TheCityUK

CLIFFORD
CHANCE

The UK as a leading centre for international sovereign wealth funds

June 2021

About TheCityUK

TheCityUK is the industry-led body representing UK-based financial and related professional services. We champion and support the success of the ecosystem, and thereby our members, promoting policies in the UK, across Europe and internationally that drive competitiveness, support job creation and ensure long-term economic growth. The industry contributes over 10% of the UK's total economic output and employs more than 2.3 million people, with two thirds of these jobs outside London. It is the largest tax payer, the biggest exporting industry and generates a trade surplus exceeding that of all other net exporting industries combined. It also makes a real difference to people in their daily lives, helping them save for the future, buy a home, invest in a business and protect and manage risk.

About Clifford Chance

Clifford Chance is one of the world's pre-eminent law firms, with significant depth and range of resources across five continents. As a single, fully integrated, global partnership, we pride ourselves on our approachable, collegial and team-based way of working. We always strive to exceed the expectations of all of our clients.

Our Global Financial Investors Group advises the world's leading private equity firms, asset managers, alternative capital providers, insurers, real estate and infrastructure funds, pension and sovereign wealth funds, and family offices. Our experience and capabilities include fund structuring and formation, financing and deal execution, restructuring and disputes, as well as regulatory, ESG, antitrust, tax, technology and employment matters.

Contents

Foreword from TheCityUK

Our latest economic research examines a financial services sub-sector that is often surrounded by a certain mystique: sovereign wealth funds (SWFs). This report sheds light on a particular class of fund renowned for its relative lack of disclosure of data, examining the scale and segmentation of SWF assets under management and considering SWFs as critical providers of global capital.

SWFs have risen in number and grown substantially in assets under management over the past decade (notwithstanding the pandemic and the volatility in commodity prices in 2020, which had a direct effect on funds' assets). SWF assets under management reached $6.4trn globally in 2020, up from $4.1trn in 2010. In addition, TheCityUK estimates there was also $7.9trn held in other sovereign investment vehicles in that year, such as pension reserve funds and development funds. This reflects the changing global geography of finance and investment and the rising importance of emerging markets in the global economy.

These figures demonstrate the significant scale of capital available for investment. The long-term investment horizon of SWFs makes them particularly appropriate financiers of infrastructure projects, among other long-term productivity-enhancing investments. In the current low-yield environment, some SWFs are looking to new industries and asset classes in emerging and developed markets to generate higher returns and diversify portfolios—including, for example, green infrastructure; SWFs' investment into green assets increased to $11bn over the period 2015-2017. As the UK and other countries around the world focus in the coming months and years on post-pandemic economic rebuilding, SWFs represent an addition to the range of financing sources that governments can turn to, alongside other long-term investors such as insurers and pension funds.

Meanwhile, the UK's openness to foreign business, deep pool of expertise and experience, transparent legal system, and safe and stable regulatory environment have contributed to the country's position as one of the world's leading fund-management centres, and this includes SWFs. London in particular is an important centre for SWFs as a clearing house and location from which some of these funds are managed. At a time of economic and geopolitical upheaval, it is little surprise that there is renewed debate about the UK's competitiveness as a global financial services centre. But as SWFs continue to open international offices, the potential for the UK to continue its leading role as a host to some of the world's largest and most important international investors remains undiminished.

Anjalika Bardalai

Chief Economist & Head of Research, TheCityUK

Foreword from Clifford Chance

Sovereign Wealth Funds (SWFs) play an increasingly pivotal role in global economies, not least as a result of their continued growth and asset diversification strategies.

The UK is a significant investment destination for many SWFs. It remains one of the largest and most accessible markets, with a stable and investor friendly regulatory and legal environment.

The UK is also fertile ground for innovative business. With some focus on alternative assets, to generate longer term returns and positioning, we have seen greater activity by SWFs in sectors such as technology and life sciences but also continued interest in more traditional sectors, including in UK real estate and infrastructure assets that continue to present attractive opportunities.

In addition, co-investments with financial sponsors are increasingly used by SWFs, as a way to share risk and reward but also to seek to provide greater and broader value to portfolio companies.

Importantly, as you will see from our case study later in this report, ESG considerations now feature prominently on SWF agendas, for numerous reasons, including their substantial size/ability to be a force for good (and for change), sovereign-to-sovereign initiatives, reputational imperatives and, ultimately, a very long-term investment horizon and mandate.

With the UK hosting COP26 in Glasgow later this year, the volume of ESG related legislative changes emerging in the EU, US and China, as well as a focus on how we 'build back better' following the Covid-19 pandemic, we certainly expect SWFs to continue to adopt (and adapt) ESG driven investment strategies in the years ahead.

Clifford Chance has a long tradition of partnering with and supporting global SWFs, across both developed and emerging markets. Our teams and specialists advise on the full cycle, starting from fund formation, policy design and structuring to deployment/M&A, financing, ongoing asset management and governance matters through to exits, initial public offerings and restructurings. Central to this is our integrated, global offering, including in relation to antitrust, ESG and other regulatory areas, especially at a time of heightened regulation globally.

We are delighted to be a sponsor of the The CityUK's report 'The UK as a leading centre for international sovereign wealth funds' and hope this proves to be of interest to a broad audience in the UK and beyond.

Mohammed Al-Shukairy

Global SWF Group Lead at Clifford Chance and Regional Managing Partner, Middle East

Executive summary

- While sovereign wealth funds (SWFs) have existed for over 100 years, their profile has risen considerably over the past 30 years. The substantial size and high liquidity of SWFs' assets have turned the government sector into an important international investor group, and these funds are an increasingly important source of global capital.
- According to our calculations based on data from the Sovereign Wealth Fund Institute, assets under management of SWFs increased by an average of 8% annually from 2010 to 2019. However, assets under management declined by 21%, to $6.4trn, in 2020 on account of the economic impact of the Covid-19 pandemic, together with the related volatility in commodity prices.
- SWFs typically adopt a long-term approach to investing. In the current low-yield environment, some SWFs are looking to new industries and asset classes in emerging and developed markets to generate higher returns and diversify portfolios. Seventy-eight percent of SWFs held bonds in 2018, down from 82% in 2016, as SWFs reallocated their capital into stocks and alternatives.
- Some SWFs are increasingly interested in emerging and or high-growth sectors like low-carbon infrastructure. Environmental, Social and Governance (ESG) issues are of particular and growing importance and interest to SWFs.
- SWFs also engage in direct investments and are increasingly participating in co-investments with private equity funds, pension funds and specialist advisers, although the percentage of asset allocation in SWFs' direct investments has trended downwards in recent years.
- The UK is one of the largest and most open markets in the world for fund management. The reputation of the UK as a leading international centre for fund management is built on a number of factors, including: the openness of the UK to foreign business, the safe and stable regulatory environment, the network effects associated with the cluster of financial and related professional services, a broad skills base, the pivotal international position of English law, and the availability of specialist expertise in investments. London in particular is an important centre for SWFs as a clearing house and location from which some of these funds are managed.
- North America and Europe are the major regions for SWFs' public equity, real estate and hedge fund investments, while SWF investment in emerging-market infrastructure, natural resources and hedge funds is particularly strong. The UK is an important destination for foreign investment generally, and SWF investment in particular. This means that SWFs can potentially play an important role in the UK's post-pandemic economic rebuilding.

Global sovereign assets under management

Introduction to SWFs. SWFs are special purpose investment funds or arrangements, owned by the general government. Created by governments for macroeconomic purposes, SWFs hold, manage, or administer assets to achieve financial objectives, and employ a set of investment strategies which include investing in foreign financial assets. SWFs' assets are commonly established out of current-account surpluses (Figure 4), official foreign currency operations, the proceeds of privatisations and fiscal surpluses.

While SWFs have existed for over 100 years, their profile has risen considerably over the past 30 years.[1] The substantial size and high liquidity of SWFs' assets has turned the government sector into an important international investor group.

The global fund management industry is consolidating into major financial centres where it can create economies of scale around sophisticated information systems and deep pools of skilled professionals. SWFs are increasingly opening international offices in order to be closer to the markets in which they operate in and expand their investment opportunities. London and other cities in the UK are well placed to continue to benefit from these trends.

Types of sovereign investment vehicles

Both SWFs and other sovereign investment vehicles are government owned investment entities that seek to generate financial returns for the nation. Their funding, operations and objectives, however, differ.

SWFs

Stabilisation funds are set up by countries rich in natural resources, having balance-of-payments surpluses and/or having fiscal surpluses to provide budgetary support and protect from sharp domestic economic fluctuations. These funds are built up to decrease the volatility of government revenues.

Savings funds have longer term wealth creation as a goal and are intended to share wealth across generations. For countries rich in natural resources, savings funds transfer non-renewable assets into a diversified portfolio of international financial assets to provide for long-term objectives.

Other sovereign investment vehicles

Sovereign and public pension reserve funds represent investment vehicles funded with assets set aside to meet the government's future entitlement obligations to its citizens.

Government investment funds are funds established to invest official government reserves. Often, the assets in such arrangements are still counted as reserves.

Government development funds allocate resources for funding priority socioeconomic projects, such as infrastructure.

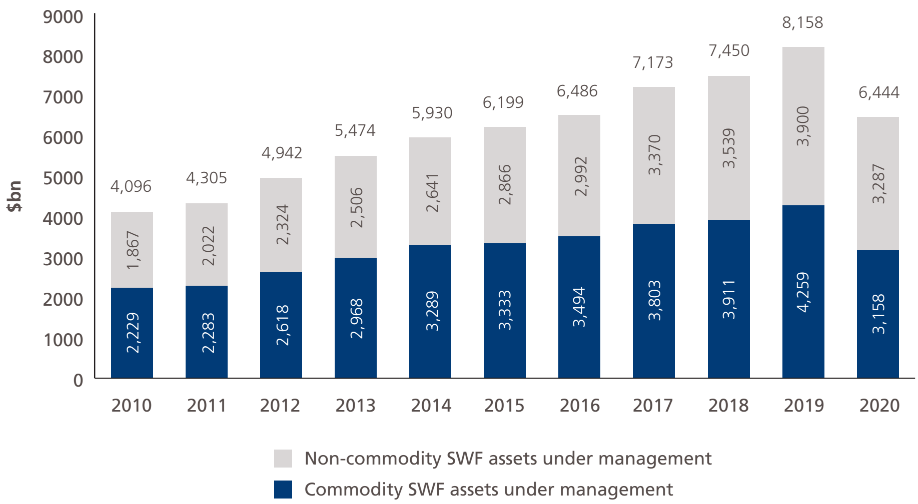
State-owned enterprises are companies over which the state has significant control. This category includes a wide variety of entities, including manufacturing and financial firms. State-owned enterprises can themselves undertake foreign investment.

