

Navigating Market Shoals in Turbulent Geopolitical Waters: Sovereign Direct Investments in 2016-17

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A macro survey of direct investment activity by sovereign and public investors in 2016 and 2017 suggests a cautious extension of prevailing themes and strategies that have predominated in the years following the Great Recession and – among oil exporters – since the stark correction in oil and gas prices. However, since 2016, among large asset owners and institutional investors, a widening expanse of geopolitical challenges have contributed significantly to the complexities of managing such large diversified global portfolios.¹

For sovereign investors, specifically, these two years have been characterized by a heightened degree of political change and uncertainty, particularly in developed economies – the US, the UK, and Europe – which have traditionally attracted a major share of SWF investment. Beyond developed markets, persistent tensions, for example, between the US and Russia, heated exchanges in Asia – conflicts on the Korean peninsula and in the South China Sea, continued disarray in the eastern Mediterranean, and the exercise of Saudi influence in the Persian Gulf – all serve to complicate sovereign investment processes that are focused on the deployment of large amounts of capital in real or otherwise illiquid assets across extended investment horizons.

In this review we examine a sample of direct investments by sovereign wealth funds from January 2016 through June of 2017. Our research focuses on the usual dimensions of sovereign investment – fund, geography and sector. However, we also tune our analysis to thematic elements that might offer a glimpse into the investment processes and strategic thinking of these large asset owners.

Surveying the Horizon

Slower growth and a decline in international trade, accompanied by weak commodity prices, and a higher quotient of political instability have required sovereign investors to be both nimble and innovative. Many sovereign funds have adapted by expanding allocations to alternative assets including real estate, infrastructure, and private equity. Moreover, many funds that invest actively in private equity specifi-

cally have retooled their strategies to seek out opportunities at earlier stages of the PE cycle. In addition, such strategies have embraced disruptive technologies that are capable of generating outsized returns by exploiting demographic themes, new technologies, and discrete shifts in modes of consumer consumption.

The current period of prolonged low interest rates and high asset valuations, have reduced return expectations over a 7 to 10-year investment horizon, prompting many SWF managers to caution owners and public stakeholders of lower returns in coming years. Among funds in oil exporting countries, organic asset growth has slowed as a result

A Brief Note on Methodology and Process

A number of institutions engage in the collection of SWF data based on publicly reported transactions. This exercise is challenging with clear limitations, including its being entirely dependent on the obligation, interest, and/or willingness of a sovereign investor to publicly disclose transaction details. As such, the process may suffer from an inherent reporting bias. With respect to methodology, our approach has been to identify, then to validate reported transactions using multiple independent sources when available. We enrich and normalize transaction details with entity, geography, and sector-level data. With respect to transaction size, we validate and report deal volume in the aggregate in both deal currency and US dollars. We also report the specific payments made/received by participating funds when these are reported and can also be validated. For clarity, we make no attempt to infer or estimate SWF deal size and so leave this key variable unreported when not available.

The 2016 and preliminary 2017 samples include coverage of 26 funds, representing approximately 90 and 95 transactions respectively. The deals include both purchases and exits, disproportionately – though justifiably – distributed among the largest SWFs who are – as we detail below – by far the most active sovereign direct investors.

With regard to fund identity, we employ an inclusive definition of sovereign investor that reflects interests in wholly-owned or directly affiliated investment companies or subsidiaries. In the case of Temasek, for example, we include its affiliated private-equity platforms, such as Vertex Venture Holdings, an open vehicle which invests on behalf of Temasek and limited partners. We attempt to associate such affiliate deals when these can be separately validated. As such, our deal count for Temasek, including of affiliated transactions, may be somewhat understated.

¹ See for example “Inside the mind of the investor... What’s next?”, PWC. Accessed at <https://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2017/gx/deep-dives/2017-global-investor-survey.html> and <https://www.allianzgi.com/insights/investment-themes-and-strategy/2017-riskmonitor-geopolitical-concerns-create-risk-return-conundrum>

of fiscal consolidation. Nonetheless, despite lower return expectations many funds continue to report strong year-over-year performance.

Slower global growth and lower commodity prices have also contributed – in part – to a re-examination of sovereign investment models. This is particularly the case with respect to inward investment and economic transformation. Thus, a significant plurality of new funds announced and/or launched in 2016-17 have development or strategic mandates that emphasize both commercial or financial and strategic or development objectives. These include funds that have been launched, such as in Turkey, as well as funds under discussion, e.g. Romania and Guyana. It has also included a restructuring of existing funds, for example, the consolidation of Mubadala and IPIC,² and the transfer of some \$30 billion in the domestic state assets from the Qatar Investment Authority (QIA) to the Qatari Ministry of Finance.³

Also of note, the transaction analysis strongly reflects a continued preference among SWFs to invest alongside a sovereign or significant institutional partner. The transaction data suggest a persistently high degree of co-investment and deal partnering by SWFs. This is attributable in part to increasing scale in direct investment programs and - importantly - parallels and intersects the investment activity of other large institutional investments.

At a summary level, the predominant themes that emerge from the transaction analysis are investor concentration, large-scale execution, and deal partnering. These are manifest in a persistently high concentration of deals among the top five to ten SWFs, their capacity to deploy very large allocations of capital in single transactions, including as lead investor, and their practice of investing with each other and other large public institutional investors.

An Active Core

In 2016, through June 2017, six sovereign investors dominated investment activity, completing deals that both reflect and inform of their investment strategies and reported performance. These include Temasek, GIC, the Abu Dhabi Investment Authority (ADIA), QIA, Ireland Strategic Investment Fund (ISIF), and the China Investment Corp (CIC) who together represent over 72% of acquisition count in 2016, rising to 77% in the first half of 2017.

Temasek, for example, refined its investment strategy to focus on long-term opportunities in key growth sectors such as technology, life sciences, non-bank financial services, and e-commerce⁴. Its target sectors expanded from 8% to 24% of its portfolio holdings through 2016,⁵ while the US has remained a major destination for its capital.⁶

As of 2017, GIC had 34% of its portfolio invested in the US, followed by 12% in the Eurozone and 6% in the UK.⁷ This was consistent with its allocations in 2016⁸ and despite mounting political pressures, including the continued uncertainty arising from the June 2016 Brexit vote. Among its most significant deals was a \$500 million expansion of its Alibaba stake, acquired from SoftBank Group Corp. Faced with sizeable losses from its 2008 investment in UBS, GIC was also a major seller, shedding about 2.4% of its holding for total proceeds of about \$1.5 billion.⁹

ADIA began to redeploy assets to private equity and alternative investments after its returns slowed in 2016, publicly advising that it would increase its exposure to direct private equity transactions and extend its focus in Asian private equity markets particularly in China and India.¹⁰ ADIA's transaction volume in fact does reflect a concerted deployment of capital to India, particularly in the power and real estate sectors.

