the last decade.

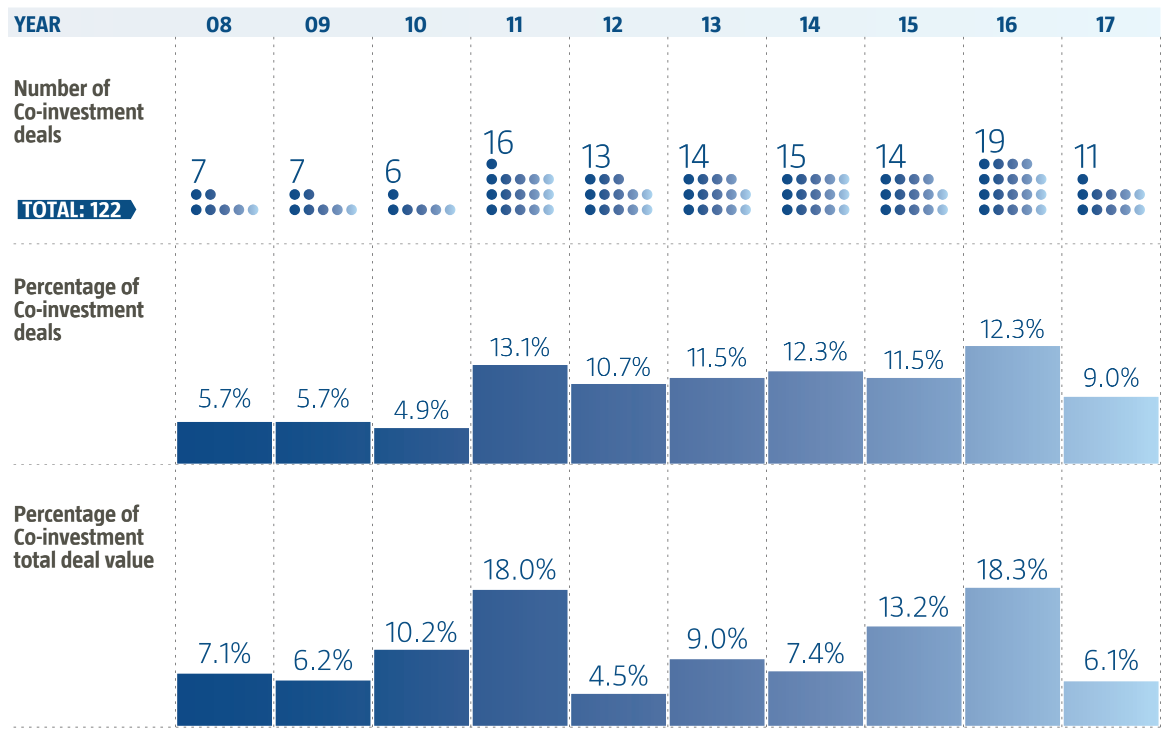
The data on the amounts invested in each sector appears to be skewed due to the extreme total value of finance deals. For example, the IPO of the Agricultural Bank of China, had participation from SWFs that exceeded $14 billion. Other very large deals in the finance sector include the injections made by SWFs in Western banks such as Merrill Lynch or Barclays, back in 2008.

Other sectors of clear interest for partnership investing are real estate (15% of all deals, amounting to 20% of all SWF capital deployed) and infrastructure (10% of all deals, and 5% of all SWF capital deployed).

These patterns have evolved over time. Co-investment activity has grown with a clear peak in 2016 (See Figure 1). Splitting the 10-year dataset in two parts, the first period (2008-2012) averaged 9.8 co-investment transactions per year. There was a significant increase of 47%, up to 14.4 deals per year during the second part of the decade (2013-2017). At the same time, SWFs joined quite similarly sized deals during the whole decade, thus reducing the size per co-investment deal in the second period. Indeed, in the first part of the decade, SWFs co-inves-

Figure 1

Co-investment trends among sovereign wealth funds (2008-2017)



Source: IE Sovereign Wealth Research based on SovereigNET data. Only transactions with total deal value at US$1 billion or more are included.

ted in deals averaging $4.3 billion, whereas in the second part there was a reduction of 20%, amounting to deals with total values of $3.4 billion. Competition with other investors for a reduced number of deals, private equity valuations and expertise in niche sub-sectors, drove these results.

The Co-investment Guidelines in Action

This section details how SWFs put into action the nine criteria included in the guidelines described above by using real case examples and investment strategies. The motivation to engage into co-investments regularly includes two or more criteria. As mentioned, active partnerships and co-investments provide unique market access to deals which were not possible before the establishment of the partnership due to regulation, scale or perceived risks. In many cases, to co-invest helps sovereign funds to achieve their diversification purposes, balancing overall risk by tapping into new financial instruments or asset classes. It further helps them to diversify across markets and industries. Some interesting cases which explain how to benefit from co-investment strategies are showcased below.

China Investment Corporation (CIC) is expanding the set of co-investments globally with advanced discussions to establish several new co-investment funds, based on its co-investment experience over the past decade. These funds, focused on the United States, the United Kingdom, continental Europe or Japan, will enhance CIC's strategic positioning and increase market access. In detail, in 2017, CIC reportedly announced its plans to establish a $5 billion co-investment fund with Goldman Sachs to invest in US companies to strengthen business partnerships between US and Chinese target industries and companies. In 2018, another $1 billion co-investment fund with HSBC was announced to focus on UK based companies who have ties with China, and to invest in high quality, growing UK companies. CIC already established a €150 million co-investment fund with the Ireland Strategic Investment Fund (ISIF), supporting Irish tech firms to expand into the Chinese market and helping Chinese firms expand their business outreach in Europe through Irish company registration. CIC also signed a "memorandum of understanding" with Nomura-led Japanese financial groups to establish a Japan-China industrial cooperation fund. CIC chose those partners keeping in mind that those active partnerships would increase its internal capabilities too. As part of the endeavor, CIC has recently set up a representative office in New York and London.

Moroccan Ithmar Capital, the strategic investment fund, attracted commitments of $2.5 billion worth, through Wessal Capital from sovereign partners in the MENA region including KIA, QIA, the Public Investment Fund (PIF) from Saudi Arabia, and the International Petroleum Investment Company (today part of Mubadala Investment Company). This represents a successful example of how development-focused strategic funds can establish regional co-investment platforms to boost high priority growth sectors through efficiency and synergy.

The above examples have shown how sovereign funds are utilizing various partnerships and co-investment structures, depending on different purposes, terms, contributions, or value. On all cases, extensive expertise in the development of these partnerships is required in order to obtain a successful outcome.

SWFs' co-investment partners and sectors

Finance: Blackrock, Blackstone, Brookfield, Citic

Infrastructure: Borealis Infrastructure, Macquarie

Natural resources: Warburg Pincus

Real estate: Brookfield, Goldman Sachs

Services: Fidelity, JP Morgan, Morgan Stanley, Carlyle

Technology: Alibaba, Horizons Ventures, Silver Lake, Bain Capital

Furthermore, our database suggests that global sovereign wealth funds repeatedly partner with investment management firms, that have specific sector expertise and reputation. Firms such as Bain Capital, Blackstone, Carlyle, Fidelity, Goldman Sachs, Macquarie, or Warburg Pincus, have partnered with sovereigns over the last decade. Sovereign funds prefer to co-invest with investment firms that have extensive track record, due to their fiduciary duties and the need to report back to the public as well as to government institutions.

Geographic expertise explains some of these relationships. Regionally well-known private equity firms are repeatedly joined by sovereign wealth funds willing to grow their exposure to the Chinese, Indian and South East Asian markets.

3. The friends of Sovereign Wealth Funds: SWFs co-investment strategies

Synergy is one of the main engines of co-investments. The alignment of investment objectives and corporate strategy fit explains why there are repeated cases of SWFs collaborating together. SWFs tend to choose partners who offer more active engagement during and after the investment process. For example, the Russian Direct Investment Fund (RDIF) partnered with Mubadala to invest on Rosneft's oil fields in Siberia, which aligned with the joint venture partnerships' strategic interests. KIA's joint venture with Macquarie to acquire E.ON's Spain and Portugal assets, was certainly a vehicle to access a strategic utility sector with stable cash flows. In both examples, the partnerships were executed through fully-owned subsidiaries (Mubadala Petroleum and Wren House Infrastructure in the case of KIA) with very focused investment and operating goals in the petroleum and infrastructure sectors, respectively.

Continuing with this example, market or industry access may explain other bidding deals. This is the case of KIA joining the \$2 billion acquisition of the London City Airport, together with Canada's Alberta Investment Management Corporation (AIMCo) and Ontario Teachers' Pension Plan (OTPP). KIA's partners have an extensive track record investing in airports around the globe, such as in Belfast, Birmingham, Bristol, Brussels or Copenhagen, and some historical investments in Rome and Sydney. Their combined expertise in airport business development, expansion financing and consumer growth created significant synergy.

Another notable example was QIA's investment in Porta Nuova. This reputable Milan city center transformation project comprised of 28 modern buildings in one of the richest business areas in Europe. QIA joined this multi-developer project in 2013. The business estate in the center of Milan was launched by a diverse group of leading local developers and regional investors, including Hines, the Italian insurance company Unipol, and property companies Coima and Galotti. Once QIA understood and got comfortable with the local market, within 18 months, they expanded their initial investment, from a 40% to a 100% participation, and kept Coima as the asset manager of the estate. The reasoning behind this important deal might be explained by a strategic positioning in a long lived asset with a stable cash-flow (the development recently became fully-let), to achieve efficiencies and gain industry expertise, and also as an enhancer of inter-governmental relationships (QIA had partnered with the Italian co-investment fund CDP Equity in November 2012, only a few months earlier).

Another typical reason why global SWFs partner with specific investment firms is their partners' industry and specific sector expertise. Singapore's GIC co-invested with CVC Capital Partners and bought Carlyle's share of the UK's auto-insurer and road-side assistance provider RAC, which services 8.6 million clients. Since it is considered an established, stable, and high-quality business, GIC relied on CVC's deep understanding of the motoring services industry, and Carlyle's previous track record in the company.