1 SWF Institute, 'What is a sovereign wealth fund?', (April 2021), available at: https://www.swfinstitute.org/research/sovereign-wealth-fund

SWF assets under management. Assets under management of SWFs increased by an average of 8% annually from 2010 to 2019, according to our calculations based on data from the Sovereign Wealth Fund Institute. This was due to growth in existing SWFs' assets as well as the launch of new funds. However, Covid-19 has affected economic output in most countries globally, including those that have SWFs. The backdrop of the pandemic, together with volatility in commodity prices, led to a decline in assets under management of SWFs by 21% to $6.4trn in 2020 (Figure 1).[2] In addition to SWFs' assets, there was also $7.9trn held in other sovereign investment vehicles, such as pension reserve funds and development funds (Figure 2).

Estimates of the size of this market differ widely due to varying definitions of SWFs and limited disclosure and lack of transparency of a number of SWFs. Transparency in the market has gradually been improving since the development and implementation of the Santiago Principles in 2008, a list of best practices for SWFs.

Figure 1: SWF assets under management
Source: TheCityUK estimates based on SWF Institute and Preqin data



Distinct from SWFs but sharing many common elements with them are other sovereign investment vehicles such as sovereign and public pension reserve funds, government investment funds, government development funds and state-owned corporate entities.

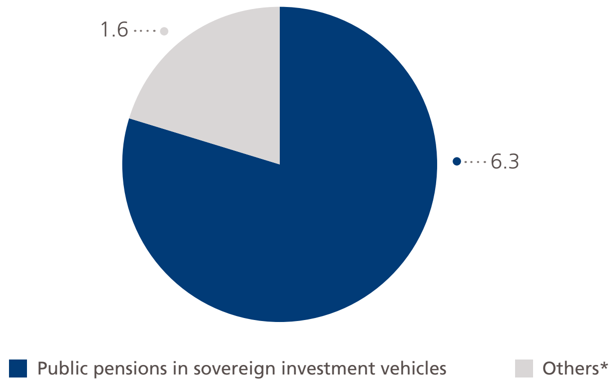
2 TheCityUK estimates based on SWF Institute, 'What is a sovereign wealth fund?', (April 2021), available at: https://www.swfinstitute.org/research/sovereign-wealth-fund

Figure 2: Sovereign investment vehicles, $trn
Source: TheCityUK estimates based on SWF Institute and Preqin data

	Sovereign wealth funds				
	Commodity funds	Non-commodity funds	Total assets	Other sovereign investment vehicles	Official foreign exchange reserves not in SWFs
2010	2.2	1.9	4.1	6.3	7.1
2011	2.3	2.0	4.3	6.5	8.2
2012	2.6	2.3	4.9	7.3	8.6
2013	3.0	2.5	5.5	7.8	9.1
2014	3.3	2.6	5.9	8.0	8.9
2015	3.3	2.9	6.2	8.1	7.9
2016	3.5	3.0	6.5	8.3	7.5
2017	3.8	3.4	7.2	9.0	7.9
2018	3.9	3.5	7.5	9.3	7.7
2019	4.3	3.9	8.2	10.1	7.7
2020	3.2	3.3	6.4	7.9	8.7
	- Stabilisation funds - Savings funds			- Reserve invest. corp. - Development funds - Pension reserve funds - State-owned comp.	Central banks' official reserves

TheCityUK estimates that assets held by public pensions in sovereign investment vehicles totalled $6.3trn at the end of 2020, accounting for 80% of other sovereign investment vehicles. The remaining $1.6trn (20% of the total) were in reserve investment corporations, development funds and state-owned companies (Figure 3). According to the OECD, countries such as the US, Japan, and Sweden hold funds to finance future payouts on pay-as-you-go pensions. Remaining funds include government development funds, government investment corporations and overseas investments of government-owned enterprises.

Figure 3: Other sovereign investment vehicles, $trn, end 2020
Source: TheCityUK estimates based on SWF Institute data



*Others include reserve investment corporations, development funds and state-owned companies

Total assets: $7.9trn

Geographical distribution of SWFs. The growing prominence of SWFs is a phenomenon of the past decades. There are over 120 funds in existence, of which more than 40 have been established since 2005.[3] A number of new SWFs were launched in recent years or will launch imminently. For example, Indonesia is currently planning to set up a sovereign wealth fund, aiming to propel its domestic infrastructure investment. The SWF has started its second round of funding since December 2020, after the fund finished its first round of funding and raised up to $15.5bn. Israel launched its SWF, Israeli Citizens' Fund, in January 2021. The fund accumulates tax revenues from gas reservoirs and natural resources; 3.5% of revenues generated by the fund will be distributed for social, economic and educational purposes. The Sovereign Fund of Egypt was established in 2019. The objective of the fund is to invest in underutilised assets in Egypt, generate future generations' wealth and support Egypt's economic growth. The UK has also debated the possibility of establishing a sovereign wealth fund (see page 13 for details). Assets of SWFs ($6.4trn) are now larger than those of the private equity ($4.1trn) and hedge fund ($3.4trn) industries, but still much smaller than conventional fund management assets (pension, insurance and mutual funds); for more information see Figure 4.

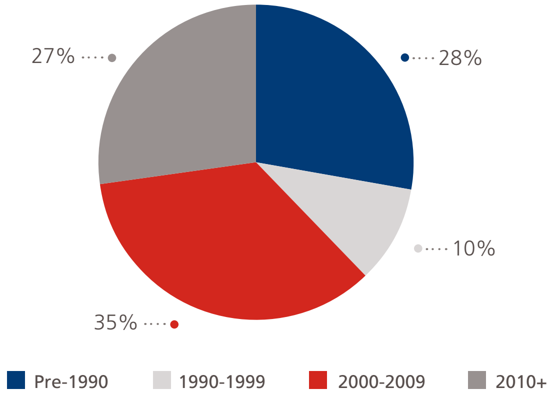
Figure 4: Global fund management industry, assets under management, $trn

Source: TheCityUK estimates based on data from Willis Towers Watson, Investment Company Institute, Insurance Europe, The General Insurance Association of Japan, The Life Insurance Association of Japan, Insurance Bureau of Canada, Canadian Life and Health Insurance Association, Insurance Information Institute, International Monetary Fund, Barclay Hedge, Preqin, Sovereign Wealth Fund Institute and Capgemini

	Assets under management, $trn	
Pension funds (2019)	46.7	
Mutual funds (2019)	54.9	Conventional investment management assets
Insurance funds (2018)	36.5	
SWFs (2020)	6.4	
Private equity (2019)	4.1	Non-conventional (alternative) investment management assets
ETFs (2020)	6.6	
Hedge funds (2020)	3.4	
Private Wealth (2019)	74.0	

3 SWF Institute, 'What is a sovereign wealth fund?', (April 2021), available at: https://www.swfinstitute.org/research/sovereign-wealth-fund

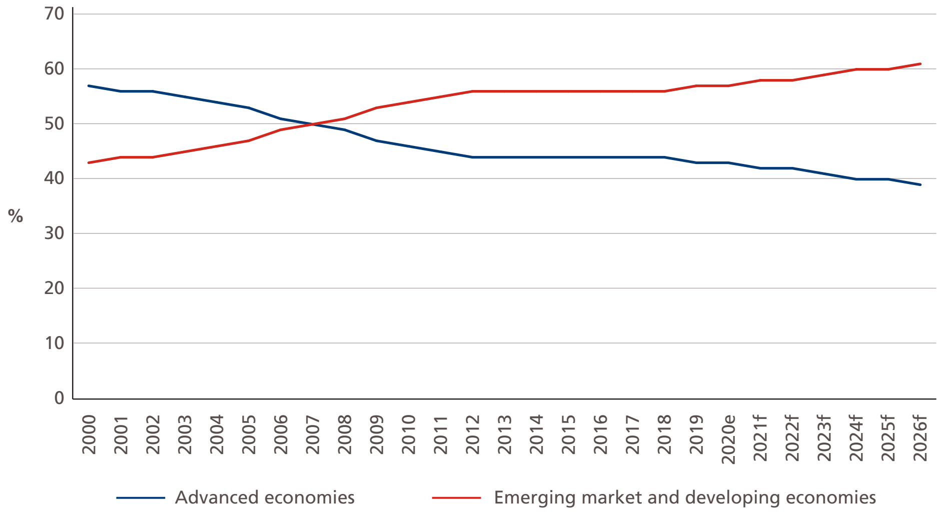
Figure 5: Launch year of large SWFs, % share by number
Source: OMFIF



Some SWFs have decided to launch representative offices in major international financial centres in recent years. Others have been well established internationally for decades; for example, the Kuwait Investment Authority has had a representative office in London since 1953.

The weight of the world economy is gradually shifting from advanced economies to the emerging economies (Figure 6). There are a growing number of large institutional investors originating far from the traditional international financial centres.