4. See "Temasek portfolio value hits new record of \$275b; posts one-year return of 13%", The Straits Times, July 11, 2017. Accessed at <http://www.straitstimes.com/business/companies-markets/temasek-portfolio-value-hits-new-record-of-275b-posts-one-year-return-of>

5. Ibid

6. Ibid

7. See "Singapore's GIC warns of weaker returns", Financial Times, July 9, 2017. Accessed at <https://www.ft.com/content/f6a796f2-630e-11e7-8814-0ac7eb84e5f1>

8. Ibid.

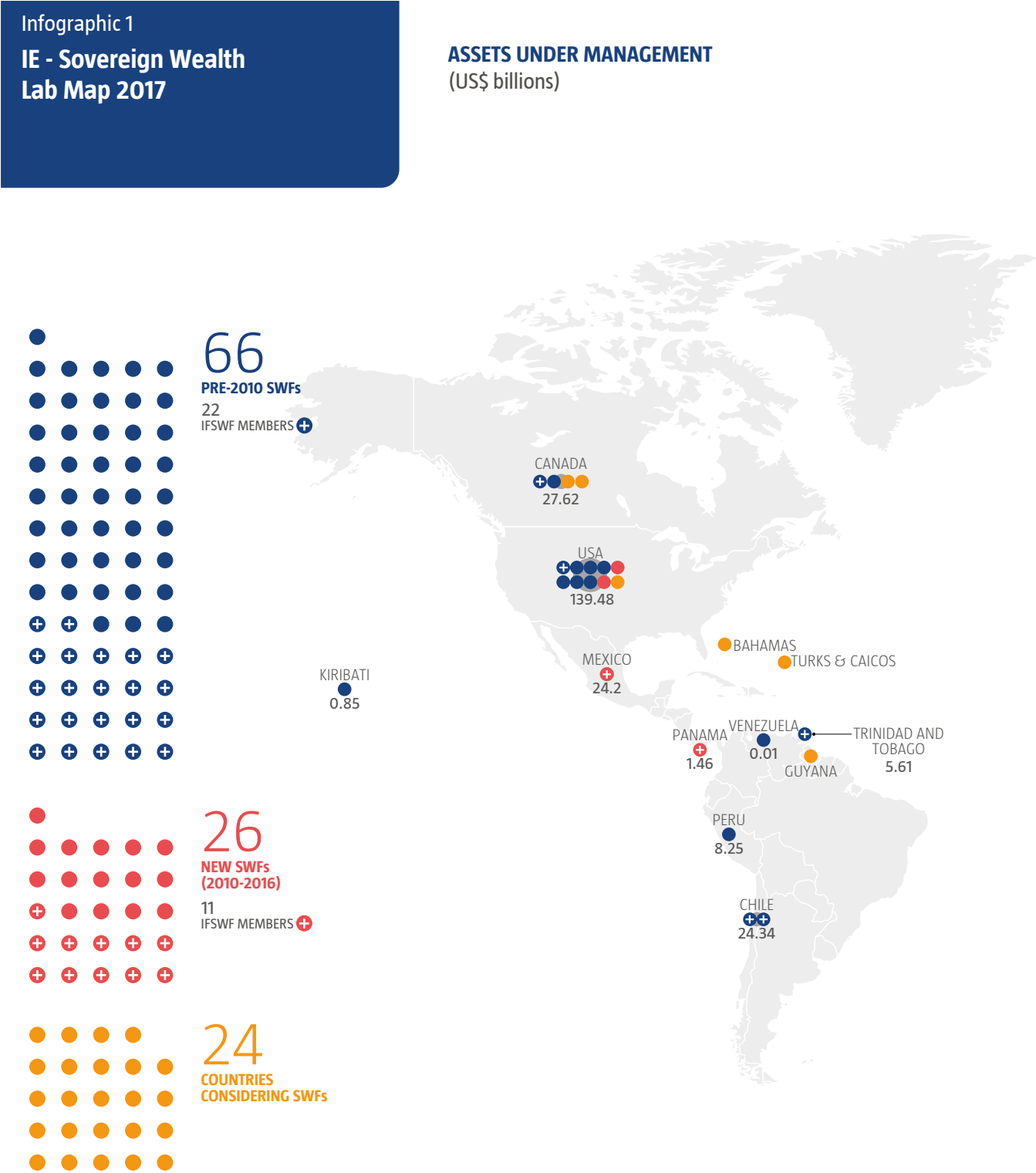
9. See "Sovereign Wealth Fund GIC Warns Investors Aren't Fearful Enough", Bloomberg, July 9, 2017. Accessed at <https://www.bloomberg.com/news/articles/2017-07-09/sovereign-wealth-fund-gic-warns-investors-aren-t-fearful-enough>

10. See "Abu Dhabi fund ADIA eyes direct private equity investments as returns slow", Reuters, July 4, 2017. Accessed at <https://www.reuters.com/article/emirates-adia/abu-dhabi-fund-adia-eyes-direct-private-equity-investments-as-returns-slow-idUSL8N1U3IM>