SWFs fiduciary management represents an opportunity to extend responsible investment practices around the globe. Partnering with sovereign funds should increase government and policy predictability. SWFs working with governments on enabling favorable investment frameworks would make them proper partners to co-invest in infrastructure or utility sectors. The SWFs of Nigeria, Senegal or Morocco, with clear domestic development mandates are great examples for this and have paved the way for third-party investors to finance sustainable development goals, together with risk-adjusted financial returns. Investments in agriculture, infrastructure, green energy and urbanization, are designed to provide sustainable long-term benefits for both investors and the local populations.

Recently, the establishment of the National Investment and Infrastructure Fund (NIIF), in India, has received strong support from sovereign entities like ADIA, Temasek, RDIF, DP World or the Asian Infrastructure Investment Bank. The NIIF is committed in investments that follow a global best-in-class environment, social, and governance (ESG) policy and thus will help to provide long-term sustainable developments to a country which currently represents 20% of the world's population.

Due to their scalability, SWFs represent an important funding source in an era of rapid expansion of global urbanization (smart city projects) and rising middle classes across South East Asia and many African countries. SWFs capital and strategic investments may address relevant infrastructure and logistical challenges. SWFs are extensively working with global technology providers to develop solutions. Interesting examples of this, include QIA's partnership with Deutsche Bahn to develop a rail system in Qatar, Mubadala's partnership with GE in renewable energy centers and GIC's partnerships with Chinese logistics companies to tap into China's rapidly growing consumer product markets.

Leveraging their long-term nature, sovereign funds have also started investing in turnaround assets, such as distressed loan portfolios and loss-making companies. ADIA's $2.6 billion joint venture investment in loss making Royal Dutch Shell's Australian refinery and petrol stations is an obvious example. Their common expertise in developing oil product markets and similar global expansion strategies perfectly fits with their respective corporate strategies resulting in increased synergies. A similar type of investment is that of Malaysia's Khazanah in China's Huarong, the largest financial asset management company in China in terms of total assets, with a focus on distressed debt management. Outstanding non-performing loans in China have been increasing considerably in recent years. Long term strategic positioning and betting in the growing Chinese consumer markets appears to be the rationale behind such co-investments.

TYPES of SWFs CO-INVESTMENTS

As we have seen so far, the different types of co-investment deals represent opportunities for SWFs to obtain certain benefits. Access to larger and longer-term deals, learning from industry leaders, co-investing with reputable asset managers and gaining efficiencies, explain some of the cases presented above. Yet, what kind of SWFs co-investments are more prominent? In this section we separate deals using an ad-hoc categorization of the different types of co-investments. We find that only mature SWFs, with investment experience and teams established for private markets, participate in complex co-investment deals. We have divided co-investments in six broad categories and ordered them according to the coordination costs required among co-investors, from the least to the most demanding relationships (See Table 3).

SWFs use several channels for co-investing. In some transactions, the involvement of the SWFs is just financial; in others, SWFs also provide sector expertise and experience. But in most cases, there's a big grey zone where SWFs engage with other investors in various degrees of involvement.

As said, co-investments may imply a very loose cooperation effort too. That is the case when SWFs join other qualified institutional investors during pre-IPO placements. The massive capital involved in the initial public offering of the Agricultural Bank of China, attracted multiple institutional investors during the pre-IPO period. At least six SWFs joined the $22 billion deal in June 2010. Other large deals such as the IPO of AIA in Hong Kong in October 2010, also simultaneously attracted several SWFs. Yet, these cannot be compared to operational, joint-ventures, or strategic co-investment deals. In many IPOs, co-investors merely coincide as shareholders and coordination efforts are not required.

Table 3
Types of co-investments identified

Type	Description
Limited partnership	SWFs provide capital to an externally managed fund without SWFs involvement in the establishment and operations of the fund. SWFs accidentally join other limited partners in the fund. Weak co-investment dynamics.
Shares offering	SWFs join a (frequently large) group of institutional investors before an IPO and other capital-share offerings (mergers, new issuance).
Investment round	similar to shares offerings, it refers to venture capital-backed investment rounds, where SWFs join other co-investors.
Co-investment	SWFs engage with other investors to acquire stakes of public companies, form alliances or joint-ventures (JVs) with industry or financial peers. They may provide just capital in some cases or add expertise and operational resources in others. We have divided this category in general co-investment, co-investment joint-ventures and co-investment operational.
Group bidding	SWFs establish or join a formal structure to tender for assets. It requires a high degree of coordination among bidding partners and represents a stronger mode of co-investment. This form dominates on public infrastructure assets.
Fund capitalization	SWFs engage with other investors, sometimes other SWFs, to capitalize new vehicles. SWFs work with asset managers and/or co-investors in the definition of the fund, setting up goals. It implies a real involvement in deal sourcing and operations via investment committees, capital deployment and monitoring.

Source: Authors' elaboration.

3. The friends of Sovereign Wealth Funds: SWFs co-investment strategies

QIA invested with Brookfield, the Canadian alternative asset management company with assets worth $285 billion, in the development of Manhattan West, a massive 7,000,000 square feet mixed-use development near the Hudson river, in New York City. The deal, announced in November 2015, confirmed a relationship which had started at least a year earlier, in November 2014, when QIA announced negotiations with Brookfield to acquire a substantial stake in Canary Wharf in London. QIA formed a joint venture with Brookfield and acquired a 44% stake to develop Manhattan West at an early stage. The similarities with the Canary Wharf deal demonstrates a common trend among SWFs: they like to repeatedly co-invest with the same partners. Given trust is not built overnight, the involvement in repeated transactions reduces uncertainty, asymmetries of information and fosters efficiency. This type of deal could be classified as operational co-investment given SWFs provide the capital whereas partners, industry leaders, are in charge of the design, operational risks, and execution.

Table 4

SWFs investment strategies by co-investment type

Type	Deals	Deals (%)
Co-Investment JV	41	22
Co-Investment	38	21
Co-investment Operational	27	15
Shares Offering	26	14
Fund Capitalization	22	12
Bidding Consortia Fund	15	8
Limited Partnership	10	5
Co-Investment Debt	2	1
Investment Round	2	1
Total	183	100%

Source: IE Sovereign Wealth Research based on authors' analysis of SovereigNET data.

In other cases, co-investments require a more strategic commitment and the participation of the SWF becomes vital. That is the case of "fund capitalizations" and "consortium bidding". The former is chiefly represented by the so-called "co-investment SWFs". These hybrid vehicles are designed by certain countries (France, Italy, Spain, and more visibly Russia) to attract foreign SWF capital and to invest in domestic companies. Mostly used in European countries, governments decide to create or redefine a government-controlled company to attract foreign SWFs and capital into domestic national leaders or strategic sectors. The best example is Russia, through its Russian Direct Investment Fund (RDIF). It has been able to attract $40 billion into joint funds, and to co-invest $21 billion in leading and promising Russian companies. In June 2012, only a few months after its establishment, RDIF created the Russia-China Investment Fund (RCIF) in partnership with China Investment Corporation (CIC). The fund received commitments of $2 billion from CIC and RDIF, on equal share. RCIF focuses on projects that foster economic cooperation between the two nations and invests at least 70% of its capital in Russia and CIS countries and up to 30% in China. So far, RCIF has participated in projects covering a range of industries including metals, infrastructure, tourism and agriculture.

Another category which requires strong coordination efforts is consortium bidding. In these cases, SWFs join a group of partners, usually setting up a special purpose vehicle (SPV) and then tender for public long-lease contracts and infrastructure assets. A consortium agreement is signed among the consortium members focusing on issues such as the scope of each member's commitment, allocation of profits and costs, rights and responsibilities. This type of partnership has had a clear investment destination in recent years: Australia. The on-going privatization process developed by the federal and regional governments in Australia intends to cut debt and finance greenfield infrastructure, by selling brownfield large assets. Over the last two years, the sell-off has included key infrastructure assets, strongly focused in long-lease contracts in ports like Melbourne, Botany and Kembla, or Brisbane. SWFs have extensively joined this privatization process. The largest consortium deal was Transgrid, the electricity transmission network of the State of New South Wales (in Australia). Transgrid was acquired for $7.8 billion by a group led by Caisse de depot et placement du Quebec (CDPQ), a pension fund, and joined by Tawreed Investment, a fully-owned subsidiary of ADIA, and Wren House Infrastructure, a fully-owned subsidiary of KIA.

In many cases these consortia deals have witnessed intense competition among SWFs, which joined competing bidding groups. In other cases, SWFs have cooperated by combining forces within the same investor group. CIC and Future Fund from Australia were part of the same bidders in the Port of Melbourne, ADIA and KIA joined forces in the acquisition of Transgrid, whereas CIC, QIA and GIC were part of the acquiring group of the Asciano's port and railway assets for $6.8 billion.

THE CO-INVESTOR PROFILE: WHO COINVESTS WITH SOVEREIGNS?

The Sovereign-Sovereign collaboration

The collaboration between SWFs brings attention to another important set of results from our analysis. We have classified SWFs based on how frequently they cooperate with other SWFs in co-investment deals. The Russian RDIF has participated in eight co-investment deals, and in all occasions, it has attracted other SWFs. In most cases (75%), deals relate to the capitalization of their country-to-country funds, as has already been commented, rather than actual investments. RDIF has established partnership funds with CIC, PIF, Mubadala, QIA or KIA. Other smaller or non-capitalized co-investment agreements include France, Italy, South Korea, Turkey, Vietnam and Bahrein's Mumtalakat.

Apart from the special nature of these RDIF co-investment agreements, other "friendly" co-investment SWFs are Kuwait Investment Authority (75% of its deals are with other SWFs), and Abu Dhabi Investment Council, now part of Mubadala (60%). On average, SWFs tend to co-invest with other SWFs in 56% of their co-investment deals. In comparison, Norway's GPFG only invested in two occasions (China Pacific Insurance and OAO VTB Bank) with other SWFs out of its 7 co-investment deals (29%). GPFG has engaged with large industry leaders instead, in sectors such as logistics (Prologis, both in Europe and the United States) or commercial real estate (AXA and TIAA). The impossibility imposed by the Norwegian parliament to GPFG of direct investing in infrastructure, may explain why it is engaging less with other sovereign partners.