Figure 6: World GDP (based on purchasing power parity)
Source: TheCityUK calculations based on International Monetary Fund data



Six of the ten largest SWFs in the world are from emerging markets.[4] The largest SWFs include the Norway Government Pension Fund Global, China Investment Corporation, Hong Kong Monetary Authority Investment Portfolio, Abu Dhabi Investment Authority, and Kuwait Investment Authority (Figure 7). Estimates of holdings of some SWFs vary widely due to limited disclosure and transparency.[5]

4 SWF Institute, 'Top 92 largest sovereign wealth fund rankings by total assets', (April 2021), available at: https://www.swfinstitute.org/fund-rankings/sovereign-wealth-fund

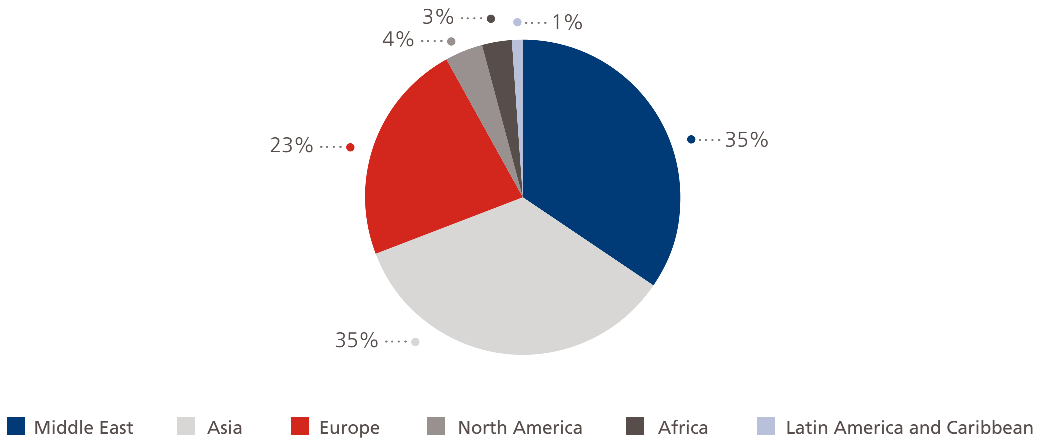
5 Ibid.

Figure 7: Largest ten SWFs as of April 2021
Source: SWF Institute

	Assets under management, $bn	Region	Country	Inception year	Source
Norway Government Pension Fund Global	1,323	Europe	Norway	1990	Commodity
China Investment Corporation	1,046	Asia	China	2007	Non-Commodity
Hong Kong Monetary Authority Investment Portfolio	581	Asia	China-Hong Kong	1993	Non-Commodity
Abu Dhabi Investment Authority	580	Middle East	UAE-Abu Dhabi	1976	Commodity
Kuwait Investment Authority	534	Middle East	Kuwait	1953	Commodity
GIC Private Limited	453	Asia	Singapore	1981	Non-Commodity
Temasek Holdings	417	Asia	Singapore	1974	Non-Commodity
Public Investment Fund	399	Middle East	Saudi Arabia	1971	Commodity
National Council for Social Security Fund	372	Asia	China	2000	Non-Commodity
Investment Corporation of Dubai	302	Middle East	UAE - Dubai	2006	Commodity

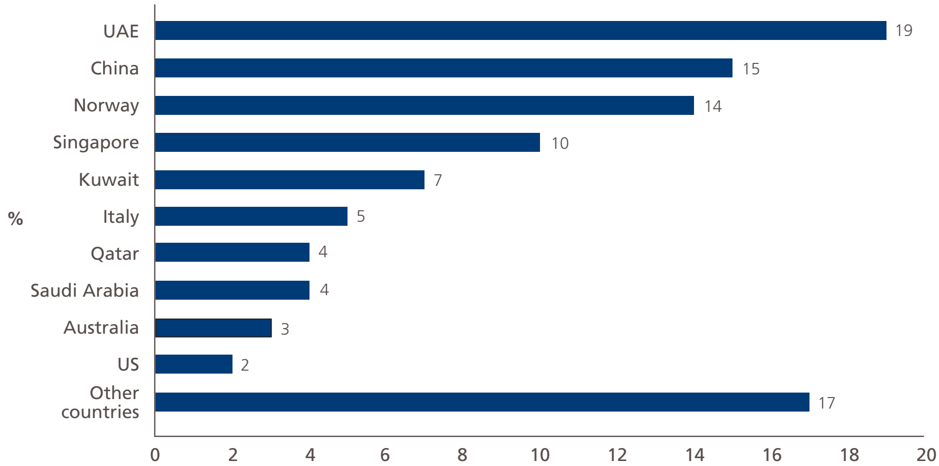
Asian and Middle Eastern countries accounted for more than two-thirds of SWFs' assets in 2020. Europe generated most of the remainder (Figure 8). The UAE had the largest country share, with around a fifth of the global total, followed by China (15%). Countries from the Middle East are very prominent in individual country rankings. The UAE is followed by Kuwait (7%), and Qatar and Saudi Arabia (4% each). Norway, Singapore and Italy are also important centres with 14%, 10% and 3% of global assets, respectively (Figure 9).[6]

Figure 8: SWF market share by region, %, 2020
Source: OMFIF



6 TheCityUK calculations based on OMFIF, 'Global public investor 2020', (February 2021), available at: https://www.omfif.org/wp-content/uploads/2020/08/GPI_2020-1.pdf

Figure 9: Global SWF assets by country as a share of global total, 2020
Source: OMFIF



A UK SWF?

In recent years there have been periodic calls from members of parliament, economists and others for the UK government to create a SWF. Arguments in favour of the establishment of a UK SWF include the idea that such a fund would increase investments over the long-term, support new industries, and overcome the challenges of the future. In his speech at the Liberal Democrats' spring conference in March 2021, Ed Davey MP proposed that money raised from green energy auctions be used to create a green SWF.[7] A prominent financial journalist has argued that against the backdrop of Covid-19, a SWF is needed for the UK government to invest in equities rather than providing loans to companies[8] (equity investment reduces debt burden of businesses, and for the investor, generates higher returns over the long-term, compared with other traditional asset classes, such as bonds. The fund would buy equities of key businesses outside of London to support pandemic-hit regional companies.)

Although there may be advantages to allocating government funds specifically to long-term investments (in the manner of the Life Sciences Investment Programme; see pg 29 for details), the UK would face challenges in establishing an SWF in the traditional sense. As noted earlier in this report, SWFs are established by governments to manage and invest wealth generated from current-account surpluses, often accumulated by commodity exports. In contrast, the UK runs a current-account deficit (equivalent to 4.3% of GDP in 2019, and averaging 4% of GDP over the past decade). The UK has been a net crude oil exporter since 2016, with crude oil exports totalling £21bn in 2019. However, the trade surplus generated from crude oil exports is small, at £1.6bn in 2019, relative to the total UK current-account deficit of £95.3bn. This means that any sovereign UK investment fund would be financed out of general government receipts—or potentially gilt issuance, given that the UK has also run a budget deficit in eight out of the past ten years. According to data from the Office for National Statistics, the current budget deficit was equivalent to 9.8% of GDP in 2020, and 3.3% on average over the past decade.

7 Ed Davey, speech at the Liberal Democrats spring conference, March 2021, (21 March 2021), available at: https://www.libdems.org.uk/s21-ed-speech

8 MoneyWeek, 'Turn the Covid-19 bailout into a sovereign wealth fund', (5 May 2020), available at: https://moneyweek.com/economy/uk-economy/601261/turn-the-covid-19-bailout-into-a-sovereign-wealth-fund

Sources of funds. SWFs are only one of the many channels through which governments deploy their financial assets. The funding of SWFs comes from various sources, which can be combined. SWFs are generally the result of current account surpluses from: exports of oil and other commodities or manufactured goods; fiscal surpluses; public savings; and privatisation receipts.

SWFs fall into one of two major categories:

- Commodity funds funded predominantly from oil and gas export revenue
- Non-commodity funds funded mainly from official foreign exchange reserves and in some cases from pension reserves.

Growth in SWFs' assets is closely linked to the price of commodities, predominantly oil, as around half of SWFs' assets originate from commodity exports.[9] For years, major oil producing exporters funnelled foreign exchange reserves into funds aimed at stabilising economies and paying for pensions. A sharp drop in the oil prices in the first half of 2020 left some of these countries with a cash shortfall (Figure 10).[10] The subsequent rebound in oil prices has allowed some oil-rich countries to rebuild assets in their commodity funds.

Figure 10: Crude oil price, average
Source: World Bank

In terms of average current account imbalances, the US has run the largest deficit over the past decade, and Germany and China have been the top two countries running surpluses (Figure 11).[11] However, the Chinese economy is rebalancing and restructuring in recent years, shifting the country from being an investment- and export-based economy to more of a consumption-based economy. This structural change and slower GDP growth in China is likely to constrain growth in its SWF assets in the next few years.

9 TheCityUK estimates based on Preqin, 'Preqin special report: Sovereign wealth funds', (August 2018), p.5, available at: https://docs.preqin.com/reports/Preqin-Special-Report-Sovereign-Wealth-Funds-August-2018.pdf

10 World Bank, 'World Bank commodity price data (the Pink Sheet)', (5 January 2021), available at: https://www.worldbank.org/en/research/commodity-markets

11 TheCityUK calculations based on IMF, 'World economic outlook database', (April 2021), available at: https://www.imf.org/en/Publications/WEO/weo-database/2021/April

Figure 11: Largest current-account surplus and deficit economies, 2009-2019 average
Source: TheCityUK calculations based on IMF data

	Largest surplus economies, $bn
Germany	258.3
China	189.6
Japan	140.1
Netherlands	74.4
South Korea	63.8
Switzerland	62.2
Russia	62.0
Saudi Arabia	60.0
Taiwan	57.4
Singapore	53.6

	Largest deficit economies, $bn
US	-407.9
UK	-106.7
Brazil	-57.5
Canada	-48.6
India	-43.5
Australia	-41.6
Turkey	-34.8
Mexico	-18.7
France	-18.0
Indonesia	-15.9

Commodity SWFs, or natural resource SWFs, are funded predominantly from oil exports, with gas and mineral revenue also representing important sources. Many oil exporting countries have set up SWFs to invest oil trade surpluses in global financial assets. Other investors include central banks, government investment funds, wealthy individuals and private and government-controlled companies. Norway Government Pension Fund Global is the largest global SWF, predominantly funded from the government's oil-related revenues. For the purposes of this report we have classified this type of fund as commodity SWF.[12]

The major oil exporting countries with commodity SWFs include the Gulf Cooperation Council and other Middle Eastern and North African countries; Russia; Canada; Nigeria and Angola (Figure 12).[13] The focus of commodity SWFs is on maintaining domestic economic stability insuring against the risk of commodity price fluctuation; and providing an income stream for future generations in the event of long-term decline in export revenue from oil and other commodities.