2. See <https://www.mubadala.com/en/ipic-mubadala-merger>

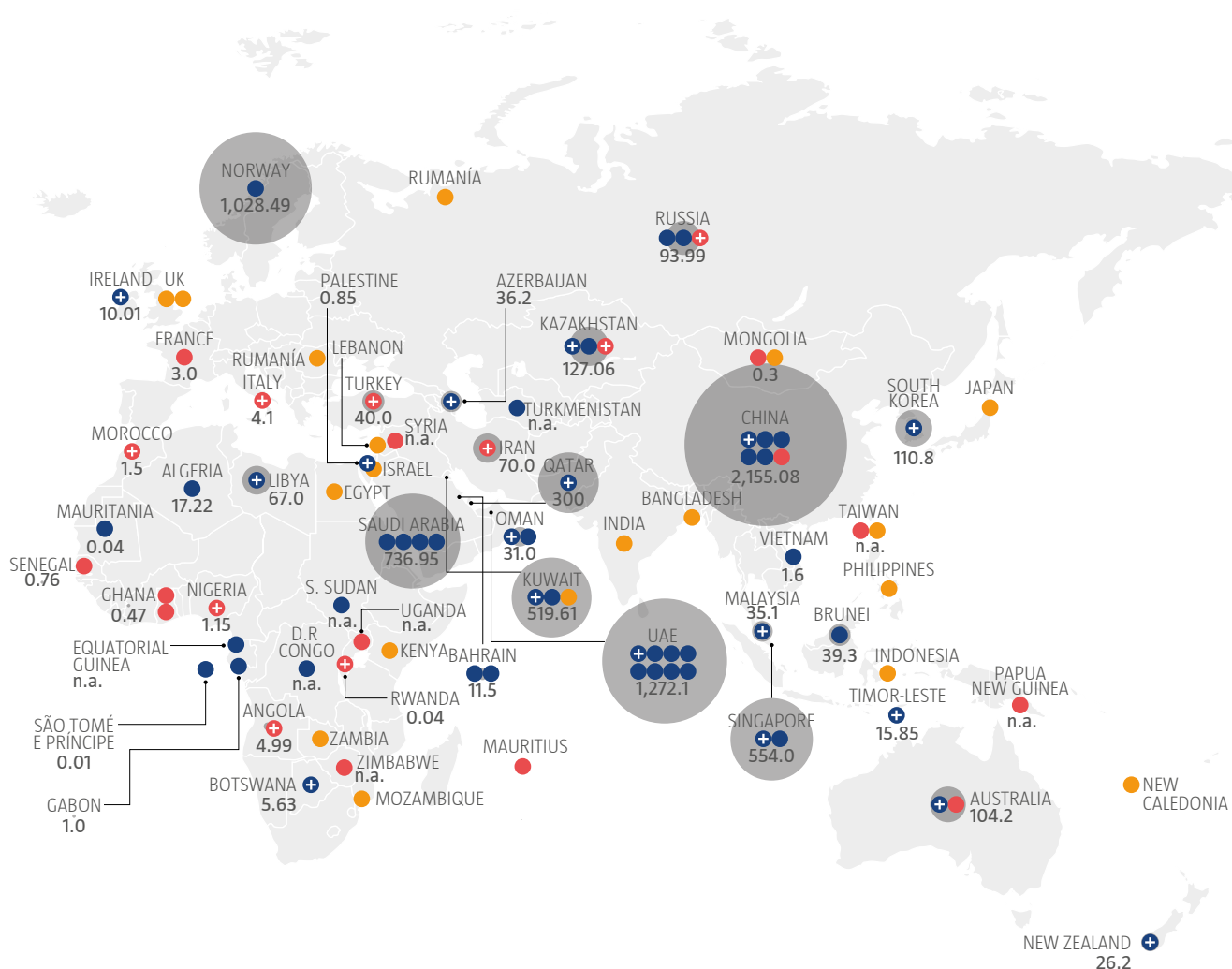
3. See "Qatar sovereign fund moves stakes to government, may sell assets", Reuters, June 21, 2017. Accessed at <https://www.reuters.com/article/us-gulf-qatar-qia/exclusive-qatar-sovereign-fund-moves-stakes-to-government-may-sell-assets-sources-idUSKBN19C2PB>

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Source: IE SWLab SWF Tracker (2017).

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The QIA has been strapped with several recent constraints, stemming firstly from fiscal pressures due to the decline in oil and gas prices, secondly, the decision noted earlier to transfer domestic holdings to the Ministry of Finance, and lastly, the requirement to service liquidity needs of the Qatari banking system resulting from the blockade of Qatar by a coalition led by Saudi Arabia. In April 2017, QIA did in fact liquidate its 2.5% stake in Banco Santander Brasil SA for over \$700 million, selling into an 18-month rally.¹¹ However, despite challenges, the QIA remained a net investor and has punctuated this intent by publicly advising U.S. officials of its goal to invest \$10 billion in infrastructure projects in the United States.¹² In 2016 the QIA completed some 15 transactions with a particular emphasis on the US real estate sector, including a \$622 million investment representing a 9.9% stake in the Empire State Building.¹³ This interest in real estate assets in gateway cities in both the US and UK continued into 2017.

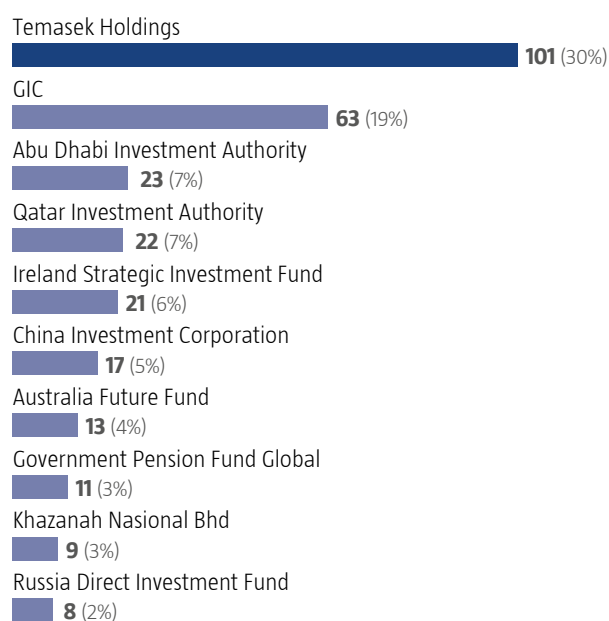
The ISIF, a largely domestic investor, maintains a dual mandate that includes advancing the economic development and transformation of Ireland. Its 2016 investments included both direct placements, as well as allocations to private funds and were focused heavily on financial services, communications and energy infrastructure, technology, and real estate.