Table 5

SWF-SWF co-investments

SWF	Co-investment (Total deals)	SWF-SWF Co-investments (% total deals)
Russian Direct Investment Fund	8	100%
Kuwait Investment Authority	12	75%
Abu Dhabi Investment Council	5	60%
Temasek Holdings	21	57%
China Investment Corporation	27	56%
Mubadala Investment Company	6	50%
Qatar Investment Authority	24	46%
GIC	35	46%
Abu Dhabi Investment Authority	12	42%
Government Pension Fund Global	7	29%
Total	183	

Source: IE Sovereign Wealth Research based on authors' analysis of SovereigNET data.

The friends of SWFs: Who co-invests with SWFs?

We now turn our attention on SWFs' investment peers, and we also pinpoint certain similarities. Our dataset identifies 229 different co-investors. Among them, and excluding SWFs, there are clear "friends of SWFs" with repeated transactions. As previously mentioned, repetition helps to establish trust, build reputation and more importantly increase learning dynamics, which may result in enhanced investment capabilities and industry expertise.

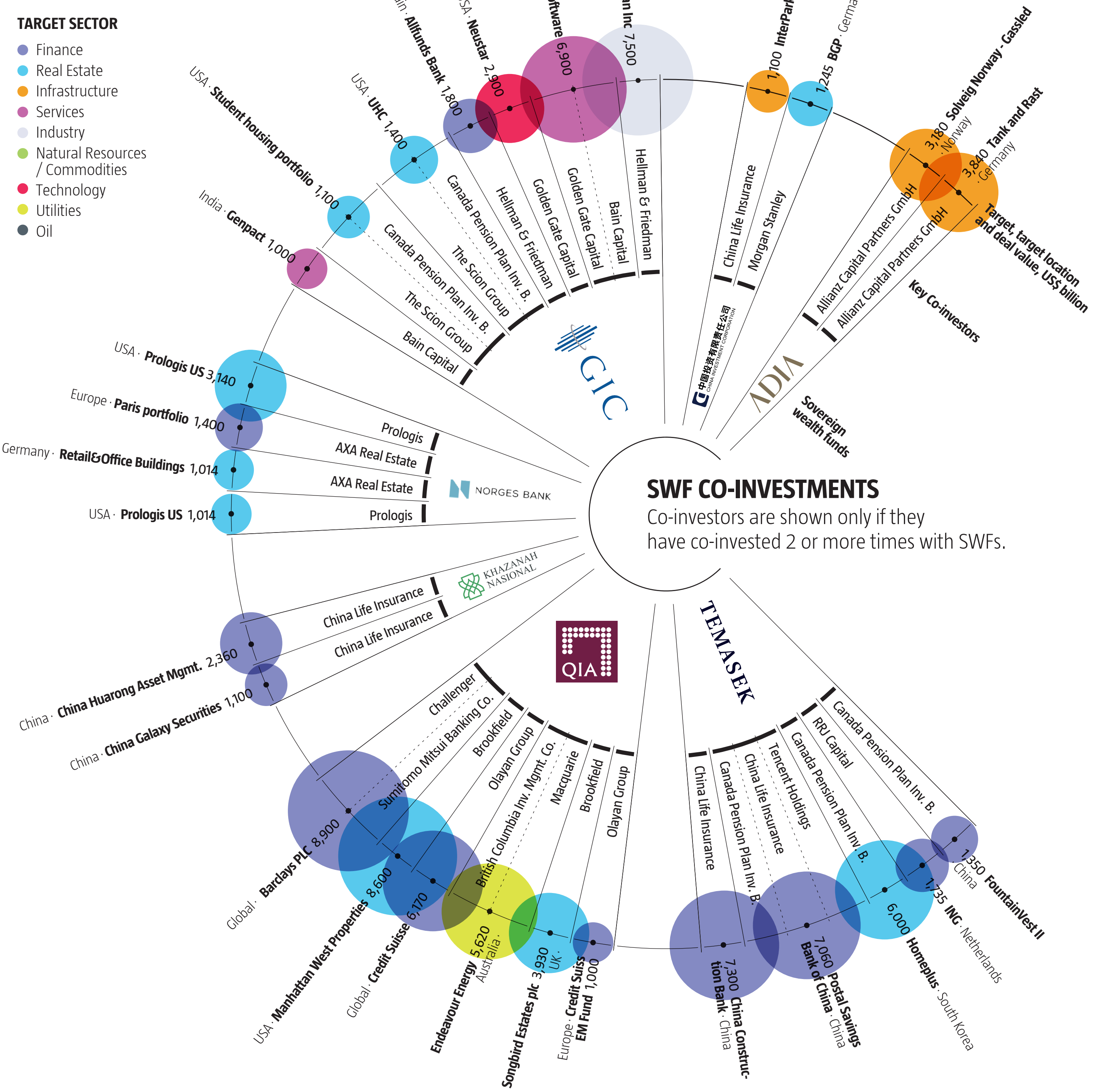
China Life Insurance is a very good example. This state-owned enterprise with assets under management worth $117 billion, has co-invested with Temasek, Khazanah or GIC. More importantly, it has provided support and access to the Chinese financial markets to non-Chinese SWFs. Brookfield, the Canadian alternative asset manager, has led bidding consortium groups with SWFs participation in the Asciano deal, already analyzed, and in the acquisition of Nova Transportadora do Sudeste, the natural gas distribution Brazilian company, joined by CIC Capital and GIC. Brookfield also engaged with QIA in the Manhattan West development and Canary Wharf. The global leadership of Brookfield in the real estate and infrastructure sectors is undeniable, and the combination of access and efficiency in long-term assets explains why it has become one of the preferred SWFs partners in direct deals.

BlackRock is another frequent friend of SWFs. In the case of this US-based asset manager, the sector diversification is the identifying characteristic: BlackRock joined Temasek, KIA and

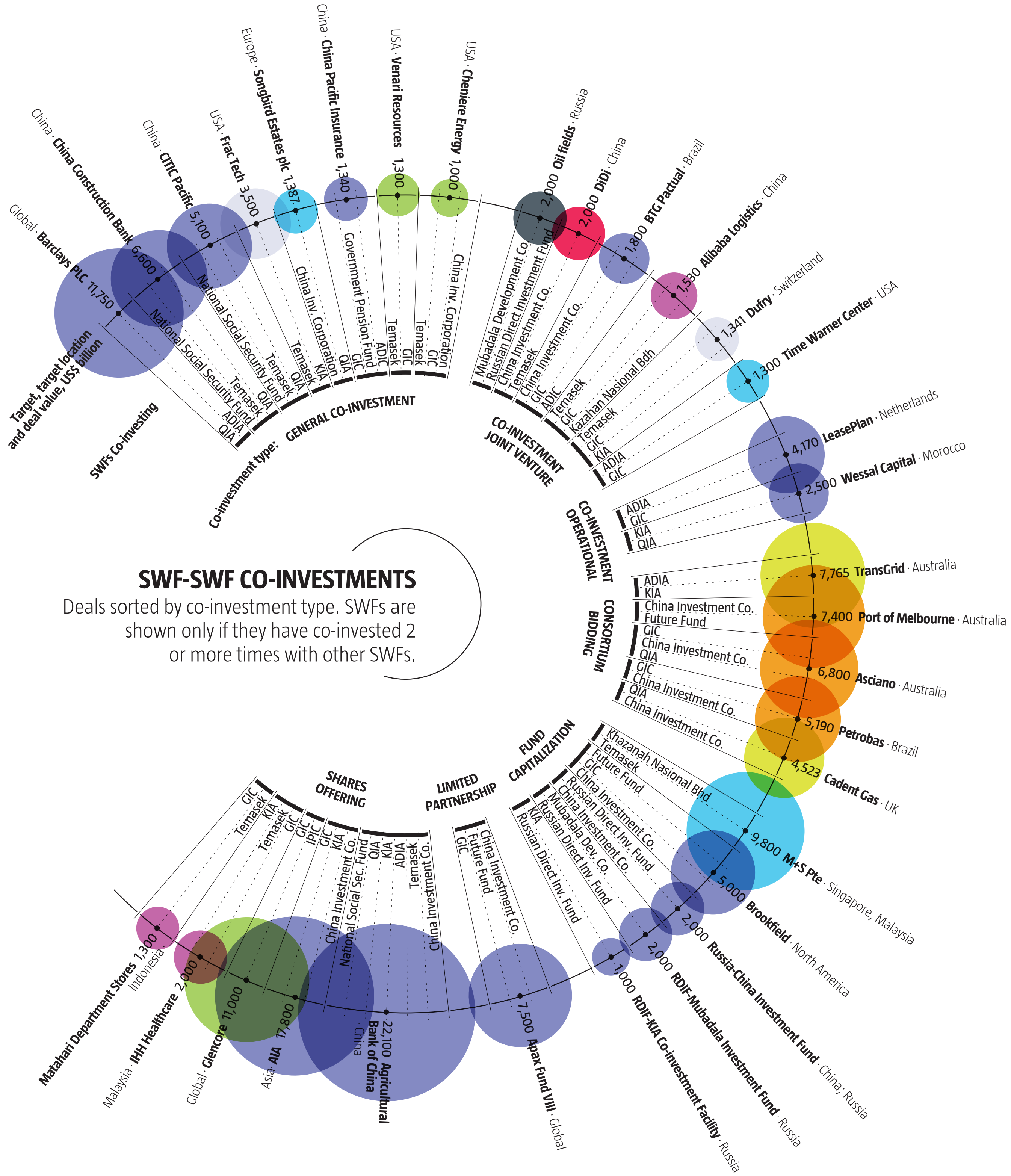
3. The friends of Sovereign Wealth Funds: SWFs co-investment strategies

Infographic 4

SWF co-investment activity (2008-2017)



Source: IE Sovereign Wealth Research based on SovereigNET data. Only transactions with total deal value at US$1 billion or more are included.



SWF-SWF CO-INVESTMENTS

Deals sorted by co-investment type. SWFs are shown only if they have co-invested 2 or more times with other SWFs.