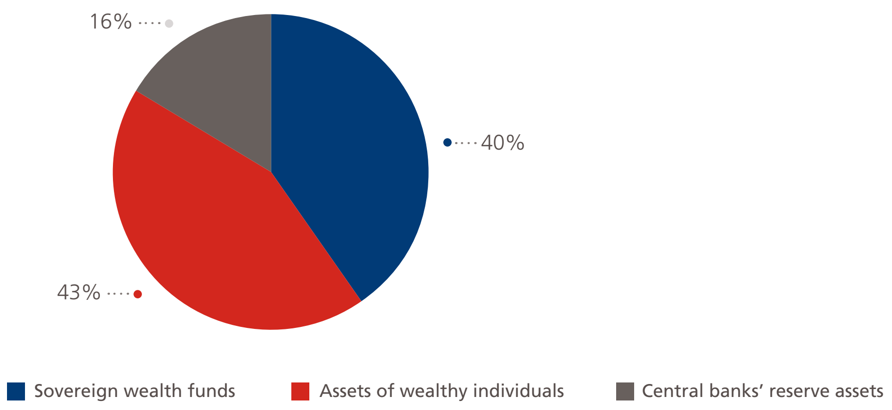
12 SWF Institute, 'Top 92 largest sovereign wealth fund rankings by total assets', (April 2021), available at: https://www.swfinstitute.org/fund-rankings/sovereign-wealth-fund
13 Central Intelligence Agency, 'The world factbook: Crude oil – proved reserves', (January 2021), available at: https://www.cia.gov/the-world-factbook/field/crude-oil-proved-reserves/country-comparison

Figure 12: Crude oil exports
Source: Central Intelligence Agency

	Million bbl/day	% share	Date of information
Saudi Arabia	7.3	17%	2015 est.
Russia	4.9	12%	2015 est.
Iraq	3.1	7%	2015 est.
Canada	2.8	7%	2017 est.
United Arab Emirates	2.6	6%	2015 est.
Nigeria	2.1	5%	2015 est.
Angola	1.8	4%	2015 est.
Venezuela	1.7	4%	2015 est.
Kazakhstan	1.4	3%	2015 est.
Norway	1.4	3%	2017 est.
Other countries	13.5	32%	
Total	**42.5**	**100%**	

Over half of the $7.9trn in oil exporters' foreign investment assets was held by governments at the end of 2020, with wealthy individuals accounting for the remaining 43%. Nearly three-quarters of government-controlled funds were held in SWFs (Figure 13). Assets of SWFs originating from commodity exports increased by 91% between 2010 and 2019, before declining by 26% to $3.2trn in 2020 (Figure 14). Commodity funds' share of total SWFs' assets decreased from 54.4% to 49% over the past decade.[14]

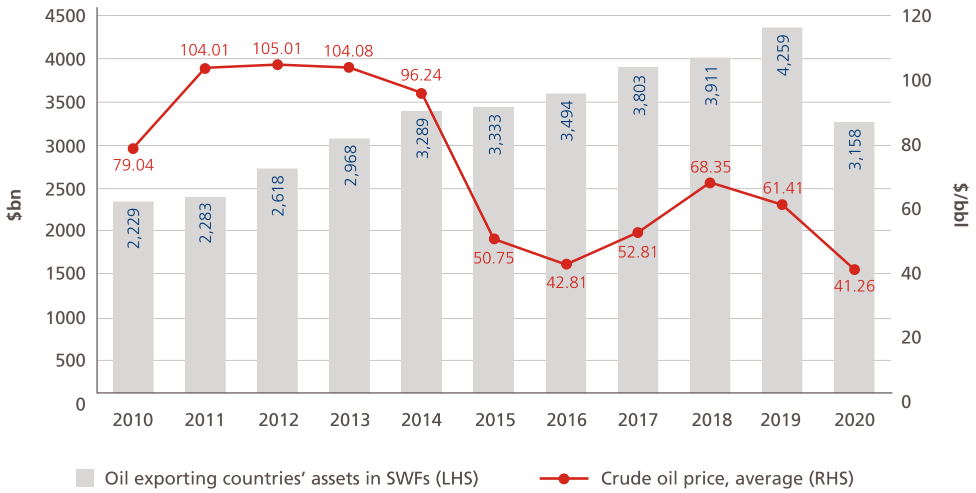
Figure 13: Oil exporting countries' foreign investment assets, % share, end-2020
Source: TheCityUK estimates based on SWF Institute and Preqin data



Total assets: $7.9trn

14 TheCityUK estimates based on Preqin, 'Preqin special report: Sovereign wealth funds', (August 2018), p.5, available at: https://docs.preqin.com/reports/Preqin-Special-Report-Sovereign-Wealth-Funds-August-2018.pdf

Figure 14: Oil exporting countries' assets in SWFs
Source: World Bank and TheCityUK calculations



Non-commodity SWFs are funded by the transfer of assets directly from official foreign exchange reserves, and in some cases from government budget surpluses and privatisation revenues. As official foreign exchange reserves have grown, some monetary authorities have concluded that their reserves are in excess of their immediate needs. Global foreign exchange reserves were estimated to total $12trn at the end of 2020[15], having grown by 34.3% over the past decade. Although China's foreign exchange reserves have declined from a peak of $3.9trn in 2014, reserves in the country totalled $3.1trn at the end of 2019, over one-quarter of the global total. It was followed by Japan, with 11% of the global total. Switzerland and Saudi Arabia were the next largest holders of official reserves with around 7% and 4% of the total respectively.[16]

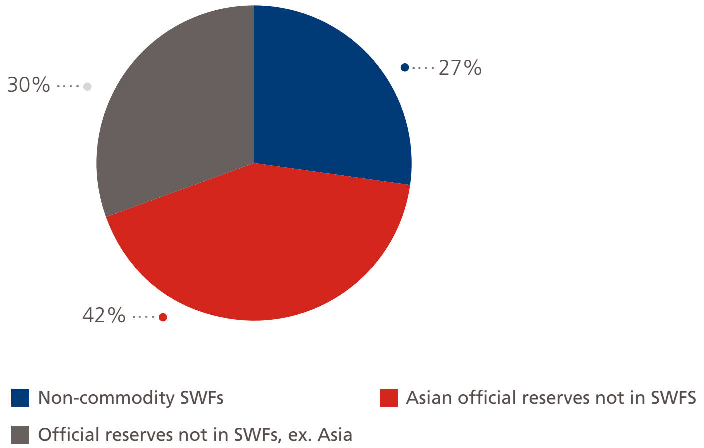
According to TheCityUK estimates, 27% of the $12trn in total global reserves, or $3.3trn, was held in SWFs in 2020 (Figure 15).[17] As a result of the overall growth in foreign-exchange reserves, non-commodity SWFs' share of global SWFs' assets has increased over the past decade to 51% of total SWFs at the end of 2020.

15 TheCityUK estimates based on World Bank, 'Total reserves minus gold (current US$)', (16 December 2020), available at: https://data.worldbank.org/indicator/FI.RES.XGLD.CD

16 TheCityUK calculations based on World Bank, 'Total reserves minus gold (current US$)', (16 December 2020), available at: https://data.worldbank.org/indicator/FI.RES.XGLD.CD

17 TheCityUK estimates based on Preqin, 'Preqin special report: Sovereign wealth funds', (August 2018), p.5, available at: https://docs.preqin.com/reports/Preqin-Special-Report-Sovereign-Wealth-Funds-August-2018.pdf

Figure 15: Distribution of official foreign exchange reserves, %, end-2020
Source: TheCityUK estimates based on SWF Institute and Preqin data



Total assets: $12 trillion

Global SWF investment trends

The substantial size and high liquidity of SWFs' assets have turned the government sector into an important international investor group. SWFs can differ significantly in their asset-allocation and risk-management strategies, reflecting their different objectives and constraints. SWFs typically adopt a long-term approach to investing and low leverage, although stabilisation SWFs have shorter-term investment horizons in order to take into account possible shorter-term national liquidity and financing needs. Public disclosure of investment-management strategies varies widely among SWFs, but overall is limited. SWFs have considerable freedom in their asset-allocation decisions and are usually not confined to certain asset classes or currency exposures, like some institutional investment managers, such as pension funds, may be. A growing number of funds are 'insourcing' asset management functions that would traditionally be managed by external parties. Commodity SWFs have a long-term approach to investment decisions and a preference for equity and alternative investments. Non-commodity SWFs have been an important source of liquidity on global capital markets and tend to invest in US assets, particularly US government bonds.

In the current low-yield environment, some SWFs are looking to new industries and asset classes in emerging and developed markets to generate higher returns and diversify portfolios. According to the latest available data from Preqin, 78% of SWFs held bonds in 2018, down from 82% in 2016. SWFs reallocated their capital into stocks and alternatives instead between 2016 and 2018. Many sovereign wealth funds have been increasing their exposure to alternative assets, with 64% of these funds now having exposure to infrastructure investments, followed by real estate (62%), private equity (60%), natural resources (59%), private debt (38%) and hedge fund investments (35%); for more information see Figure 16.

Case study: the Rise of Environmental, Social and Governance (ESG)

ESG issues are of increasing importance to investors for the opportunities they bring, but also because of the reputational and economic risks that come with making the wrong decisions. At Clifford Chance, we have seen ESG issues rise to become a crucial issue for boardrooms and investment committees as they seek to understand and address ESG risks as well as look to take advantage of the dynamic opportunities which arise in connection with ESG matters.

For a number of reasons, including their substantial size, governmental ties, reputational concerns and their long-term investment horizon, ESG issues are of particular importance and interest to SWFs. We have seen this interest increase during the last few years, as SWFs seek to embed ESG within their organisations and processes. With the UK hosting COP26 in Glasgow later this year, the volume of ESG-related legislative changes emerging in the EU, US and China, and a focus on how we "build back better" following the Covid-19 pandemic, we see the interest of SWFs in managing and adapting to ESG issues continuing to grow over the short to medium term.

Several key ESG themes which we think are particularly relevant to SWFs are discussed below.