A major focus for the CIC in 2016 and 2017 was the continued pursuit of investment opportunities in North America and specifically the US. It has also been aggressively engaged in the organizational build-out and ramp-up of its newest subsidiary - CIC Capital, founded in 2015 with a mandate to pursue direct investments in the broader context of CIC's overall portfolio management framework and with a

Figure 1

The most active Sovereign Wealth funds in 2016 and 2017

Deal count and % of total deals



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

discrete goal to enhance investment in long-term assets.¹⁴ In 2016, CIC publicly disclosed that CIC Capital had made investments in 16 projects, with a total commitment of about \$5 billion. These included investments in core infrastructure in ports, railway, pipeline and telecommunications in Europe, Oceania and Latin America.¹⁵

11. See "QIA sells stake in Santander Brasil worth \$737 million", Reuters, April 5, 2017. Accessed at: <https://www.reuters.com/article/us-bco-santander-br-offering/qia-sells-stake-in-santander-brasil-worth-737-million-idUSKBN1772MY>

12. See "Qatar sovereign fund tells Washington will invest \$10 billion in U.S. infrastructure", Reuters, December 13, 2016. Accessed at: <https://www.reuters.com/article/us-qatar-usa-investment/qatar-sovereign-fund-tells-washington-will-invest-10-billion-in-u-s-infrastructure-sources-idUSKBN1421AF>

13. See "Qatar buys a piece of Empire State Building", New York Post, August 24, 2016. Accessed at: <https://nypost.com/2016/08/24/qatar-buys-a-piece-of-empire-state-building/>

14. See http://www.china-inv.cn/wps/portal/!ut/p/a1/jzFBc4lwEIX_Sj14pFkgEDxSQM-CW1lEchEsmEbmMDDgePDXF7BXynPKZr63L7sPZeilMsHuVcluvSNYPdaZSb_BB-NXZwwYiew22BV70o2_CT88cgHqW0HysSfvr_Kd3fDvA5AsAKVB6H4ELIIFAKH5Pz-3MHbte_T8d9GQOCeBHe5ShLHEiug1Rqo6FEw-mSzhdKsGUSTzf2qa7sXoJl-bKKRd-LiDw3tKfbtuN9T3e85qzn_fAONhA9lXrSyY6V_F0nJ5LnWqEYeq4qmGBNyTHhim6d-LYOsLLUwCUo1lxtJYM6RA74sRx4JkBSqgmQJF8mrZScfFmXeoVR4OxOfM8OfRer-vAKO3F4herM56l/dl5/d5/L3dHQSEvUUTRy9nQSEh/

15. See http://www.china-inv.cn/wps/portal/!ut/p/a1/jzHBDsFAElafxaHX7q-qL-belVEtJOKi9SCu1KtWVKn19lluEZw4z-b5k_hnCEhYH1tHpWpyKPsOTNjM4WBZ-n8BDz4dgl0Y-LOW547nxh1YfwUOR9ek_rL58vsOHenMBIBuaXDt3sg2Oz7gG-v-5-FIUv_ZfESZFxroccJamFHjeoAZklWtAkslijGcirj-ypnncsjhhRbJLiqRQL8V9vC_L07mr-QEFVVS0XgmeJuhVHBZ-UvTiXJHwnyeykYBCFS99D0rhPaaNwA7qOyQ!!/dl5/d5/L2dBISEvZOFBIS9nQSEh/

The 2016 Direct Investment Sample

Year over year, SWF investment activity, reflected in our sample, was robust. SWF direct transactions expanded significantly in 2016 to over 290 transactions from 187 in 2015, reflecting a period of active capital deployment by SWFs and their affiliates. Of 290 discrete transactions, approximately 247 of which were purchases, and the remainder divestitures or exits. Temasek - and its affiliates (including its venture holdings) - led all funds by a significant margin, having completed 75 transactions in 2016, 36 of which in various technology sectors. Other active core funds - GIC, ADIA, QIA, ISIF, and CIC - each ranked with 5% or more of total SWF purchases or in the aggregate 72% of total purchases. Among others in the sample, Norway's GPFG completed 8 new investments in 2016, as did Australia's Future Fund. Khazanah followed with 7 deals, while Mubadala was among 4 funds – also including Mumtalakat, the Kuwait Investment Authority, and the Russia Direct Investment Fund – that completed 6 new investments each.

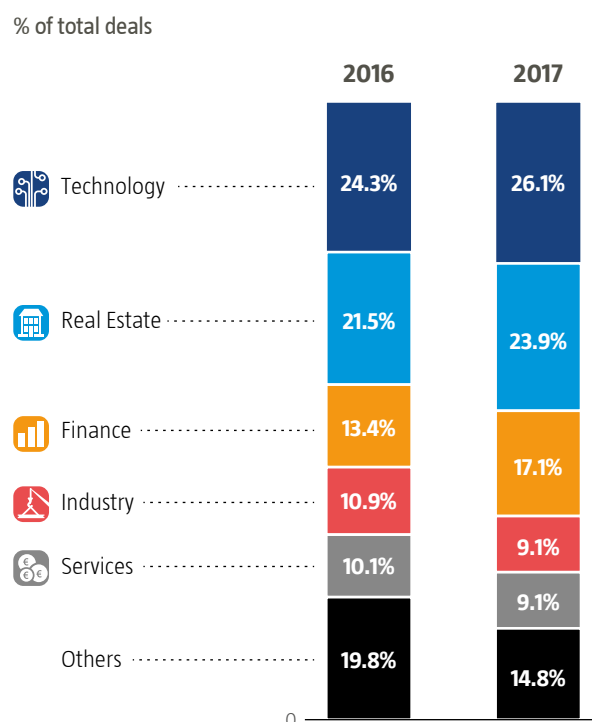
Sector-level activity similarly exhibited an extension of prior year investment trends. Among funds with greater than 10 deals, investments in real estate dominated other sectors for all but the Ireland Strategic Investment Fund. In fact, as in 2015, the real estate (21.5%), technology (24.3%), and finance (13.4%), sectors each attracted significant new capital from SWFs in 2016. This is reflected across 146 acquisitions representing nearly 60% of the total purchases.

Prominent sovereign investors in the real estate sector in 2016 included ADIA, CIC, GIC, QIA, and Norway's GPFG. The US and UK dominated target geographies for real estate. Temasek, GIC, and Khazanah led in 2016 technology deals, targeting primarily the US, UK, China, and India and focusing on several key technology and application-specific areas, such as e-Commerce, IT and services, and biotech and life sciences.