3. The friends of Sovereign Wealth Funds: SWFs co-investment strategies

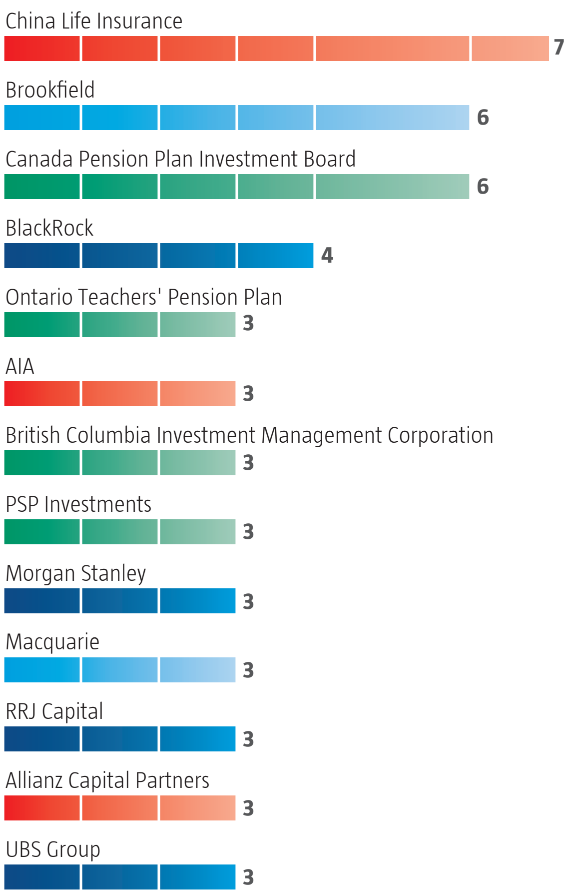
GIC in the pre-IPO of IHH Healthcare, a Malaysian health company. BlackRock also helped GIC during the secondary public offering of Venari, the natural resource US-based corporation, and teamed up with Temasek and GIC during the shares acquisition of Matahari Department Stores, a retail company in Indonesia. Financial market expertise, market access, reputation, and investment capabilities may explain the repeated collaboration with BlackRock.

Cousins invest together: Pension and sovereign funds co-investing

Other key group of friends of SWFs, or cousins in this case due to the similarities, are public pension funds: CPPIB (Canada Pension Plan Investment Board), OTPP (Ontario Teachers' Pension Plan), BCI (British Columbia Investment Management Corporation), or PSP Investments, are among the Canadian pension funds which more frequently engage with their sove-

Figure 2
The league of SWFs co-investors

Number of deals with SWFs.



INSURANCE GROUPS

SOVEREIGN PENSION FUNDS

FINANCIAL ASSET MANAGERS

ALTERNATIVE ASSET MANAGERS

Source: IE Sovereign Wealth Research based on SovereigNET data. Only transactions with total deal value at US$1 billion or more are included.

reign cousins. These particular group of investors, known by their alternative asset allocations, have partnered extensively with sovereigns from China, Singapore, Qatar, Kuwait and Abu Dhabi.

CPPIB, the Toronto-based pension fund, has established a long-term joint venture with GIC (and the Scion Group) to invest and manage student houses. CPPIB also joined Temasek to explore the retail market in South Korea with the acquisition of Homeplus. The United States is the main destination market when Canadian pensions and SWFs join forces. This can be explained by the geographic expertise and access to local developments and projects. SWFs leverage on the alternative assets expertise their pension cousins have, in order to acquire ports, airports (Kuwait joined OTPP and AIMCo to control the City airport in London), pipelines in Brazil or warehouses in the United States.

The alignment of long-term interests, seasoned with the sovereign-ownership nature, helps us understand why sovereign cousins join forces. Other reasons that explain this special relationship are the scale and efficiency in long-term assets, which requires deep internal investment capabilities and provides strategic positioning.

In September 2009, AIG, the then world's largest insurance company, decided to sell off its century years old Asian unit and to list AIA on Hong Kong's stock market. Since then, CIC, KIA and GIC have joined the ample base of shareholders of the insurance company. In three consecutive years, AIA has partnered with SWFs to co-invest. In 2012, it joined two of their three new sovereign shareholders to participate in the pre-IPO of IHH Healthcare. A year later, in 2013, AIA joined Khazanah in the strategic stake taken in China Galaxy Securities, an investment banking firm based out of Beijing. In 2014, AIA invested in the pre-IPO of CITIC Pacific, a Chinese state-controlled company listed in Hong Kong and financed by QIA, Temasek, and China's National Social Security Fund. This shows how even weak partnership deals (AIA has many shareholders), may lead to strategic collaborations and repeated engagement deals.

SOVEREIGN FUNDS AND PRIVATE EQUITY GENERAL PARTNERS

As observed, SWFs regularly co-invest with general partners like Apollo, Bain, CVC or TPG, since sovereigns started to diversify into new asset classes. Regularly, many of these private equity houses invite SWFs as limited partners to launch or anchor their funds. Yet, access to accurate information in this particularly opaque sector remains elusive and SWFs' investments intermediated via funds cannot be properly traced. However, since relationships develop and mature, SWFs are keener to act as co-investors of their general partners instead of solely providing capital as limited partners. In reality, many of these global private equity houses are partially owned by SWFs themselves.

One of the best-known cases has been the relationship between CIC and Blackstone. CIC invested in the US financial institution before its IPO in May 2007. The initial 9.9% stake rose up to 12.5% in 2008. The two financial giants developed a disputed equity relationship that lasted for eleven years until March 2018, when Blackstone announced the departure of CIC as its stockholder. Yet, Blackstone remains one of the most important external asset managers for CIC and they keep collaborating in real estate and hedge funds. For example, CIC executed the largest ever real estate deal in Europe by acquiring Logicor from Blackstone for $13.8 billion in 2017. Some months later, Blackstone bought back 10% of Logicor and is now in charge of managing the vast network of warehouses and logistic properties portfolio, showing the deep relationship between these 2 firms.

More relationships between sovereigns and general partners have flourished. Apax Partners, another global private equity house has a diversified base of shareholders lead by public and private pension funds (43%) and sovereign wealth funds (12%) including CIC, Future Fund of Australia, and GIC. Carlyle, for instance, sold in 2007, a 7.5% stake in its general partnership to Mubadala, which increased to an undisclosed percentage in 2010 with a combination of convertible subordinated notes and additional equity. Other general partner–sovereign fund relationships include CVC Capital Partners with KIA and GIC, 3i Group with GIC, Apollo with ADIA and TPG with KIA. Reputation and industry knowledge lie behind these strong relationships. Also, market access, which works in both directions: SWFs help to source domestic deals for the private equity firms, while general partners provide global and industry access for SWFs deals.

3. The friends of Sovereign Wealth Funds: SWFs co-investment strategies

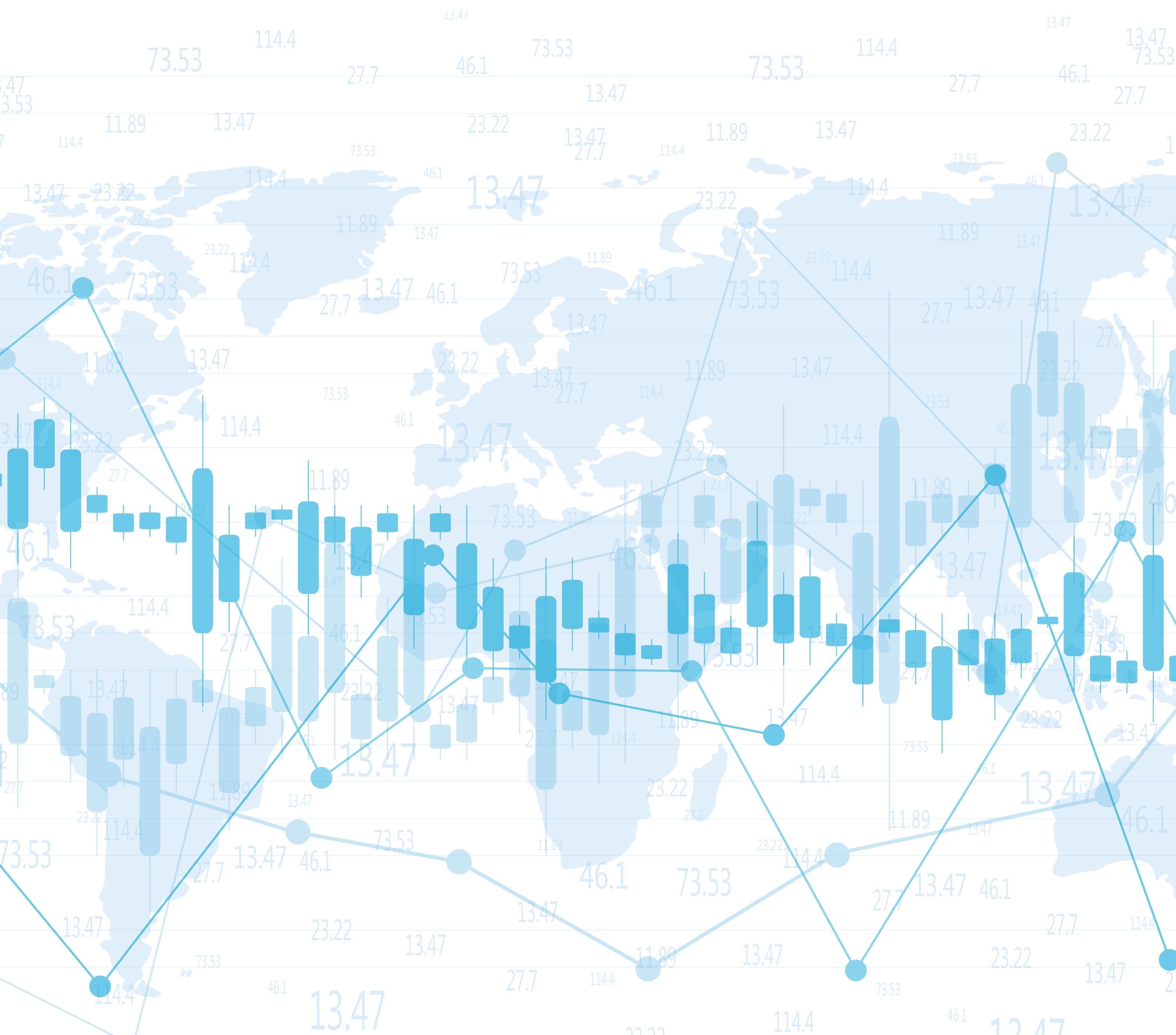
CONCLUSION

Based on our database, we have identified core features of sovereign fund co-investment trends, main benefits and potential pitfalls. Given their scale, and strategic long-term positioning, reputation appears to be one of the main features when SWFs consider co-investment partners. Potential synergies, increased efficiency and market access were the other main identified considerations. By partnering with other SWFs and private and public global peers, SWFs obtain the co-investment benefits of scale, efficiency, reputation, industry access and knowledge.