ESG in the Investment Life Cycle

While ESG due diligence has been part of the investment process for investors over many years, this has to some extent focused on the 'E' of ESG. More recently investors, including SWFs, have been broadening the scope of their ESG due diligence to consider and assess social and governance risks (e.g. business and human rights, diversity and inclusion, and supply chain management and transparency) in connection with proposed investments.

This trend will continue, and we have recently worked with several SWFs to help them develop focused ESG due diligence criteria within their investment processes to evaluate the compliance and track record that targets have in relation to ESG matters. In addition, we have also seen SWFs focus not just on the identification of ESG risks, but also on integration issues so as to ensure that post investment there is alignment of policies and, crucially, culture, with respect to ESG matters as part of the investment life cycle.

Growth in Sustainable Finance products

We have seen a growing appetite among certain SWFs to diversify into the increasing range of sustainable finance products. These products enable SWFs—particularly given their long-term investment horizons—to tie returns to ESG outcomes. Products include green loans, green bonds, sustainability-linked debt, blue bonds, Covid-19 response bonds, social bonds and social loans, among others.

We see this trend continuing and in the past year alone, we have seen and advised our clients on:

- A surge in social bonds, and particularly Covid-19 response bonds
- Increasingly sophisticated green bonds, from the UK's first 'transition bond' issued by gas network operator Cadent to sustainability-linked offerings from cement firm Lafarge Holcim—the first of its kind in the building industry
- The establishment of cutting edge ESG-linked Euro Commercial Paper programmes for high-volume issuers

Increasing ESG legislation

The regulatory and legislative landscape with respect to ESG issues is developing rapidly across jurisdictions. The EU is a first mover with legislative proposals for mandatory environmental and human rights due diligence. The Sustainable Finance Disclosure Regulation, which has applied from 10 March 2021, aims to increase transparency and prevent greenwashing. It introduces harmonised disclosure obligations on asset managers and other types of financial institutions. Linked with this is the Sustainable Finance Taxonomy Regulation, which sets out a framework for labelling what qualifies as a sustainable finance product.

We are also seeing legal and regulatory change under the Biden administration in the US, and in China. For example, in early 2020 the chief regulator for listed companies in China, the China Securities Regulatory Commission (CSRC), in collaboration with China's Ministry of Environmental Protection, announced that it plans to introduce new requirements which will mandate all listed companies and domestic bond issuers to disclose ESG risks associated with their operations. Further in May 2021 the CSRC announced that it was carrying market consultation on the expected ESG reporting rules and standards to be imposed. It is expected that following the completion of this consultation round that the CSRC will promulgate and implement the relevant ESG reporting rules within the 2021 calendar year.

We have been working with many SWFs to help them stay ahead of these changes and ensure that they are able to adapt to meet applicable regulatory requirements. We have seen particular challenges around the need for enhanced disclosure, particularly where that is coupled with the need to track and collate reliable data against ESG criteria. Generally, however, where the SWF is able to be flexible and embrace the necessary changes in approach, we have seen SWFs emerge with enhanced processes which should be able to flex as the regulatory landscape shifts.

Opportunities in the renewables sector

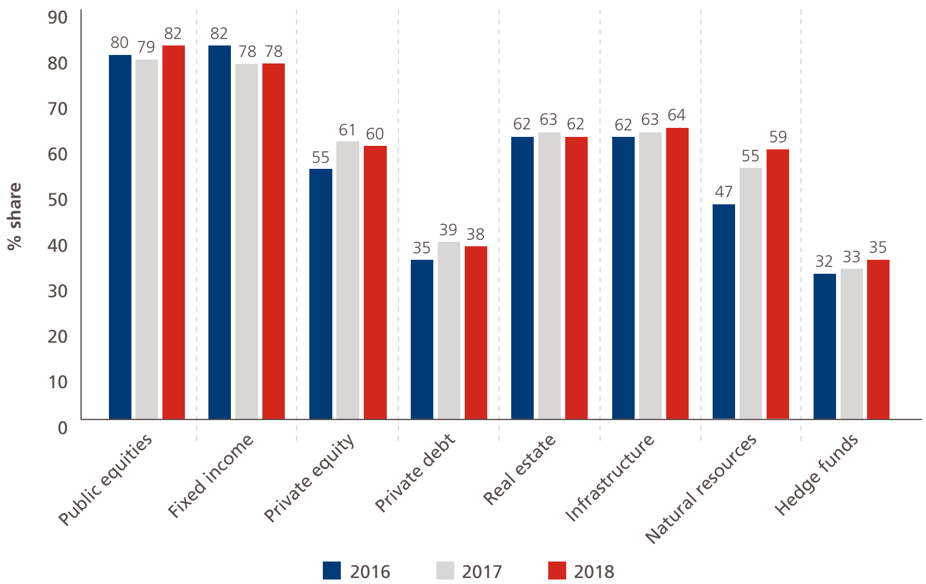
As the drive to 'build back better' post the Covid-19 pandemic advances, we also expect a renewed focus on the renewables sector and energy transition.

This is giving rise to increased opportunities for SWFs to invest in clean energy sources including clean hydrogen, offshore wind and renewable energy platforms. The hydrogen industry in particular is developing at pace across Europe and the Asia-Pacific region through its range of applications including flexible electricity generation and storage, heavy duty transport, heating, and certain industrial applications. Whilst certain barriers still need to be overcome in terms of policy, regulation and technology uncertainty, this sector represents an interesting opportunity for SWFs, particularly given their long-term investment horizon and their appetite to diversify into new sectors and asset classes.

The above are just some of the ESG themes we have seen emerge recently. We expect ESG issues to continue to be a key consideration for SWFs in 2021 and beyond, and Clifford Chance is on hand to help its SWF clients navigate the fast-changing landscape of international and regional polices and regulations, frameworks and mechanisms as they relate to all aspects of ESG.

Some funds are also becoming innovative and appear increasingly interested in low-carbon infrastructure. SWFs' investment into green assets increased to $11bn over the period 2015-2017. The top three investors into green assets were China's State Administration of Foreign Exchange (with investment of $3bn), Abu Dhabi Investment Authority ($1.4bn) and Mubadala Investment Company ($1.3bn).[18]

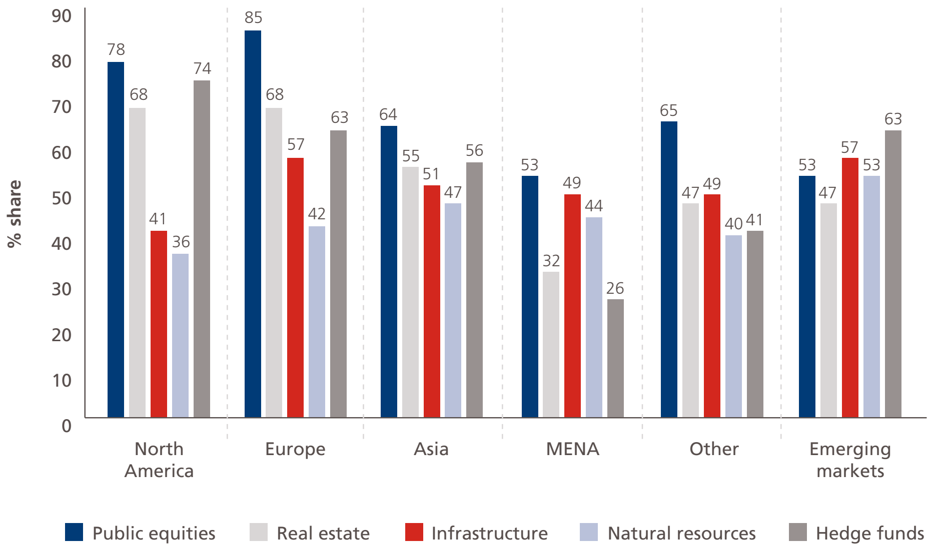
Figure 16: Proportion of SWFs investing in each asset class
Source: Preqin



18 Preqin, 'Special report: Sovereign wealth funds', (August 2018), available at: https://www.pwc.co.uk/industries/ assets/prequin-special-report-august-2018.pdf

SWFs are developing greater and more sophisticated investment capacities. North America and Europe are the major regions for SWFs' public equity, real estate and hedge fund investments (Figure 17). Seventy-eight percent of SWFs invested in public equities in North America in 2018, and 85% in Europe. Sixty-eight percent each invested in real estate, and 74% and 63% allocated their funds in hedge funds in the two regions respectively. The infrastructure, natural resource and hedge fund sectors in emerging markets attract SWFs' investments, with 57%, 53% and 63% of SWFs having invested in the three sectors in 2018 respectively.[19]

Figure 17: Proportion of SWFs investing in each region
Source: Preqin



SWFs invest in various asset classes. According to the latest available data from Preqin, all SWFs invested in investment-grade bonds, and over half of the funds targeted high-yield fixed income to seek higher expected returns with higher risks in 2018 (Figure 18). For the private equity market, venture capital funds are the most popular targets for SWFs to allocate their capital in, with 72% of SWFs investing in the funds. Small and medium sized enterprises (SMEs) benefit from investments in venture capital by SWFs. Venture capital investments are followed by buyout (70%) and growth funds (65%); for more information see Figure 19. The largest proportion (73%) of SWFs invest in mezzanine debt among the whole private debt sector, followed by distressed debt (67%), direct lending (57%) and special situations debt (53%); for more information see Figure 20. In the real estate, infrastructure and natural resources sectors, the proportions of SWFs' investments in unlisted assets significantly overweigh the ones in listed assets. Sixty-eight percent, 63% and 58% of SWFs allocate their capital in unlisted assets, compared to 34%, 20% and 13% in listed assets in these sectors respectively (Figure 21).