In terms of geography, prevailing distributions continued as US, India, Singapore, China, Australia, and – most significantly - the UK remained key destinations for SWF investment.

In 2016, A number of the largest funds – Temasek, GIC, ADIA, GPFG, QIA – engaged actively as sole or lead investor in very large deals. Notwithstanding, funds predominantly partner. In 2015, for example, approximately 68% of reported purchases involved SWFs partnering with co-investors, including through joint ventures. This trend continued in 2016, with

Figure 2
Top five sectors
in 2016 and 2017



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

consortia or co-investment deals increasing to 172 or about 70% of total purchases. Co-investment patterns vary widely, as do partners. The latter might include – for example - private equity firms, infrastructure or real-estate funds, investment banks, operating companies, and multilateral finance organizations, such as the IFC. Among SWFs, we identified approximately 20 new investments in 2016 that included at least 2 funds and/or their affiliates. Most striking was the diversity of partnering among large sovereigns. We reference several such arrangements later in our analysis.

2016 also saw a material increase (11% to over 20%) in the number of domestic transactions by SWFs in our sample, nearly tripling in the aggregate. These included 40 purchases with the ISIF - consistent with its mandate - again among the most active lead domestic investors (33% of the total new domestic investments), followed by Temasek (with 10

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Table 1

Co-investment deals by SWFs

Target Name	Participating SWFs	Total deal size (US\$M)	Target country & sector
Asciano	China Investment Corporation GIC Qatar Investment Authority British Columbia Investment Mgmt. Corp.	9,405	 Infrastructure
Endeavour Energy	Qatar Investment Authority British Columbia Investment Mgmt. Corp.	8,671	 Utilities
Port of Melbourne	Australia Future Fund China Investment Corp.	7,400	 Infrastructure
Nova Transportadora do Sudeste SA (Petrobras)	China Investment Corp. GIC British Columbia Investment Mgmt. Corp.	5,190	 Infrastructure
Cadent Gas (National Grid)	China Investment Cor. Qatar Investment Authority	4,523	 Utilities
Zhejiang Cainiao Supply Chain Management Co. (Alibaba Logistics)	GIC Khazanah Nasional Bhd Temasek Holdings	1,540	 Services
Alrosa PJSC	Abu Dhabi Investment Authority Mubadala Russia Direct Investment Fund	813	 Natural Resources/ Commodities
Pharmaceutical Product Development (PPD)	Abu Dhabi Investment Authority GIC	550	 Industry
Alibaba	GIC Temasek Holdings	500	 Technology
3 Milan real estate assets	Abu Dhabi Investment Authority Qatar Investment Authority The State Oil Fund of the Republic of Azerbaijan	380	 Real Estate
ICICI Home Finance Co. Ltd	GIC Temasek Holdings	320	 Finance
Greenko Energy	Abu Dhabi Investment Authority GIC Abu Dhabi Investment Authority GIC	230	 Utilities
AFG National	Mubadala Russia Direct Investment Fund	137	 Agribusiness
AU Small Finance Bank	GIC Kuwait Investment Authority	87	 Finance
Shanghai Gangfu E-Commerce Co	China Investment Corporation Russia Direct Investment Fund	74	 Technology
Moximed	Australia Future Fund Temasek Holdings	50	 Industry

Note: This table and chapter considers British Columbia Investment Management Corporation (bcIMC) as a SWF. The rest of the report and the Ranking in Annex 1 do not include it.

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

deals or 25% of total new home country transactions), and the RDIF (3). Transactions were broadly diversified and included deals in finance (12), infrastructure (6), and technology (5) as lead sectors. With respect to deal size, SWFs in our 2016 sample participated in new investments with a total aggregate value of nearly \$121B. Transaction volume directly attributable to individual SWFs amounted to approximately \$38B with three sectors – real estate, infrastructure, and technology – attracting 78% of the total and infrastructure and real estate about two-thirds. There were furthermore at least 25 transactions of \$1 billion or greater. In terms of the total deal value of acquisitions, GIC led other sovereign investors participating in deals in which the aggregate deal value was over \$39 billion. The CIC, including deals executed











through CIC Capital, also participated in several large transactions. These amounted to over \$37 billion of which over half was clustered in very three large infrastructure deals - Asciano, Nova Transportadora do Sudeste SA (Petrobras), and the Port of Melbourne.¹⁶

Across sectors, several key narratives evolve from the 2016 data and extend into the first six months of 2017. These include a keen interest in investments in disruptive technologies particularly in networking and cloud computing, e-commerce, fin-tech, and bio-technology and life sciences.

¹⁶ We highlight the details of several of these transactions in the following section.

Figure 3
Largest deals in 2016

● Co-investments with other SWFs

SWF Name	Target name & country	Volume (US\$ Million)
Qatar Investment Authority	 Rosneft	11,000
China Investment Corporation GIC Qatar Investment Authority	 Asciano	9,405
GIC	 MultiPlan Inc	7,500
Australia Future Fund China Investment Corporation	 Port of Melbourne	7,400
China Investment Corporation GIC	 Nova Transportador do Sudeste SA (Petrobras)	5,190
China Investment Corporation Qatar Investment Authority	 Cadent Gas (National Grid)	4,523
China Investment Corporation	 Zhejiang Ant Small & Micro Financial Services	4,500
Abu Dhabi Investment Authority	 LeasePlan Corporation	4,117
Public Investment Fund	 Uber	3,500
Temasek Holdings	 Meituan-Dianping	3,300

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

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The deal data also suggest a continued emphasis on well-located, high quality real estate assets and, in particular, warehouse and logistics facilities that support expanding global supply chains. With few noted (and perhaps curious) exceptions – as for example QIA's investment in the Rosneft privatization¹⁷ – sovereign investment in the resource sector declined substantially in 2016 in favor of investments in power and gas distribution, as well as clean energy sources. Similarly, core infrastructure assets also attracted considerable interest and capital flows. Several illustrations follow.