The co-investment models vary from the mere coincidence as shareholders to strategic alliances and partnerships where the coordination efforts are much more demanding. Our dataset, focused on deals valued above $1 billion, shows that SWFs have participated in 183 transactions and 122 unique co-investment deals over the past decade. GIC, the Singaporean active investor, China Investment Corporation and Qatar Investment Authority were the three most active co-investors. Showing the complexities of partnering, only 22 SWFs, out of the list of 91 active sovereigns, have engaged in some kind of co-investment activity. Finance, real estate and infrastructure are the top preferred sectors for SWFs engaging in co-investing, representing 70% by deal count over the last ten years. SWFs seem to be comfortable co-investing with other SWF peers. Beyond sovereigns, other frequent partners, the "friends of SWFs", include regionally-focused asset managers, sovereign pension funds, and global alternative asset managers.

An interview with Adrian Orr: Reflections on SWF risks, rewards and collective responsibility

Loch Adamson
Director, Sovereign Wealth Center



4. An interview with Adrian Orr: Reflections on SWF risks, rewards and collective responsibility

As climate risks accrue, sovereign wealth funds have recently begun to work more closely to assess their portfolio exposure to such risks — and to identify potential collaborative opportunities to support and advance new, more sustainable technologies through early-stage and private investment. Adrian Orr, who spent more than a decade leading the New Zealand Superannuation Fund as its chief executive officer until March 2018 — and also served as the chair of the International Forum of Sovereign Wealth Funds (IFSWF) for three years until his term ended in September 2018 — has long advocated for greater accountability and awareness of climate risk amongst the world's largest investors, spurring them to take concerted action.

Orr, now governor of the Reserve Bank of New Zealand, is no longer involved in day-to-day sovereign wealth fund management, but his call to consciousness has profoundly reshaped the way in which the New Zealand Superannuation Fund (colloquially known as NZ Super) assesses long-term risk across its NZ$41.10 billion ($26.9 billion) portfolio. Under his leadership, NZ Super adopted a comprehensive and multi-faceted climate change strategy in October 2016 to address risks and opportunities presented by the global shift away from fossil fuels to a low-carbon energy system; in December 2017, NZ Super joined with five other sovereign wealth funds to form the One Planet Sovereign Wealth Fund (SWF) Working Group, which promotes the integration of climate change analysis in the management of large, long-term, diversified asset pools.

Despite the centrality of its role, NZ Super is the only member of the One Planet SWF Group that is not financed by surplus oil and gas revenue. All of the other member funds — the Abu Dhabi Investment Authority, the Kuwait Investment Authority, Norges Bank Investment Management (which oversees the Norway's Government Pension Fund Global), the Public Investment Fund of the Kingdom of Saudi Arabia, and the Qatar Investment Authority — derive most of their considerable wealth from the exploitation of fossil fuels. For these funds, the development of sustainable energy is, paradoxically, especially pertinent, and in July 2018, the group published a framework on climate change designed to reflect current best practice in the global sovereign fund community. The six funds, united under the One Planet banner, are now working to promulgate three core principles of sustainable investing: alignment of interests, ownership accountability, and integration of climate change-related risks and opportunities.

The emergence of the One Planet SWF Group also marks an evolutionary step in some sovereign funds' own governance and investment practices: Exactly ten years ago, most of these funds were also involved, alongside their peers, in drafting the so-called Santiago Principles, which defined 24 generally accepted principles and practices intended to promote transparency, good governance, accountability and prudent investment amongst sovereign wealth funds. At that time, climate risk didn't even merit a mention as relevant element of sound long-term investment practice amongst sovereign wealth funds; now, climate risk is an almost ubiquitous topic. Although the Santiago Principles have arguably faded from public consciousness over the past decade — not least because the Principles have never been enforced, as such— the strategic importance bestowed upon sustainable investment is high and rising.

In late July, as the end of his term as chair of IFSWF neared, Orr spoke with Loch Adamson, director of Institutional Investor's Sovereign Wealth Center, and reflected on the ten-year anniversary of the Santiago Principles, the formation of the One Planet SWF Group, and the growing importance of collaborative efforts amongst sovereign wealth funds. He also spoke about the changing dynamics shaping the investment portfolios of so many funds, whose managers are now grappling with the potential future consequences of climate risk. With new hazards come new opportunities, however, and some sovereign funds, are now focused on making more private-market and early-stage investments in innovative technologies and potential solutions.

THE ONE PLANET INITIATIVE: SUSTAINABLE INVESTMENTS BY SWFS

Q: What were the drivers behind the inception of the One Planet initiative, and how did NZ Super become involved?

Orr: From my recollection, the plan was really driven initially by France itself, from the top levels — by the President, Emmanuel Macron — and across in Canada, by Prime Minister Justin Trudeau. And they were very eager to really have something that they could own and push forward. At IFSWF, we were trying to be very realistic, saying that we don't write policy on behalf of individual funds so we could only really help facilitate its discussion and see who was interested; who was advanced enough to be able to commit. At that point, it was a bit like a chicken and egg type thing — some funds said, well, we can't commit until we know what we're committing to, and yet we can't write anything until we know who is committing. In the end, the NZ Super Fund played an important role in saying, 'We will be involved.'

Q: How long did it take?

Orr: Probably a good couple of years. Anne-Maree O'Connor [head of responsible investment for NZ Super] was of course heavily involved in the management and drafting of the principles, and I was very pleased to see that the Norwegian fund [which dropped out of IFSWF in 2016], came back into the fold for this particular exercise, too. As it turned out, the six members effectively include most of the biggest oil-producing funds in the world — plus the NZ Super Fund. I could not have predicted that from the outset! I could not have predicted anyone at all. But, with regard to climate risk, we were already out over our skies [at NZ Super]; we knew where we were going. But it is not for us to tell people what to do. Norway was already doing its own gig. And the others came and joined.

Q: Isn't their interest somewhat paradoxical?

Orr: Well, we were already seeing some kind of light at the end of this tunnel, because they have been thinking really, really hard about what they can do, in terms of reinvestment and the global transition to alternative fuels. So, in one sense, whilst it seems kind of ironic that it's the oil-producing funds that have signed up, they have the most to lose and the most to gain if they get it wrong or right. So they are highly incentivized.

Q: How does this effort relate to the Paris agreement on climate change?

Orr: By definition, what the sovereign wealth fund is doing leads right back to the government balance sheet, so what is the government doing about it? You want to try and get tangible things going. One of the slowest and hardest things about the agreement is waiting for individual governments to come back with their plans. Whereas these individual funds are broadly autonomous in terms of their investment decisions, so most could probably move without official sanction of some sort. The other big part of it, though, in terms of capital needs, is that you see these huge numbers —trillions of dollars — that will be required to shift from current forms of energy production to future forms, so why not at least start mobilizing as best you can? Sovereign funds can start incentivizing investment behaviors by looking for what might be called a 'green premium,' and trying to create that through the bond market. But you need the full capital markets to be mobilized, including the equity markets, so that it's not just about having a green premium — it's also about having a brown discount.

Q: We are now ten years beyond the introduction of the Santiago Principles by the International Working Group of SWFs — how do the One Planet principles relate to those earlier, more generalized guidelines?

Orr: I think the One Planet initiative is best seen as an addition to the Santiago Principles, which are — in a sense — very bland. You could take them across any industry and say well of course you should have these things: clear governance, transparency, ownership capability, and reporting, those are very much hygiene-type standards. Going beyond that to say now, you should care about additional things — you've seen how tough that conversation is in the private market, let alone among some government sovereign funds. In the US, even up until about 18 months ago, people were saying 'Well, it's outside of my fiduciary duty to worry about anything in the environment, society and governance'. But they got away with that statement for about 30-plus years. So I really can't predict on behalf of other funds just how this rolls forward.

4. An interview with Adrian Orr: Reflections on SWF risks, rewards and collective responsibility

Q: Are the IFSWF members likely to embrace this effort?

Orr: We see a huge range of perspectives, even across the SWF members in the IFSWF. On one end of the spectrum, you've got the NZ Super Fund, which is decarbonizing its portfolios, and you've got the Moroccan Fund, Ithmar Capital, which is thinking hard about promoting and initiating the green-type work, and then you've got traditional, passive listed funds with no climate mandate at all. Our challenge at IFSWF is that it's not the forum's policy; it's not up to the secretariat, it's up to the individual funds.

REFLECTIONS ON THE 10TH ANNIVERSARY OF THE SANTIAGO PRINCIPLES

Q: In Auckland in 2016, you gave an impassioned speech about what you thought the membership ought to be doing with regard to adopting the Santiago Principles more fully. What is your feeling now about their uptake by sovereign funds generally?

Orr: My belief and/or passion hasn't shifted at all. If people adopt the Principles and these funds become a part of IFSWF, then they have to show how they are meeting those standards. And so I would say that the discussion of what the Principles are — and why they matter — has increased. Just chatting at the forum, I can really see the new members — and potential new members — showing interest in the Principles. And I think the incentive to adopt them [as a requirement to join IFSWF] really helps give these managers domestic credibility back home in their own countries. So that has been one side of it. The other side of it is that there have been more third-party references made to [the Principles], and more evident displays of what is going on. Coming forward, in addition to annual reviews and reports, there are a tremendous number of co-studies and reports that provide more transparency around what people are doing, and how they're doing it, which is consistent with the Santiago Principles.

Q: Sovereign wealth funds are clearly taking a much more active role in private markets and alternative investments, and arguably, they need to be selectively transparent to prospective partners and co-investors — even if they're not providing much in terms of public-facing information. Has that shift to private markets had a positive impact on the ways that sovereign funds perceive their need for transparency?

Orr: I would agree with your intuition. If you're going to be very much on the ground as a sovereign fund investor, and going direct in a foreign country by owning a large asset, then I would imagine that the demands to show what you're all about would be a lot more significant. Remember, that was really the origin of the Santiago Principles: sovereign funds were buying assets, and people were saying, 'Well, who are you? Is this investment strategic or economic?' The Santiago Principles are all about saying: this acquisition is economic; this is how we roll; these are the benefits. And there is certainly a lot more pressure on you to be transparent and explain yourself when you're dealing face-to-face with direct investing.