19 Ibid.

Figure 18: Proportion of SWFs investing in fixed income, 2018

Source: Preqin

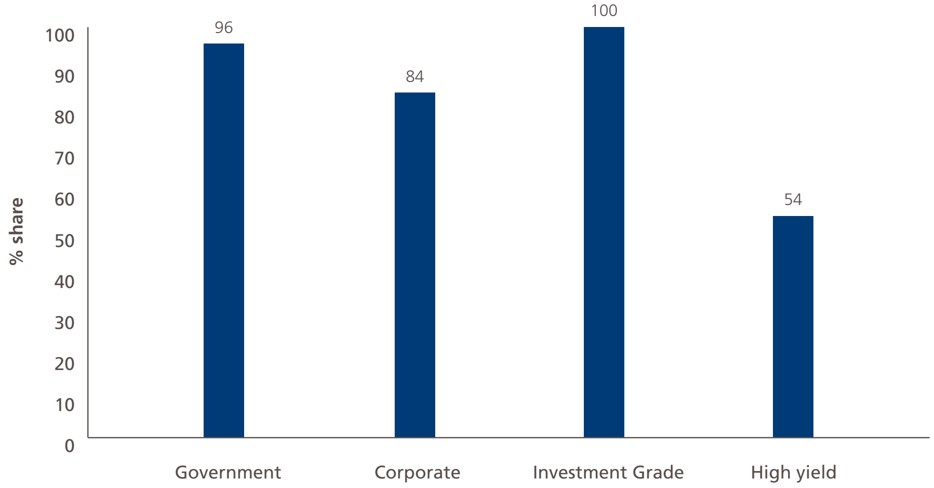


Figure 19: Proportion of SWFs investing in private equity, 2018

Source: Preqin

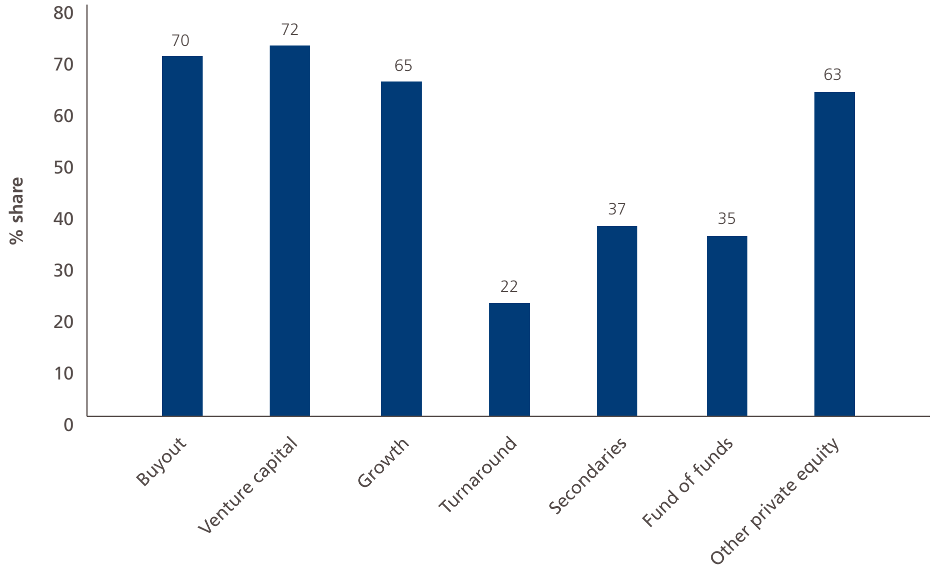
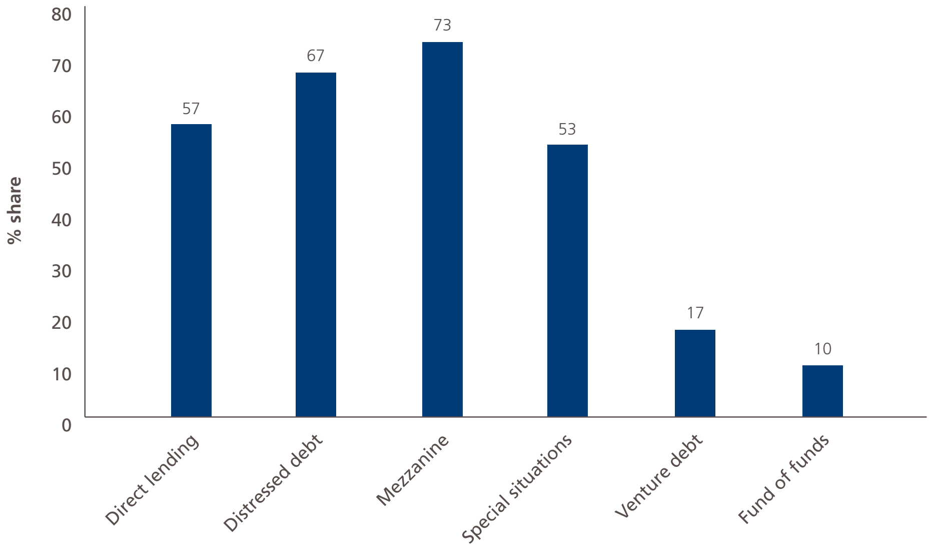
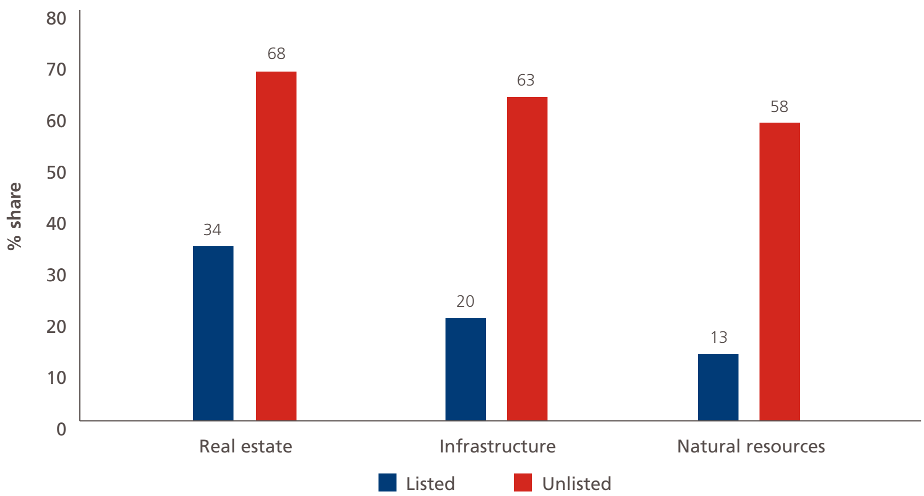


Figure 20: Proportion of SWFs investing in private debt, 2018
Source: Preqin



SWFs' importance as an investor group is likely to increase further in line with the growing debate about global infrastructure financing. A large amount of capital for infrastructure investment is needed for maintenance and improvement of energy, road and rail transport, telecommunications, and water. According to the World Economic Forum, the global infrastructure investment gap—the difference between estimated infrastructure spending and needs—will be $15trn by 2040.[20] Infrastructure investment will also play a key role of rebuilding economies post-pandemic. For example, digital infrastructure is a core requirement for building up a better post pandemic society. The existing speed and availability of key infrastructure in the UK, such as broadband, lags most other leading countries. SWFs could play an important role in infrastructure investment and supporting post-pandemic economic development, as these funds have long-term investment horizons and low leverage so are well suited for such investments.

Figure 21: Proportion of SWFs investing in real estate, listed vs. unlisted, 2018
Source: Preqin



20 World Economic Forum, 'The world is facing a $15 trillion infrastructure gap by 2040. Here's how to bridge it', (11 April 2019), available at: https://www.weforum.org/agenda/2019/04/infrastructure-gap-heres-how-to-solve-it/

Historically, SWFs have tended to be conservative in their approach to infrastructure investment by focusing on purchases of existing assets. However, SWFs have invested more in new 'greenfield' infrastructure developments in recent years. While greenfield assets bear higher risks, their higher potential returns attract the majority (84%) of SWFs. In order to bear lower investment risks, many (76% and 67% respectively) SWFs also invest in brownfield and secondary stage assets (Figure 22). For natural resources investments, all SWFs invest in the energy sector, followed by agriculture/farmland and water (62% of SWFs each); for more information see Figure 23.