Investing Thematically

In February 2017, Temasek opened a San Francisco office following the earlier location of staff to the area by both GIC and Khazanah.¹⁸ This initiative represents a clear commitment to the technology sector in the US and globally – whether through direct placement, via private equity partnerships, or special venture capital platforms, such as Vertex Holdings. Vertex's current plans include separate funds in Israel and the United States in 2018, additional projects related to China, India, Southeast Asia, and horizontally, to target the healthcare sector. The U.S. fund will seek investments in enterprise and infrastructure related software among other areas¹⁹

In 2016, arguably the most prominent SWF investment in technology and innovation was the Saudi PIF's \$3.5 billion investment in Uber. However, a more refined analysis of sub-sector allocations, suggests a deeper sophistication in sovereign investment interest, particularly in disruptive tech. Artificial intelligence and virtual reality applications, for example, attracted significant sovereign interest in 2016. Blippar.com is a technology company specializing in augmented reality, artificial intelligence and computer vision based in London. Its Series D round was completed in March 2016, totaling at \$54 million.²⁰ The deal was led by Khazanah and

included follow-on investment from its investor base.²¹ Unity Technologies has developed a high-performance platform to create interactive 2D, 3D, VR and AR experiences.²² In July 2016, it closed a Series C round at \$181 million led by DFJ Growth that included CIC, alongside existing investors Sequoia Capital and WestSummit Capital.²³

In FinTech, Zhejiang Ant Small & Micro Financial Services, Alibaba's finance affiliate raised \$4.5 billion in April 2016 from a consortium that included the CIC and an investment vehicle of the China Construction Bank. The company runs Alipay and also controls the firm that manages Yu'E Bao, China's largest money-market fund. Ant Financial is expected to use the proceeds to invest in network infrastructure to facilitate expansion into rural and international markets.²⁴ WeLab is a FinTech startup that operates online lending platforms in Hong Kong and China. The company closed a \$160 million Series B round in January 2016 that was led by Khazanah, with participation from ING Bank and Guangdong Technology Financial Group.²⁵

Sovereign investment in real estate in 2016 focused on three major themes: high quality commercial properties in major urban centers, student housing units, and logistics properties. Representative of the commercial sector is Norges Bank Real Estate Management's 100% interest in the Vendôme Saint-Honoré property, located in central Paris.²⁶ It also continued to invest in London, acquiring a long leasehold interest in 355-361 Oxford Street for \$164 million. No financing was involved in either transaction.²⁷ Also, in the UK, ADIA acquired Queensmere and Observatory shopping centers in Slough for £130 million.²⁸ In the US, ADIA, through its subsidiary Henley Holding Company, made a development

17. In December 2016, Glencore and QIA agreed to buy a 19.5% in Russian state oil company Rosneft for over EUR 10.2B. The rationale and structure of the deal have been shrouded in a degree of mystery. In September 2017, Chinese conglomerate CFC agreed to acquire 14.16% of Rosneft from Glencore and the QIA for \$9.1B, leaving the pair holdings 0.5% and 4.7% of Rosneft respectively. See "China invests \$9.1 billion in Rosneft as Glencore, Qatar cut stakes", Reuters, September 8, 2017. Accessed at <https://www.reuters.com/article/us-rosneft-cfc-glencore/china-invests-9-1-billion-in-rosneft-as-glencore-qatar-cut-stakes-idUSKCN1B1J1HT>

18. In March 2017, the QIA also announced that it will open a Silicon Valley office.

19. See "Temasek's venture arm Vertex to launch new Israel, U.S. funds in 2018", Reuters, May 26, 2017. Accessed at <https://www.reuters.com/article/us-temasek-holdings-venturecapital/temasek-venture-arm-vertex-to-launch-new-israel-u-s-funds-in-2018-ceo-idUSKBN18M10M>

20. <https://www.crunchbase.com/organization/blippar>

21. See <https://blippar.com/en/resources/blog/2016/03/02/blippar-raises-54-million-series-d-funding/>

22. See <https://www.crunchbase.com/organization/unity-technologies>

23. See "Unity raises \$181M monster round at a reported \$1.5B valuation", Techcrunch, July 13, 2016. Accessed at <https://techcrunch.com/2016/07/13/unity-announces-181-million-monster-round-led-by-dfj-growth/>

24. See "China's Alipay, Alibaba's payment arm, gets \$4.5 billion to expand", Digital Commerce360, April 26, 2016. Accessed at <https://www.digitalcommerce360.com/2016/04/26/chinas-alipay-alibabas-payment-arm-raises-45-billion/>

25. See "Online lending platform WeLab gets \$160M series B to expand in China", Techcrunch, January 21, 2016. Accessed at <https://techcrunch.com/2016/01/21/welab/>

26. See <https://www.nbim.no/en/transparency/news-list/2016/fund-makes-new-investment-in-paris/>

27. See "Norway's oil fund buys leasehold interest in London property for \$163 mln", Reuters, July 16, 2016. Accessed at <https://www.reuters.com/article/norway-swf-realestate-london/norways-oil-fund-buys-leasehold-interest-in-london-property-for-163-mln-idUSL8N1A20C4>

28. See "Slough shopping centres sold to Abu Dhabi Investment Authority", CoStar, November 15, 2016. Accessed at <http://www.costar.co.uk/en/assets/news/2016/November/Slough-shopping-centres-sold-to-Abu-Dhabi-Investment-Authority/>

commitment to Waterline Square, a three-building luxury residential development under construction on Manhattan's Upper West Side.²⁹

GIC has been a lead in the student housing segment. In September 2016, it partnered with the Global Student Accommodation Group to acquire a 7,150-bed UK student housing portfolio from Oaktree Capital Management.³⁰ In November 2016, GIC also acquired PointPark Properties - P3 Logistic Parks, a pan-European owner, developer and manager of logistics properties, whose portfolio includes 163 high quality warehouses in 62 locations across nine countries in Europe. The transaction valued the business at \$2.6 billion and was reported to be the largest European real estate transaction in 2016.³¹

Infrastructure has long been considered an appropriate asset class for sovereign investors with long investment horizons, few near-term liabilities, and the capacity to invest in scale. Because of the size of investment required, infrastructure deals can also bring together diverse investor partners. A case that integrates both theses is the March 2016 buyout of Asciano, the Australian freight logistics company, by two global consortia for a total of approximately \$9.4 billion. These together included substantial sovereign participation. Post deal, Sydney-based Qube became Australia's largest stand-alone ports company. CIC, through CIC Capital, Canada Pension Plan Investment Board, and Global Infrastructure Partners of the US acquired the company's railway assets. Brookfield Asset Management GIC, QIA, and the British Columbia Investment Management Corp acquired the half of the company's port business not retained by Qube.³²