Q: Do you think that the Santiago Principles may return to relevance given the escalating trade war between the US and virtually all of its trading partners, particularly China?

Orr: Absolutely. You've got to be waving virtually anything you can to say 'Don't shoot! Don't shoot! We're on your side!' And we, as fund managers, are separate from official this or that. We always talk about goods and service flows, but capital flows totally dominate them, and this is part of the capital flows.

PRIVATE MARKETS AND CO-INVESTMENTS: ACCESS, CAPABILITY AND CAPITAL

Q: Are rising geopolitical tensions actually making co-investment prospects dimmer for SWFs? Or are they still able to entertain the types of partnerships that they would like to be able to forge across jurisdictions?

Orr: I would say the latter — in that if you can't actually cross borders, you might say, 'Okay then, let's jointly own [this asset] and continue to do the business.' That would certainly be the economic incentive. Is that European or US investment mode? You would be able to reply, 'Don't know, we both own it!' So you could have those types of incentive structures. I would say that co-investing is extremely difficult, and it is increasingly only for the big end of town. And because it is highly labor-intensive, to make it worthwhile you need to be spending north of one billion, and those projects don't come up that often. When they do, however, are you working together or are you competing to get the assets? So, it is a very complex challenge.

Q: I'm interested in your views as well on private markets' ability to absorb ever-increasing amounts of sovereign wealth fund investment capital, especially in light of what has been going on in private equity, where valuations have been high and rising.

Orr: I haven't been watching closely where pricing is at all, lately, mostly because I've been operating as a central banker. But I would say that private markets, like all markets, eventually get overpriced. I'm not saying that that's where we are now, or that we're very close, but you always want to look and see at what point are you just doing manager buyouts just for the sake of it, or are you truly going to add value? So you can look through some of these long-term trends, and — as liquid markets dry up — some of these long-term direct investing decisions in private markets and in specific assets become very attractive. But you have to question when people are just running around and buying things for the sake of it.

Q: How did you set those parameters at NZ Super?
Orr: At the NZ Super Fund, the very first question is, 'Why do we need to be going direct?' We used the acronym ACC [to help assess opportunities]: access, capability, and capital. So, first of all, what is unique about this access? If you are having to fight to get in there, or compete to get in there, then there is nothing particularly unique about the access. Or if it's an access point that can be reached by any form of capital markets, like listed markets, then there is nothing unique. But if there is some form of requirement where there's an emphasis on partnership, as well as a long horizon or a requirement for transparency, then that creates a unique access point. The second part is really around capability. All too often you hear, 'Hey, I've got access to this piece of land and I want to build a hotel on it, you've got money.' Well, the person who has access to the land probably isn't a hotel operator! You've got to say, well, we would need to look for the third-party expertise to build the world-class hotel, because we need that capability. And then lastly is the capital. And that's the weakest of the three legs, because everyone has got a checkbook in that world. So your checkbook isn't any more exciting than anyone else's checkbook. But it is if you can add up the previous legs, because you are the right partner, you're willing to be honest about your capital capability, what you can bring and what you need to access from elsewhere, and then the capital will flow.

Q: How common — or rare — is it to find those three factors?
Orr: It's rare, and that is why a lot of private investment isn't all that exciting. We have to truly think hard: 'What is our access point? Are we truly confident in our capability, and prepared to bring in additional capability? If so, let the capital flow.' And only then can you say 'Hey, there's something interesting here.' I have seen it time and time again, when private capital drives out listed capital at the same price if not an even higher price. And so thinking that, 'now that a company or investment is private, it's going to have some magical mystery about it', is misleading. If they don't have the capability, it all gets pretty hard and nothing much else happens.

VENTURE CAPITAL, TECHNOLOGY AND EARLY-STAGE INVESTMENTS: NOT FOR EVERYONE

Q: Do you think that those competitive pressures are actively driving funds to make even earlier early-stage investments?

Orr: Yes, I think so. If you have established a team called 'direct investment,' then it's hard not to have deal fever. What is the paddock that you are comfortable playing on? Is it expansion capital? Is it pre-IPO capital? What is it? And then you still have to be very, very clear about that mandate. The challenge is not to slide down into smaller and smaller investments — or to move the other way, when you start out in venture capital and then the next thing you know, the first deal you do is expansion capital. Pretty soon, you will have used up your entire portfolio on two investments and you're in the thick of it, trying to turn these things around! So it takes real discipline on the part of the large sovereign funds getting into this space.

Q: What is your view on the rising popularity of venture capital?

Orr: Venture capital is incredibly difficult. You've got to have a hundred or so bets on the table at any one time, hoping that one or two will come off. And that is incredibly labor-intensive. Yes, there might be some limited access to a particular type of intellectual property, and yes there may be access to the inventor or entrepreneur, but you have to add a lot of capability, which means that you're on the ground with $5 million to $50 million investments. I still struggle to see it as a viable proposition for large, long-term institutions.

Q: Obviously there are going to be opportunities that we see arising from climate risk, and even possibly degradation of the environment — will those necessarily emerge as earlier-stage investments?

Orr: I think so. Will large-scale institutional investors be able to manage that challenge on their own? I would say no. Jagdeep Bachher [Chief Investment Officer of the Regents at the University of California] has tried an innovative approach where his team is sitting at the end of the pipeline, watching the outflow of IP coming from the University of California system. That's one solution. The other possibility is to seed-fund other third parties to source and invest in specific types of biology, or technology, or their implementation. Where institutional money will be most useful in looking for new types of shiny things is not by funding the latest invention, however — the bigger role will be around the transformation, expansion and implementation of these types of technologies.

Q: With regard to technology and innovation, how adept do you think SWFs are at actually integrating some of these new technologies into their own in-house operational systems? Is that something that they are keen to do?

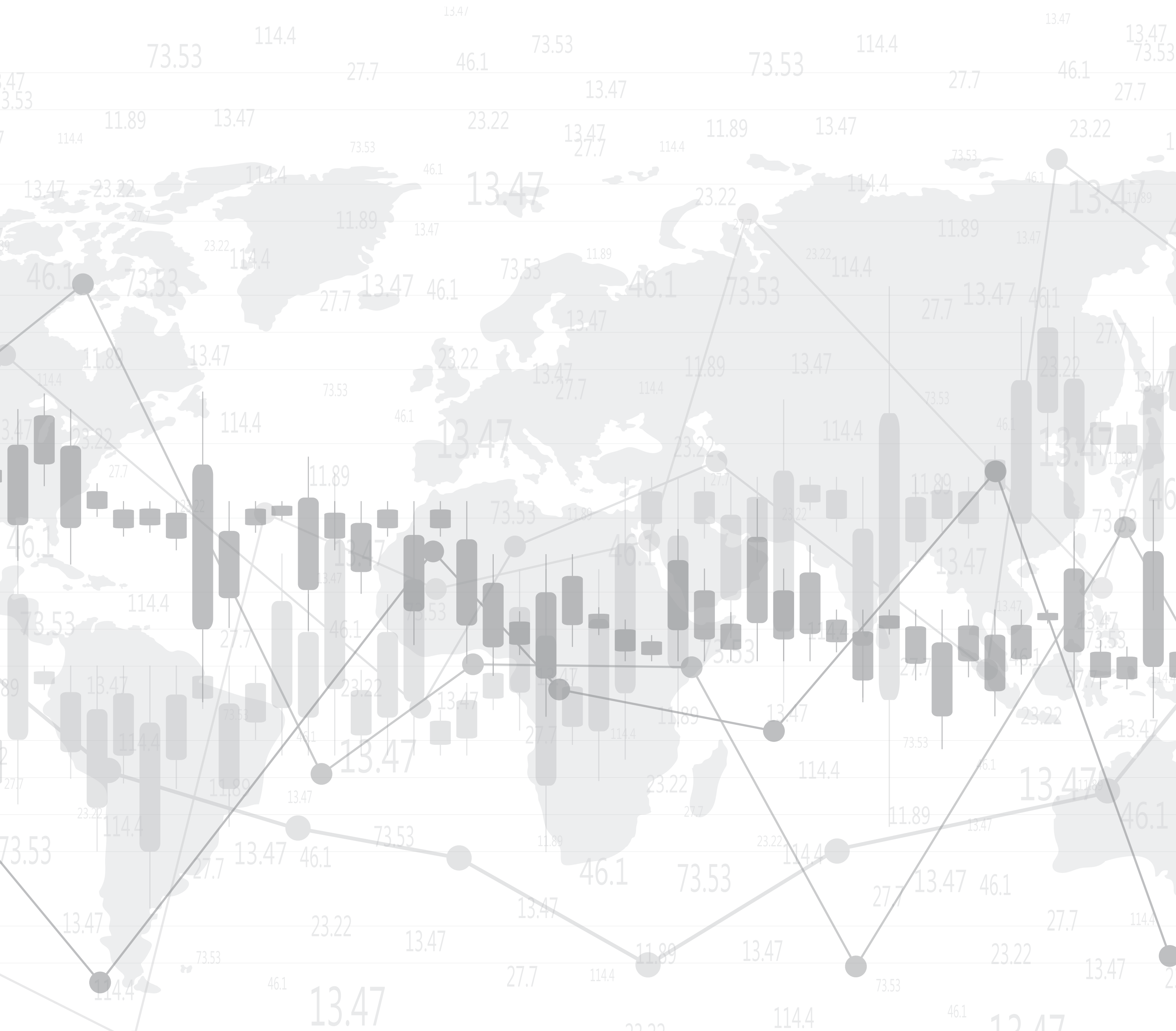
Orr: Yes, it is, and I would say that it's not just sovereigns — large mutual funds are interested, too.In fact, at Stanford University, Ashby Monk [Executive and Research Director of the Stanford Global Projects Center] has pulled together quite a significant group, including chief technology officers, and they are meeting twice a year, now, to compare systems: What does this middle or back-office look like? And collaborate. And often you are being faced with divide-and-conquer strategies by the same suppliers, or how to win hearts and minds in the front office, all that type of stuff.