Figure 22: Proportion of SWFs investing in infrastructure, 2018
Source: Preqin

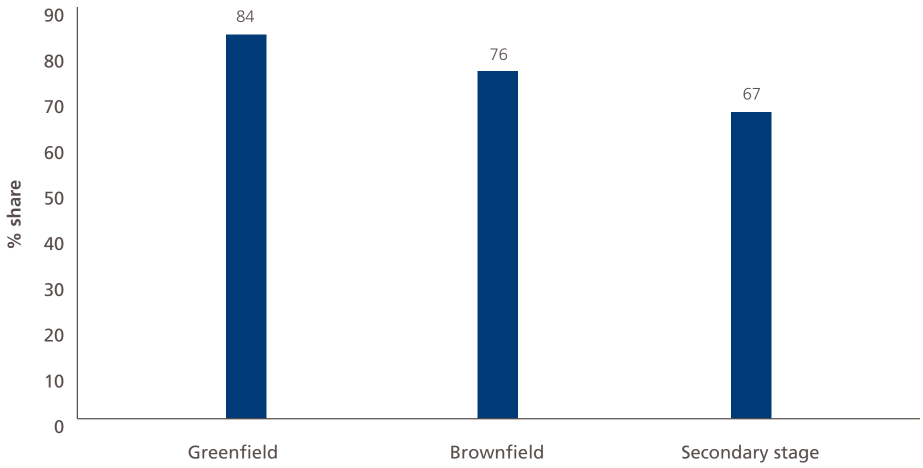
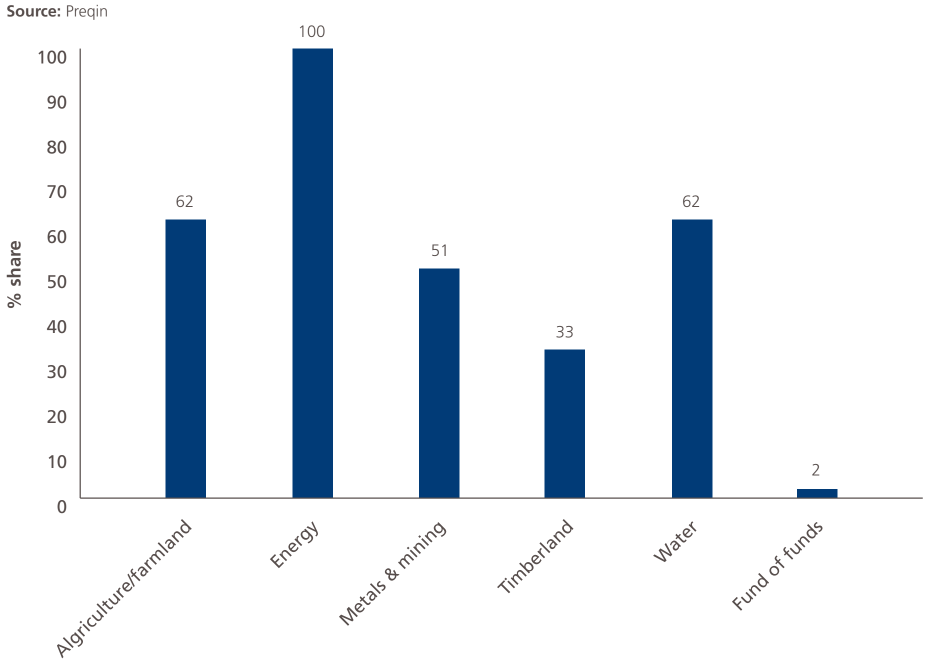
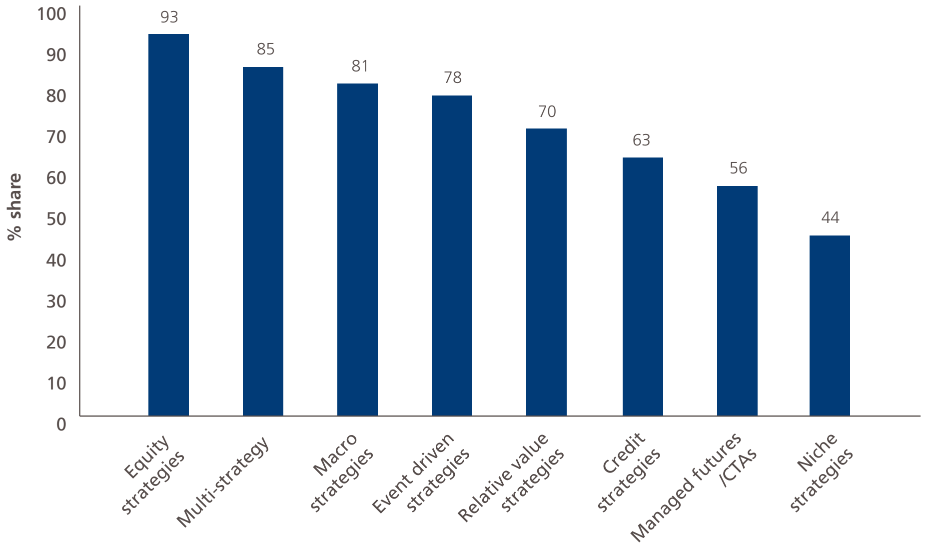


Figure 23: Proportion of SWFs investing in natural resources, 2018
Source: Preqin



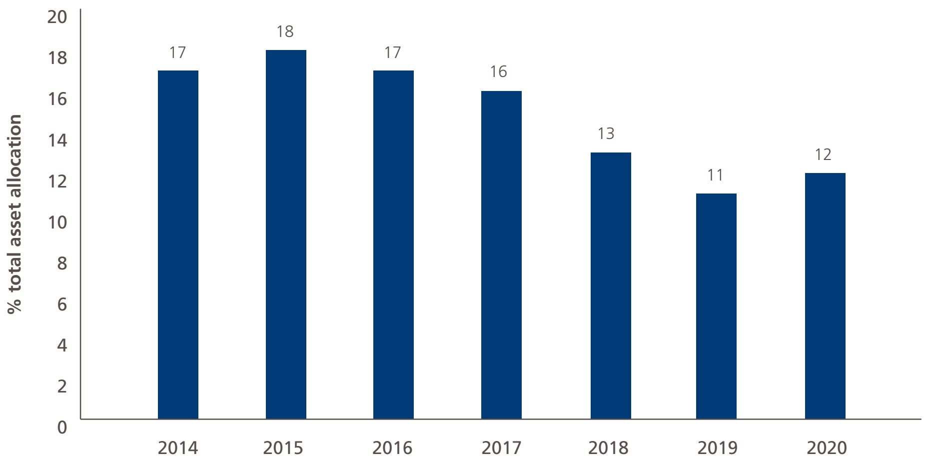
The top three types of hedge funds, in terms of the proportion of SWFs invest in, are equity strategies (93% of SWFs), multi-strategies (85%) and macro strategies (81%); for more information see Figure 24.[21]

Figure 24: Proportion of SWFs investing in hedge funds, 2018
Source: Preqin



SWFs also engage in direct investments and are increasingly participating in co-investments with private equity funds, pension funds and specialist advisers. This involves taking minority or majority stakes in companies through cross-border mergers and acquisitions. However, the percentage of asset allocation in SWFs' direct investments has trended down over the recent years, reaching 12% in 2020 (Figure 25).[22]

Figure 25: SWF direct investments
Source: Invesco

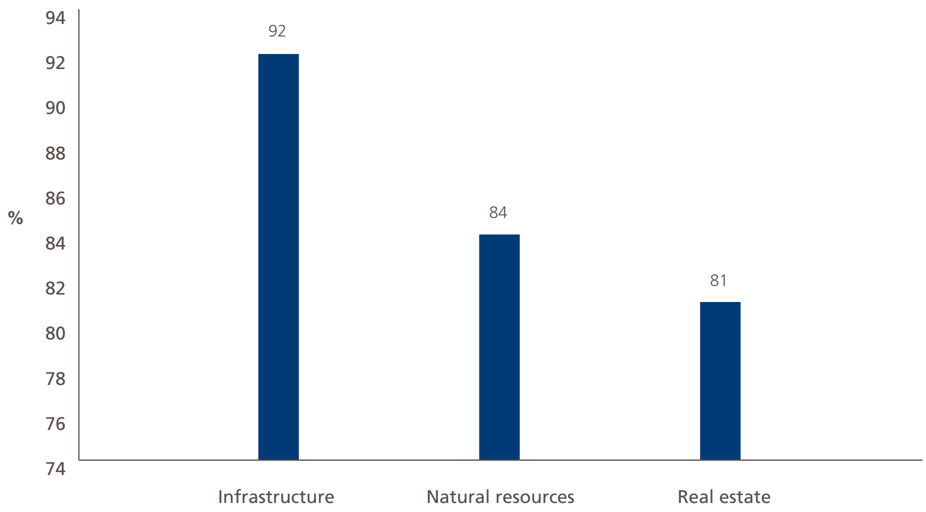


21 Preqin, 'Special report: Sovereign wealth funds', (August 2018), available at: https://www.pwc.co.uk/industries/ assets/prequin-special-report-august-2018.pdf

22 Invesco, 'Invesco global sovereign asset management study 2020', (13 July 2020), p.6, available at: https://www.invesco.com/content/dam/invesco/igsams/en/docs/Invesco-Global-Sovereign-Asset-Management-Study-2020-Global.pdf

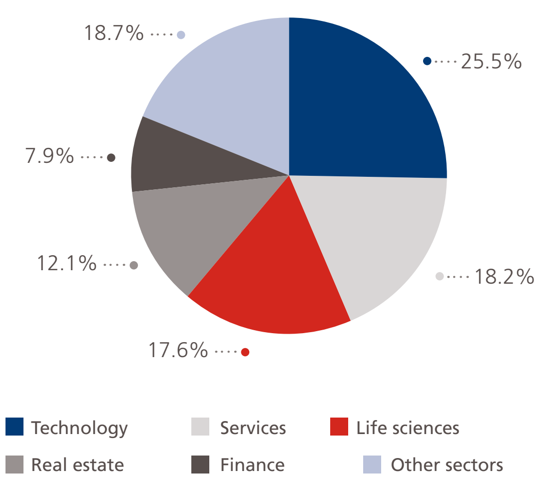
SWFs directly invest in various asset classes, such as real estate, listed equities, unlisted equities, infrastructure, and other unique acquisitions. Infrastructure was the most popular alternative asset for direct investments, with 92% of SWFs directly invested in infrastructure in 2018, followed by natural resources (84%) and real estate investments (81%); for more information see Figure 26.[23]

Figure 26: Proportion of SWFs invested in selected asset classes
Source: Preqin



Sector wise, there were 42 investment deals made by SWFs in the technology sector between July 2019 and September 2020, accounting for 25.5% of the total. This was followed by the services (30 deals, 18.2%), life sciences (29 deals, 17.6%), real estate (20 deals, 12.1%) and finance sectors (13 deals, 7.9%); for more information see Figure 27.

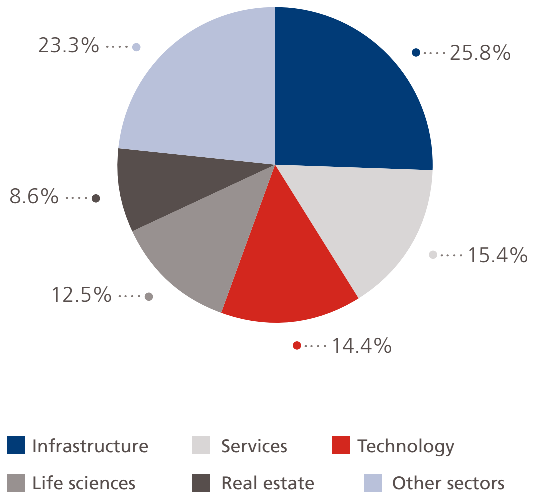
Figure 27: Top sectors for SWF investment, % of total number of deals, July 2019-September 2020
Source: IE Centre for the Governance of Change



23 Preqin, 'Special report: Sovereign wealth funds', (August 2018), available at: https://www.pwc.co.uk/industries/ assets/prequin-special-report-august-2018.pdf

In terms of deal value, the infrastructure sector received the most SWF investment in that period, accounting for 25.8% of the total. The sector was followed by services (15.4%), technology (14.4%), life sciences (12.5%) and real estate (8.6%); for more information see Figure 28.[24]

Figure 28: Top sectors for SWF investment, % of total deal value, July 2019-September 2020
Source: IE Centre for the Governance of Change



24 IE Centre for the Governance of Change, 'Sovereign wealth funds 2020: fighting the pandemic, embracing change', (April 2021), p.15, available at: https://www.ie.edu/cgc/research/sovereign-wealth-research/?submissionGuid=97919d96-d1c8-4ff9-8c6a-ca58688f1b39#downloads-cgc

UK as a centre for SWFs

TheUK, and London in particular, is one of the largest and most open markets in the world for fund management. Other cities such as Aberdeen, Birmingham, Cardiff, Edinburgh, Glasgow, Liverpool and Manchester are also important fund management centres.