As oil and gas prices remain low and natural gas expands as an alternative to coal, particularly in electricity generation, investments in energy infrastructure, and specifically gas distribution, have also grown in appeal. Among sovereigns,

such assets have attracted significant new capital, particularly through co-investment. For example, in September 2016, Brookfield, GIC, and CIC Capital re-engaged to acquire a 90% holding in the natural gas pipeline unit - Nova Transportadora do Sudeste SA – of Brazil's state-run oil company Petroleo Brasileiro SA for \$5.2 billion.³³ In October 2016, subsidiaries of ADIA acquired a 16.7% stake in Scotia Gas Networks (SGN) from Perth-based SSE for £621million.³⁴ Then, in December 2016, National Grid, the UK utility, agreed to sell a majority position in its gas division to a consortium led by Australian investment bank Macquarie,³⁵ that also included CIC Capital, QIA, and Allianz Capital Partners. The deal was valued at GBP 3.6B (\$4.5 billion) with CIC Capital and Macquarie holding among the largest positions at 10.5% and 14.5% respectively.³⁶

A 2017 Preview

Our preliminary sample for the first six months of 2017 consists of 98 total transactions, 88 of which were purchases. Funds with over 5% of purchases again included Temasek, GIC, QIA, ISIF, and ADIA and Australia's Future Fund. We note that this reflects a considerably slower pace than the 142 purchases identified in our updated 2016 first half sample.

In 2017, real estate (23.9%), technology (26.1%), and finance (17%) have continued to attract dominant interest, representing 67% of acquisition deal count. Once again, deals were distributed across established geographies, predominantly the US, India, UK, China, Singapore and Australia, which together represent over 76% of total first half 2017 purchases. With regard to investment in the UK specifically, we identified 21 new purchases in our sample in 2016, with deal count increasing from 9 in the first half of the year to 12 in the second. There were similarly 9 new purchases in the first half of 2017. Such activity implies continued confidence

29. See "GIC closes on \$2.3 billion construction financing package – largest residential construction package in New York City History – for Waterline Square Development", Cision, November 29, 2016. Accessed at <https://www.prnewswire.com/news-releases/gic-closes-on-23-billion-construction-financing-package-largest-residential-construction-package-in-new-york-city-history-for-waterline-square-development-300369837.html>

30. See <http://www.gic.com.sg/newsroom?id=574>

31. See "GIC acquires P3 for EUR 2.4b from TPG Real Estate, Ivanhoe Cambridge", DealStreetAsia, November 7, 2016. Accessed at <https://www.dealstreetasia.com/stories/singapore-gic-acquires-p3-logistics-parks-from-tpg-real-estate-57510/>

32. See "Australia's Asciano bows to \$6.8 billion break-up bid", Reuters, March 14, 2016. Accessed at <https://www.reuters.com/article/us-asciano-m-a/australias-asciano-bows-to-6-8-billion-break-up-bid-idUSKCN0WH064>

33. See <https://bip.brookfield.com/en/press-releases/2016/09-23-2016-115242937>












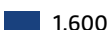








34. See "SSE sells gas networks stake to Abu Dhabi for GBP 621m", The Telegraph, October 17, 2016. Accessed at <http://www.telegraph.co.uk/business/2016/10/17/sse-sells-gas-networks-stake-to-abu-dhabi-for-621m/>

35. See "National Grid sells majority stake in UK gas infrastructure to Chinese and Qatari state investors" Independent, December 8, 2016. Accessed at <http://www.independent.co.uk/news/business/news/national-grid-sells-shares-china-qatar-investors-a7463256.html>

36. See "UK's National Grid investment by group including China's CIC approved", China Daily, April 3, 2017. Accessed at http://www.chinadaily.com.cn/world/2017-04/03/content_28786450.htm

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Figure 4
Largest deals in 2017 (H1)

SWF Name	Target name & country	Volume (US\$ Million)
China Investment Corporation	 Logicor	 13,800
Qatar Investment Authority	 Endeavour Energy	 8,671
Temasek Holdings	 Global Healthcare Exchange	 1,800
Temasek Holdings	 Kayne Anderson Real Estate Advisors	 1,600
GIC	 Student housing portfolio	 1,600
GIC	 Allfunds Bank	 1,600
China Investment Corporation	 InterPark	 1,100
GIC	 Office assets in Washington DC metro	 1,050
GIC	 60 Wall Street	 1,040
China Investment Corporation	 Airbnb	 1,000

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

in the UK as an investment destination³⁷ and suggests that any negative impacts on sovereign investment stemming from the Brexit vote have thus far been muted.

Between January and June 2017, SWFs had participated in at least ten deals with transaction value over \$1 billion. The largest and most significant of these was CIC's acquisition of Logicor. The second was participation by QIA and British Columbia Investment Management Corp in a consortium to acquire majority interests in Endeavour Energy, a New South Wales government utility. Both deals again illustrate the attractiveness among SWFs for direct investments in long-term core assets, particularly in real estate and infrastructure. An analysis of the 10 largest deals shows the strong dominance of the United States and the United Kingdom as preferred

target for large-scale transactions in the first half of 2017. The only exception is Spain, which with the Allfunds deal classifies to the top 10 table. Indeed, only a month later, beyond the analysis of this report, a consortium joined by the Abu Dhabi Investment Council bought Naturgas, the EDP's gas distribution subsidiary in Spain, for almost \$3 billion.