CONCLUDING REMARKS

Q: As you're anticipating the transfer of the chairman's position at IFSWF, do you have a sense of what your legacy will be, having spent so many years now committed to that group?

Orr: I think the legacy is that this organization is on a sustainable path towards being comfortable sharing information, and that there will be more comparison and collaboration. The two things that have been most common are collaboration and comparison; which are right up there with falling in love— it's very hard to plan in advance! The access, the capability and the capital. I strongly believe that in ten years' time, IFSWF will be a very important institution for knowledge around what is and isn't important to sovereign wealth funds, and what constitutes good practice.

Annex 1. IE Sovereign Wealth Research Ranking 2018



Annex 1.
IE Sovereign Wealth Research Ranking 2018

Table 1

IE Sovereign Wealth Research Ranking 2018

Ranking	Sovereign Wealth Fund	Assets under Management ($bn)	Country	Established
1	Government Pension Fund Global	1,040.00	Norway	1990
2	**China Investment Corporation**	940.00	China	2007
3	**Abu Dhabi Investment Authority**	828.00	UAE	1976
4	**Kuwait Investment Authority**	595.00	Kuwait	1953
5	Hong Kong Monetary Authority - Exchange Fund	523.00	Hong Kong (China)	1993
6	Saudi Arabian Monetary Authority - Reserve Assets	506.00	Saudi Arabia	1952
7	State Administration of Foreign Exchange	441.00	China	1997
8	**GIC**	378.50	Singapore	1981
9	Public Investment Fund	350.00	Saudi Arabia	1971
10	National Social Security Fund	325.00	China	2000
11	**Qatar Investment Authority**	317.00	Qatar	2005
12	Temasek Holdings	235.00	Singapore	1974
13	Investment Corporation of Dubai	230.00	UAE	2006
14	Mubadala Investment Company	226.00	UAE	2002
15	**Korea Investment Corporation**	134.10	South Korea	2005
16	**Future Fund**	108.00	Australia	2004
17	National Wealth Fund	77.20	Russia	2008
18	**Samruk-Kazyna**	75.70	Kazakhstan	2008
19	**National Development Fund**	68.00	Iran	2011
20	**Libyan Investment Authority**	67.00	Libya	2006
21	**Alaska Permanent Fund**	65.70	USA - Alaska	1976
22	National Oil Fund of Republic of Kazakhstan	58.10	Kazakhstan	2000
23	Texas Permanent School Fund	41.40	USA - Texas	1854
24	**Turkiye Wealth Fund**	40.00	Turkey	2016
25	Emirates Investment Authority	39.50	UAE	2007
26	Brunei Investment Agency	39.30	Brunei	1983
27	**Khazanah Nasional**	38.70	Malaysia	1993
28	**State Oil Fund of Azerbaijan**	38.04	Azerbaijan	1999
29	**New Zealand Superannuation Fund**	25.12	New Zealand	2001
30	**State General Reserve Fund**	25.00	Oman	1980
31	New Mexico State Investment Council	23.70	USA - New Mexico	1958
32	**Timor-Leste Petroleum Fund**	16.80	Timor-Leste	2005
33	Bahrain Mumtalakat Holding Company	15.40	Bahrain	2006
34	Fondo de Estabilidad Económica y Social	14.60	Chile	2007
35	**Alberta Heritage Savings Trust Fund**	13.50	Canada	1976
36	**Strategic Investment Fund**	10.96	Ireland	2001
37	Quebec's Generations Fund	10.10	Canada	2006
38	**Russian Direct Investment Fund**	10.00	Russia	2011
39	China-Africa Development Fund	10.00	China	2007
40	Fondo de Reserva de Pensiones	9.87	Chile	2006
41	Permanent Wyoming Mineral Trust Fund	7.78	USA - Wyoming	1974
42	Oman Investment Fund	7.10	Oman	2006
43	Fondo de Estabilización Fiscal	6.40	Peru	1999
44	**Heritage and Stabilization Fund**	5.88	Trinidad and Tobago	2000
45	**Pula Fund**	5.65	Botswana	1994
46	North Dakota Legacy Fund	5.40	USA – North Dakota	2011
47	**Fundo Soberano de Angola**	5.01	Angola	2012

Ranking	Sovereign Wealth Fund	Assets under Management ($bn)	Country	Established
48	CDC International Capital	4.67	France	2014
49	Gulf Investment Corporation	4.30	Kuwait	1982
50	**Cdp Equity**	4.06	Italy	2011
51	Fondo de Ahorro y Estabilización	3.68	Colombia	2011
52	Alabama Trust Fund	3.15	USA - Alabama	1985
53	State Capital Investment Corporation	2.77	Vietnam	2006
54	Louisiana Education Quality Trust Fund	2.37	USA - Louisiana	1986
55	Idaho Endowment Fund	2.19	USA - Idaho	1969
56	Fonds Gabonais d'Investissements Stratégiques	1.80	Gabon	1998
57	**Ithmar Capital**	1.80	Morocco	2011
58	**Nigerian Sovereign Investment Authority**	1.47	Nigeria	2011
59	**Fondo de Ahorro de Panamá**	1.40	Panama	2011
60	Western Australia Future Fund	1.20	Australia	2012
61	Palestine Investment Fund	1.02	Palestine	2003
62	Fondo Mexicano del Petróleo - Reserva Largo Plazo	0.99	Mexico	2015
63	Future Generations Fund	0.73	Bahrain	2006
64	Revenue Equalization Reserve Fund	0.72	Kiribati	1956
65	Ghana Heritage Fund	0.32	Ghana	2011
66	Ghana Stabilization Fund	0.31	Ghana	2011
67	Egypt Fund	0.28	Egypt	2018
68	Fiscal Stability Fund	0.25	Mongolia	2011
69	Spain-Oman Private Equity Fund	0.20	Spain	2018
70	**National Investment Corporation**	0.13	Kazakhstan	2012
71	Fund for Future Generations	0.09	Equatorial Guinea	2002
72	Petroleum Revenue Investment Reserve	0.09	Uganda	2015
73	National Fund for Hydrocarbon Reserves	0.07	Mauritania	2006
74	**Intergenerational Trust Fund**	0.06	Nauru	2015
75	**Agaciro Development Fund**	0.05	Rwanda	2012
76	FONSIS	0.02	Senegal	2012
77	Northwest Territories Heritage Fund	0.01	Canada	2012
78	Permanent Fund for Future Generation	0.01	São Tomé e Príncipe	2004
79	Fonds de Stabilisation des Recettes Budgétaires et Réserves pour Générations Futures	0.01	Republic of the Congo	2005
80	Fondo para la Estabilización Macroeconómica	0.003	Venezuela	1998
81	West Virginia Future Fund	N/A	USA - West Virginia	2014
82	Dubai World	N/A	UAE	2006
83	Dubai Holding	N/A	UAE	1997
84	Mauritius Sovereign Wealth Fund	N/A	Mauritius	2010
85	Oil Revenue Stabilization Fund	N/A	South Sudan	2008
86	National Investment Fund	N/A	Syria	2012
87	Turkmenistan Stabilization Fund	N/A	Turkmenistan	2008
88	Zimbabwe Sovereign Wealth Fund	N/A	Zimbabwe	2015
89	Papua New Guinea SWF	N/A	Papua New Guinea	2011
90	BUMN Fund	N/A	Indonesia	2018
91	Savings and Stabilization Fund	N/A	Suriname	2017
	Total assets under management	**US$8,093.73**		

Source: IE Sovereign Wealth Research (2018) with information obtained from funds' annual reports and websites. In their absence we relied inter alia on the estimates of the Sovereign Wealth Center, Natural Resource Governance Institute, and Preqin.

* This list includes sovereign wealth funds established as at June 2018. The IE Sovereign Wealth Research Ranking uses the most updated information available, some figures may differ from data shown in other parts of the Report.

** The sovereign wealth funds in bold are members of the International Forum of Sovereign Wealth Funds (IFSWF).

Annex 1.
IE Sovereign Wealth Research Ranking 2018

Table 2

Potential new funds

Ranking	Sovereign Wealth Fund	Assets under Management ($bn)	Country	Established
92	Japan	N/A	Japan	N/A
93	India	N/A	India	N/A
94	Israel	N/A	Israel	N/A
95	Turks & Caicos	N/A	Turks & Caicos	N/A
96	Guyana	N/A	Guyana	N/A
97	South Africa	N/A	South Africa	N/A
98	Lebanon	N/A	Lebanon	N/A
99	Kenya	N/A	Kenya	N/A
100	Zambia	N/A	Zambia	N/A
101	Mozambique	N/A	Mozambique	N/A
102	Namibia	N/A	Namibia	N/A
103	Tanzania	N/A	Tanzania	N/A
104	Liberia	N/A	Liberia	N/A
105	Saskatchewan	N/A	Canada	N/A
106	Bangladesh	N/A	Bangladesh	N/A
107	New Caledonia	N/A	New Caledonia	N/A
108	Future Britain Funds	N/A	United Kingdom	N/A
109	Future Heritage Fund	N/A	Mongolia	N/A

Note: These 18 funds were not active when this edition went to press.