UK attractiveness. The reputation of London and the UK as a leading international centre for fund management is built on a number of factors, including the UK's jurisdictional conditions; the openness of the UK to foreign business; the safe and stable regulatory environment; the structural strengths and network effects associated with the cluster of financial and related professional services; a broad skills base; the pivotal international position of English law; and the availability of specialist expertise in investments.

Advantages of the UK as a centre for fund management

- A strong and responsive regulatory environment that is effective, fair and focused on the future.
- A demonstrated commitment by the government to the sector.
- A vibrant and supportive sector cluster in asset management and related professional services; the UK remains one of the leading locations for asset management and is the top jurisdiction in Europe for funds under management, enjoying sustained growth.
- A deep talent pool that supports all aspects of the asset management value chain.
- A strategic geographical location.
- State-of-the-art support services in front, middle and back office across the regional centres allowing cost efficiencies and access to a diverse talent pool.
- An innovative ecosystem that promotes innovation and product development, e.g. Islamic Finance, renminbi trading, etc.

London is a leading asset management centre that attracts overseas asset management companies to relocate and expand their operations there. The key factors contributing to London's leading position include its business environment, human resources and proximity to global financial markets. UK investment managers can support a wide variety of different investment styles and strategies, and have a proven track record of innovation.[25]

The UK government is committed to ensuring the UK remains an open and competitive market for international investment managers. Wealthy investors are provided substantial opportunities by a wide range of service providers based in the UK. The UK government sought to improve the country's attractiveness for foreign clients and firms with the launch of its 'Investment Management Strategy' in 2013; this was updated to the 'Investment Management Strategy II' in 2017. The government's description of the most recent strategy includes the following:

- Enhance the government, regulator and industry dialogue.
- Maintain stable tax and regulatory environments.
- Strengthen the asset management domestic skills pipeline.
- Advance the development of asset management FinTech solutions.
- Support UK asset managers to be global leaders in developing innovative investment strategies (such as green finance and social impact investment).

25 For more detail, see TheCityUK, 'UK fund management', (April 2018), available at: https://www.thecityuk.com/assets/2018/Reports-PDF/fe6b3af4b4/UK-fund-management.pdf

- Continue a coordinated programme of international engagement to attract overseas firms to locate in the UK and promote UK firms overseas.

The Financial Conduct Authority (FCA) ensures that the UK industry offers a level playing field with no preferential treatment for domestic firms or investors. Fund managers can therefore have confidence in the strength and impartiality of the UK's regulatory system, together with the financial stability of a well-regulated G7 economy.

SWFs are increasingly opening international offices in order to be closer to the markets in which they operate, to have access to more and better deal flows and to gain access to local talent and expertise. The major international centres such as London and New York offer economies of scale and network effects in addition to a wide range of complementary services for investors.

London is the preferred international base of operations for SWFs and many largest SWFs have offices there. SWFs with offices in London include Norway Government Pension Fund Global, Kuwait Investment Authority and GIC Private Limited.

There are a variety of goals and objectives that motivate SWFs to locate in major international financial centres. According to 'Getting Closer to the Action: Why Pension and Sovereign Funds are Expanding Geographically' published by the Global Projects Center at Stanford University, these include:[26]

- **"Talent attraction:** Opening an office in a major financial centre allows institutions access to a deeper and wider labor pool.
- **Deal flow:** More and more funds are moving from public to private markets and real estate and infrastructure investment, exploiting their long-term investment horizons to increase returns. This requires a considerable amount of face-to-face interaction with peers, bankers, and brokers.
- **Investment monitoring:** Having an office in a major financial centre facilitates monitoring existing fund managers and conducting due diligence to hire new managers.
- **Cooperation:** Launching a representative office in an international financial centre can help expand an institution's global network and reinforce communication with like-minded, long-term oriented investment institutions that have done the same.
- **Talent retention:** Having an office in or close to a financial centre can help to retain investment professionals back at the head office for longer periods of time, as there is perceived to be an option to move to the overseas office at some point, either permanently or for periods of time.
- **Knowledge transfer:** Financial centres offer clusters of financial expertise which results in knowledge development and transfer. Many institutional investors are already leveraging their relationship with existing external managers to help train their employees."

26 Global Projects Center at Stanford University, 'Getting closer to the action: Why pension and sovereign funds are expanding geographically', (January 2014), p.5-7, available at: https://www.researchgate.net/publication/272246609_Getting_Closer_to_the_Action_Why_Pension_and_Sovereign_Funds_are_Expanding_Geographically

SWFs as investors in the UK economy. There has been an increase in SWFs' investment into global infrastructure in recent years. The UK is a world leader in attracting foreign direct investment, with reputation for being open and welcoming to global investors. UK infrastructure is attractive to investors looking for safe assets with good returns because the UK offers a stable regulatory regime and steady investment returns. The government has recently updated its inward investment regime via the National Security and Investment Bill 2020, identifying security, speed, certainty and transparency as core objectives. As the UK focuses on post-pandemic economic recovery, and on its new trade and economic relationships outside the EU, remaining an internationally competitive and attractive place to invest will be essential. SWFs are a potential addition to the range of financing sources that governments, including the UK government, can turn to.

SWFs can continue to play a positive role–alongside other long-term investors such as insurers and pension funds–to find new ways of addressing the infrastructure funding gap in the UK. Indeed, UK-based infrastructure and infrastructure funds have attracted SWF investment in recent years. For example, in 2019, Abu Dhabi Future Energy Company (Masdar), a subsidiary of Mubadala Investment Company, the UAE's SWF, provided the first £35m (matched by the UK government to take the initial funding to £70m) to the Charging Infrastructure Investment Fund established by the UK government to fund the roll-out of charging stations for electric vehicles. In 2017, Kuwait's SWF, Kuwait Investment Authority, along with Borealis Infrastructure, a subsidiary of a Canadian pension fund, bought 26% of Kemble Water Holdings, the holding company of Thames Water. In 2016, UK-based National Grid sold 61% of its gas distribution division to Chinese SWF China Investment Corporation and Australian investment bank Macquarie. In the same year, Kuwait Investment Authority along with four other institutional investors bought London City Airport at a price of £2bn.[27] Most of the SWFs investing in London have focused their attention on its two financial hubs: the City of London and Canary Wharf. Outside of these financial districts, SWFs have also targeted the West End and its adjacent neighbourhoods.

SWFs have invested not only in the UK's infrastructure sector, but also other valuable sectors. For example, in March 2021, Mubadala Investment Company agreed to co-invest alongside the UK's newly-established Office for Investment in UK health, technology, clean energy and infrastructure. The life sciences sector will receive £800m from Mubadala Investment Company, and another £200m from a UK government fund, the Life Sciences Investment Programme, over the next five years. In November 2020, Xeraya Capital, a venture capital and private equity company that was founded by the Malaysian SWF, Khazanah Nasional Berhad, invested $50m in a UK-based digital health firm, Congenica. In June 2020, Coatue, a global technology-focused investment company, together with GIC (Singapore's SWF) and other investors such as Insight Partners, DST Global, Blossom Capital and Endeavor Catalyst, invested $150m in a UK-based online payments platform, Checkout.com.

In its most recent survey, Invesco found that the score of attractiveness for government-related agencies to invest in the UK increased to 5.6 in 2020 from 4.2 in 2019.[28] This compared to scores of 7.8 for the US, 5.7 for Germany and 5.4 for France (see Figure 29 for details). Data for 2021 will be forthcoming in research to be published by Invesco in mid-2021.

27 SWF Institute, 'Infrastructure transactions in Europe', (February 2021), available at: https://www.swfinstitute.org/transactions/infrastructure/europe

28 Invesco, '2020 Sovereign Study', (March 2021), available at: www.igsams.invesco.com

Figure 29: Invesco country attractiveness scores for inward investment by government-linked agencies, 2020
Source: Invesco 2020 Sovereign Study

Country	Attractiveness score
United States	7.83
Germany	5.72
Eurozone	5.69
United Kingdom	5.64
France	5.41
China	5.34
Japan	5.33
India	4.94
Brazil	4.94
Italy	4.02

Conclusion

The accumulation of current-account surpluses in various countries means that SWFs will continue to be a crucial part of the wider fund management sector. SWFs enable sovereign capital to be deployed as investment in countries and sectors across the globe. The sector also provides economic-stabilisation functions: providing budgetary support, protecting against sharp domestic economic fluctuations, and sharing wealth across generations.

Because of their long-term investment horizons and large value of assets under management, SWFs have an important role to play as investors in various countries, including in the UK. As countries around the world focus on economic rebuilding once the Covid-19 pandemic is behind us, SWFs could potentially contribute to long-term and sustainable growth through their funding of infrastructure and other long-term investments.

The UK is well-placed to benefit from this possibility, given that it is a key destination for inward foreign investment. Combined with the UK's position as a leading international centre for fund management, this means that the potential for stronger and deeper partnerships between the UK and SWFs is significant.

Analysis and estimates are based on data available as of 7 April 2021

TheCityUK Research:

For content enquiries, further information about our work or to comment on our programme/reports, please contact:

Anjalika Bardalai, Chief Economist and Head of Research
anjalika.bardalai@thecityuk.com
+44 (0)20 3696 0111

Mingjie Tang, CFA, Senior Executive, Economic Research
mingjie.tang@thecityuk.com
+44 (0)20 3696 0149

TheCityUK

TheCityUK, Fitzwilliam House, 10 St Mary Axe, London, EC3A 8BF
www.thecityuk.com