Logicor is a European logistics company with properties across the UK and continental Europe. CIC - as sole investor - acquired the company from real estate funds managed by Blackstone for \$13.8 billion. Reuters, in fact, reported the deal as the largest private equity real estate deal on record in Europe.³⁸ Especially interesting about this transaction is CIC's

37. See "Singapore's GIC warns of weaker returns". Accessed at <https://www.ft.com/content/f6a796f2-630e-11e7-8814-0ac7eb84e5f1>

38. 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>

reported financing structure: A €6.8B (\$7.96 billion) syndicated loan underwritten by Bank of China and China Construction Bank. The use of leverage by SWFs – particularly in real estate transactions – is not unusual, but for CIC is noteworthy as a new entrant into the syndicated loan market.³⁹

The Endeavor Energy transaction was executed by an Australian consortium that, in addition to QIA and BCIMC, included Macquarie Infrastructure and Real Assets and AMP Capital. The group paid approximately \$8.6B for a 50.4% stake in the utility and assumed control of a 99-year lease to operate an extensive electricity distribution network jointly with the NSW Government.⁴⁰

In addition to logistics, power distribution, and infrastructure, technology and real estate themes have also extended robustly into 2017. In life sciences, for example, informed by demographic trends and forecasts of global healthcare spending approaching \$8.7 trillion by 2020⁴¹, sovereign investment has continued to flow into healthcare, biotech, pharma, and data science applied to healthcare applications. Among the largest and most prominent of deals – announced in January 2017 – was Temasek's \$800 million investment in Verily Life Sciences, a subsidiary of Alphabet, the holding company structured from Google. Verily combines solutions derived from data science, technology, and healthcare to inform enhanced care management.⁴² Temasek will receive a board seat with its minority stake, but perhaps more importantly a perch from which to monitor and evaluate the sector and related emerging technologies.⁴³

AI and cloud technologies also continued to attract significant funding from SWFs. Improbable, a British technology company that enables large-scale simulations of complex virtual worlds,⁴⁴ completed a major funding in 2017 that

valued the company at \$1B. The deal included SoftBank – among others – with participation by Temasek, who had also invested in an earlier March 2015 round.⁴⁵ Fugue, a startup developing an infrastructure-level operating system for managing cloud-based workloads,⁴⁶ closed an approximately \$41M Series D financing round in January 2017, led by New Enterprise Associates (NEA), with participation from the Australia Future Fund.⁴⁷ Similarly, VeloCloud, a developer of software-defined wide area networks, closed a \$35 million Series D round in March 2017. The deal was led by Hermes Growth Partners and included new investors Telstra Ventures and Khazanah.⁴⁸ In November 2017, VMware announced its intent to acquire VeloCloud⁴⁹, affording Khazanah a quick exit.

The allure of blockchain technology likewise attracted sovereign interest. R3CEV is a developer of commercial applications for distributed ledger technology. It is a consortium of over 80 banks, clearing houses, exchanges, market infrastructure providers, asset managers, central banks, conduct regulators, trade associations, professional services firms and technology companies.⁵⁰ In June of 2017, the group completed a \$107 million financing that included among others Bank of America Merrill Lynch, HSBC, and Intel. Among SWFs Temasek participated in this financing.⁵¹

SWFs remain active investors in large private equity deals targeting e-commerce. In March 2017, Airbnb closed a \$1B funding round that valued the company at \$31 billion. The round included a \$100 million investment from CIC, a key partner as the company expands its presence in China.⁵²

39. See "China's CIC raising \$8 billion loan for Logisor acquisition", Reuters, July 28, 2017. Accessed at <https://www.reuters.com/article/us-china-cic-logisor/chinas-cic-raising-8-billion-loan-for-logisor-acquisition-basis-point-idUSKBN1AD1A0>

40. 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>

41. See "Cash injection – sovereign funds target healthcare", Thomson Reuters, October 6, 2017. Accessed at <https://blogs.thomsonreuters.com/sustainability/2017/10/06/cash-injection-sovereign-funds-target-healthcare/>

42. See <https://verily.com>

43. See "Alphabet's Verily preps for China entry with Temasek funds", Bloomberg, January 26, 2017. Access at <https://www.bloomberg.com/news/articles/2017-01-26/alphabet-s-verily-preps-for-china-entry-with-temasek-investment>

44. See <https://improbable.io/company/about-us>

45. 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>

46. See <https://www.crunchbase.com/organization/luminal>

47. See <https://fugue.co/press/releases/2017-01-05-fugue-raises-41-million-in-funding-to-solve-cloud-operations-complexity.html>

48. See <http://www.velocloud.com/news/2017/velocloud-raises-35-million-to-meet-demand-for-cloud-delivered-sd-wan>

49. See <https://www.vmware.com/company/acquisitions/velocloud.html>

50. See <https://www.crunchbase.com/organization/r3-cev>

51. See "Blockchain consortium R3 raises \$107 million", Techcrunch, May 23, 2017. Accessed at <https://techcrunch.com/2017/05/23/blockchain-consortium-r3-raises-107-million/>

52. 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/>

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Airbnb's roster of investors is extensive and includes a range of institutional private equity funds and high net worth individuals. Among SWFs, Temasek participated in Airbnb's E round in 2015.⁵³

Finally, in the commercial real estate sector, GIC, in particular, remained very active, partnering with Paramount Group, Inc. in January 2017 to acquired 60 Wall Street through a 95/5 joint venture for \$1.04 billion for which the JV secured \$575 million in financing.⁵⁴ GIC also extended its program of acquiring student housing assets, launched in 2016. In February 2017, it agreed to invest \$283.5 million in a complex at Aston University in Birmingham, England. The transaction follows the two earlier student housing deals completed with GSA in late 2016.⁵⁵

reflect long-term changes in global socio-economic patterns driven by demographic and technological change. In this respect the role and interests of SWFs have become indistinguishable from other large public investors, as the expanding role of their partnerships imply.

Global development – social and economic infrastructure, technology, health sciences, etc – requires vast amounts on long-term, stable capital capable of insuring effective investment governance. As the scope and scale of sovereign and public participation in global markets continues to expand, so too do the burdens on asset owners as responsible global investment partners. Staying this course will have lasting consequences for the quality and inclusiveness of global development – a heavy burden indeed.

Maintaining the Heading: Key Takeaways

Sovereign investors have continued to track to a steady investment heading despite challenge posed by global markets and the regular infusions of geopolitical instability. By no mean exhaustive, our survey sought to highlight key themes and strategies as articulated through a variety of transactions across sectors, subsectors, and geographies. Certainly some emerging themes – e.g. clean energy and sustainability – were under-represented in our analysis in favor of a focus on prevailing investment patterns. These build on existing competencies that allow sovereign and public investors to allocate capital to direct investments in scale. They further suggest the capacity of large asset owners to leverage extended investment horizons, and – in many cases - limited liquidity exposures, to exploit opportunities that

53. See https://www.crunchbase.com/organization/temasek/investments/investments_list

54. See <http://www.gic.com.sg/newsroom?id=610>

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