Annex 2.
Sovereign wealth funds in Spain 2017-2018.
The Spanish co-investment SWF

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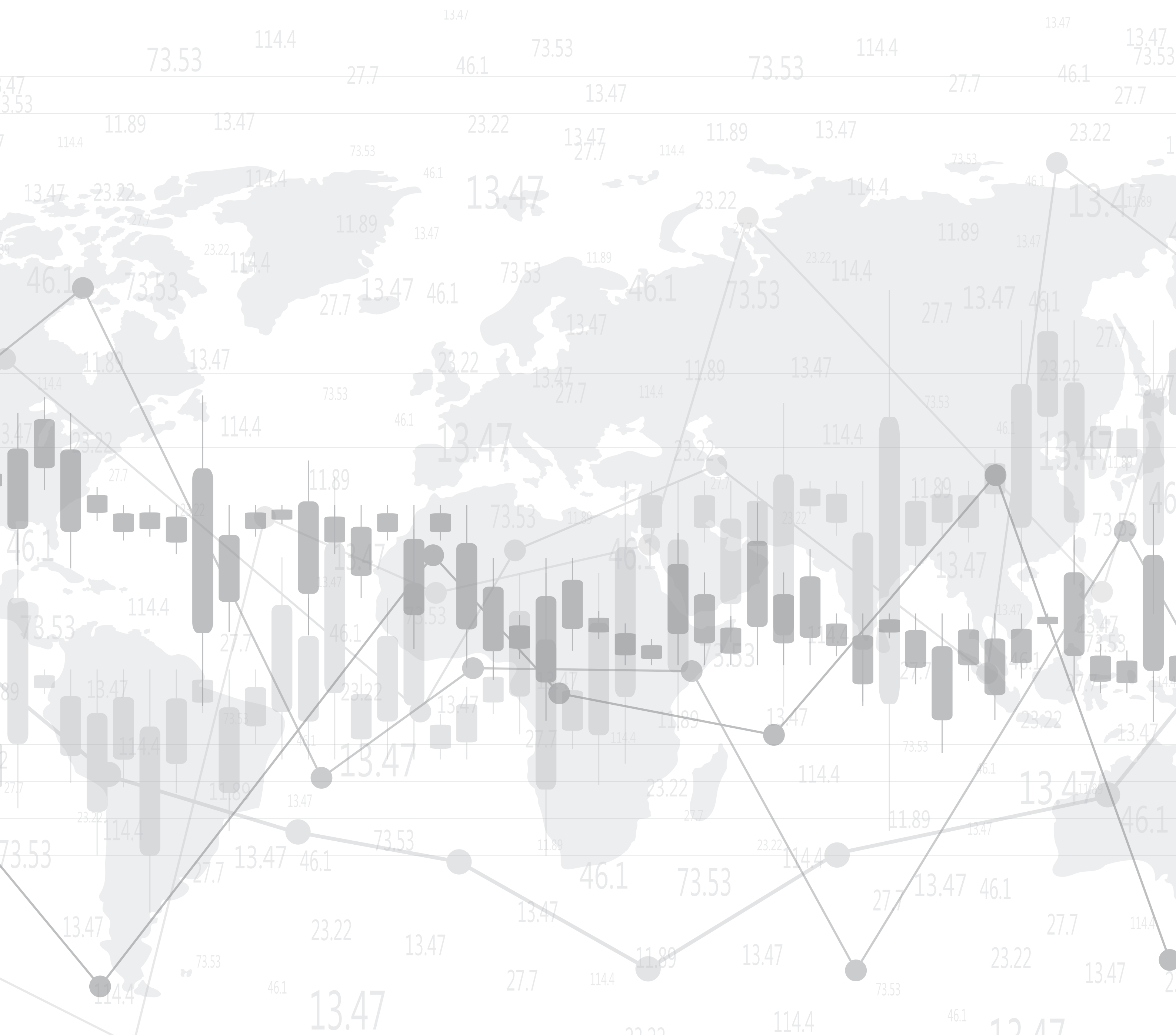

Annex 2.
Sovereign wealth funds in Spain 2017-2018.
The Spanish co-investment SWF

In the first report of the SWF Report series we have been editing with the support of ICEX – Invest in Spain since 2012, we said that Spain could benefit from the creation of a co-investment SWF. This type of vehicles, back then a novel idea just developed by Italy and Russia, and still nascent in France, would grow later on and today represent a standalone category within the diverse industry of SWFs. In that report we referred to these "cooperation funds" as ways to foster the business and economic relationship between Spain and other third countries in areas of mutual interest.

Just six years later, the Spain-Oman Private Equity Fund (SOPEF) is born. Established as a registered fund in the Comisión Nacional del Mercado de Valores (CNMV), the Spanish markets regulator, SOPEF has all the ingredients to be labelled as a co-investment SWF.

First, it is an alliance established by public investment entities, and at least one of them can be labelled as a SWF. In this case the participants are Spain's Cofides (Compañía Española de Financiación al Desarrollo) and Oman's State General Reserve Fund (SGRF). Indeed, SGRF is the largest Oman SWF and it contributed with €100 million in equity while Cofides contributed with another €100 million[1], resulting in a €200 million investment fund. The particular public-private nature of Cofides (53% government-controlled) makes it an ideal partner for this kind of co-investment SWF.

Second, the co-investment SWF has a clearly defined mission: to support and enhance the development plans of Spanish companies overseas. It will achieve this goal by acquiring temporary minority stakes in their subsidiaries and/or projects in countries linked to Oman and its ample area of influence. This area of influence, actually, has been broadly defined including Gulf Cooperation Council countries, East Africa, South-East Asia, India and Latin America too. The fund has been mandated to focus on an ample set of sectors including manufacturing, tourism, logistics, healthcare, food and agribusiness, or energy and infrastructure. It excludes real estate, naval, coal and steel, or the production of arms and ammunition.

Third, it has been established on the ground of a sound governance and accountability framework. The initial idea of Cofides was to manage in-house the co-investment fund. It evolved later on into a public tender for a third-party asset manager. MCH, an independent private equity group with 20 years of track-record in the Spanish middle-market was awarded with the contract. Yet, several features make SOPEF a particular type of private equity fund:

- It has only two limited partners. Normally, private equity funds are supported by multiple funds on different degrees of equity participation.

- The initiative of the establishment of the fund came from the limited partners, as well as the overall investment strategy.

- The two limited partners sit in the investment committee and evaluate every proposed deal with a veto power.

[1] Cofides contributed directly with €1 million, whereas the Fund for Foreign Investment (FIEX), controlled by Cofides, provided the remaining €99 million.

Fourth, the logic of the fund responds to the classical strategic approach of other co-investment funds, where a recipient country (in this case Spain) and an external SWF (in this case Oman), engage in a strategic relationship.

The "recipient country", in this case Spain, is in charge of sourcing deals and provides a credible pipeline of companies and projects (this will be done through MCH, the asset manager). SOPEF intends to invest in around 10-15 Spanish companies or projects with an average ticket size of €15 million. This will facilitate an alternative finance source to the expansion of Spanish companies. Furthermore, given the nature of their shareholders, the fund will also enhance the expansion into markets (we refer here to Oman and GCC countries) that are fewer common destinations for Spanish companies, thus diversifying their risks and exposure.

For Oman, the "origin of capital" (although in the case of SOPEF the equity is divided on equal share), a logic of learning applies. Oman is a country with enormous potential and a singular player in the GCC complex economic and geopolitical region. For Oman, to engage with Spanish companies and managers in sectors that are key for their diversification and economic growth provides strong added-value. Oman, a country with an important tourism potential, will benefit from the experience of Spain, which is the world's second recipient country of international tourist. Moreover, Oman is an emerging economy in expansion that will benefit from leading Spanish corporations in sectors like construction and infrastructure, logistics, healthcare or food and agribusiness.

The case of Spain is not an isolated one. Other SWFs have been established on similar terms, although varying governance and legal settings, mainly in European countries. France, for example, has partnered with Qatar Investment Authority, Russian Direct Investment Fund or Mubadala, in a vehicle that currently manages $4.7 billion. Italy, on its part, established Cdp Equity in 2011 in partnership with SWFs from Qatar and Kuwait. Both co-investment funds have the purpose of promoting the international expansion of their national companies, with mandates including strategic sectors and geographic interests. In the case of Ireland, its SWF has partnered with China Investment Corporation to promote technology companies in both China and Ireland. It has also used experienced third-party managers, as in the case of Spain, to source and manage the investments of its China-Ireland Technology Fund. Yet, the Russian Direct Investment Fund remains as the most active co-investment SWF, already described in the chapter devoted to co-investments, and has attracted $40 billion into joint funds, and co-invested $21 billion in Russian companies.

Investments in Spain: 2017-2018

Sovereign wealth funds kept increasing their exposure to Spanish companies and assets during the second half of 2017 and 2018. The total accumulated investments of SWFs in Spain have reached more than €40 billion, for the first time, accounting for the NBIM's large equity and debt holdings. Since our last report, SWFs have increased their foreign direct investment by €1.2 billion. It is the second year in a row with SWFs investments in Spain above €1 billion, showing the strong confidence of global investors in the Spanish economy.

Annex 2.
Sovereign wealth funds in Spain 2017-2018.
The Spanish co-investment SWF

One important part of the SWFs presence in Spain is attributed to Norges Bank Investment Management (the asset manager of the Norway's sovereign fund). The value of the Spanish equity portfolio held by NBIM grew 27% year on year to €10.8 billion at the end of 2017, backed by the strong performance of the equity markets in 2017. Government debt stood at €4.4 billion by September 2018, and it made Spain rank sixth largest NBIM's bond holding, ahead of Italy, Mexico and South Korea.

Sectors such as infrastructure, logistics, and real estate, accumulated the bulk of the foreign direct investments made by SWFs in the period. Cellnex, the Spanish telecom infrastructure company, was targeted by both ADIA and GIC, which invested close to €600 million in total. Each SWF now owns 6% of the leading infrastructure company, controlled by the Benetton family. Indeed, the vehicle used by the family office to control 29.9% of Cellnex was divided among three shareholders: 60% remains in hands of Sintonia, a subsidiary of the family office, whereas 40% is now in hands of these two SWFs, on an equal share. GIC and ADIA are experts in infrastructure and have a strong global track record in the sector, as shown in other chapters of this report. Moreover, these two investors will support the expansion of the Spanish company through Europe, with planned further investments estimated at €1.5 billion.

Qatar Investment Authority and Colonial, the real estate company, represented another significant deal. These two institutions had a close relationship since 2014, when QIA invested in both Colonial and its French subsidiary, Société Foncière Lyonnaise. In October 2018, Colonial exchanged the stake QIA controlled in its French subsidiary with new released shares, valued at €535 million. Thus, QIA reinforces its position as a global real estate investor becoming the leading shareholder in the Spanish company with a controlling stake representing 20% of all shares.

Another important deal related Temasek, the Singaporean active venture sovereign fund, and Flywire, a startup provider of global payment and receivables solutions. Temasek led a venture capital round of €85 million in the Spanish-founded company. Flywire, now located in Boston and Valencia, was founded as peerTransfer in 2009 by Iker Marcaide, and it plans to use its new funding to support growth in Europe, Southeast Asia and Latin America. The development of the Spanish startup ecosystem with record new funding in 2017 would be an ideal target for sovereign venture funds such as Temasek, GIC, Malaysia's Khazanah or the SWF-backed SoftBank's Vision Fund.

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ICEX – Invest in Spain

www.investinspain.org

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