Thinking Ahead Institute

The Asset Owner 100 | The most influential capital on the planet | November 2021

The Thinking Ahead Institute

Formed in 2015, the Thinking Ahead Institute (TAI) is a global not-for-profit research and innovation group whose aim is to mobilise capital for a sustainable future. The Institute's members comprise asset owners, investment managers and other groups that are similarly motivated. It is an outgrowth of Willis Towers Watson Investments' Thinking Ahead Group and more research is available on its website.

The Thinking Ahead Group research team

Tim Hodgson

Marisa Hall

Roger Urwin

Jessica Gao

Samar Khanna

The Asset Owner 100

A Thinking Ahead Institute study which provides key insights and trends on the top 100 asset owners in the world

An asset owner has four qualifying characteristics:

- Works directly for a defined group of beneficiaries/savers/investors as the manager of their assets in a fiduciary capacity under delegated responsibility
- Works with a sponsoring entity (government, government affiliate, company or not-for-profit)
- Works within explicit law and possesses an implicit societal license to operate because of its societal trust and legitimacy
- Delivers mission-specific outcomes to beneficiaries and stakeholders in the form of various payments or benefits into the future

Executive summary

Overview and key findings

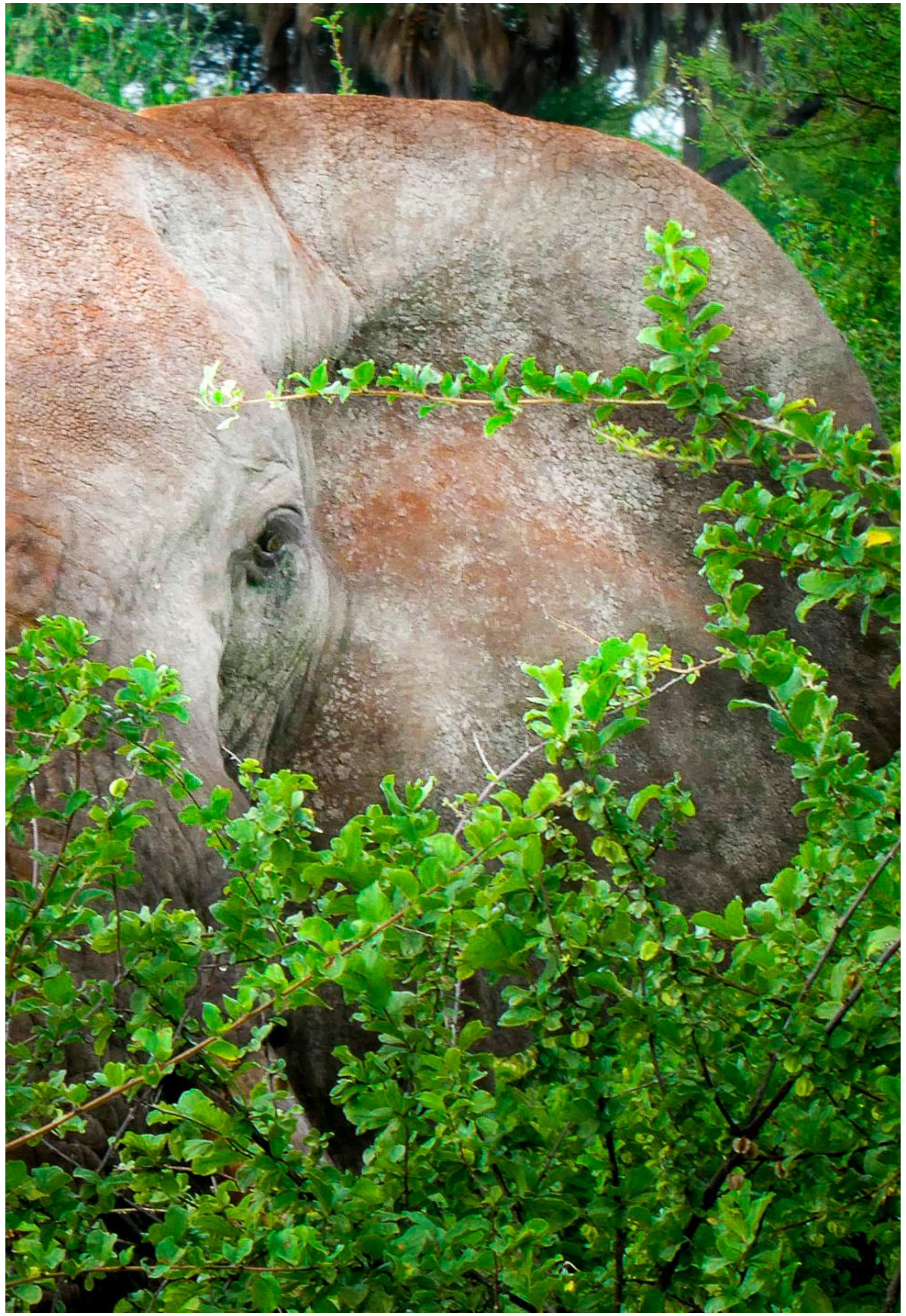
Key figures

- Assets under management (AUM) of the top 100 asset owners totalled US$23.5 trillion at end-2020; growing 16.4% from the previous year
- The top 20 assets owners made up 54.9% of total AUM in ranking in 2020 with US$12.9 trillion
- The top 5 asset owners accounted for 24.3% of total AUM in our study with US$5.6 trillion
- The Government Pension Investment Fund (GPIF) of Japan remains the largest asset owner in the world, with an AUM of US$1.7 trillion
- Norges Bank Investment Management of Norway (AUM of US$1.3 trillion) comes in second and China Investment Corporation (AUM of US$1.0 trillion) in third

Figures to end 2020, unless otherwise stated. New sources of information were used for some countries in 2020

Key figures

- Asia-Pacific accounts for 37.0% of total AUM in the ranking, making it the largest region in this study
- The regions of North America and EMEA represent 31.6% 31.4% of total AUM, respectively
- Pension funds manage 58.4%, Sovereign wealth funds handle 34.5%, and outsourced CIOs and master trusts are responsible for 7.1% of total AUM in the AO100
- Pension funds continue to dominate in North America and Asia-Pacific. This contrasts with EMEA, where sovereign wealth funds are dominant



Figures to end 2020, unless otherwise stated. New sources of information were used for some countries in 2020.

Asset Owner 100

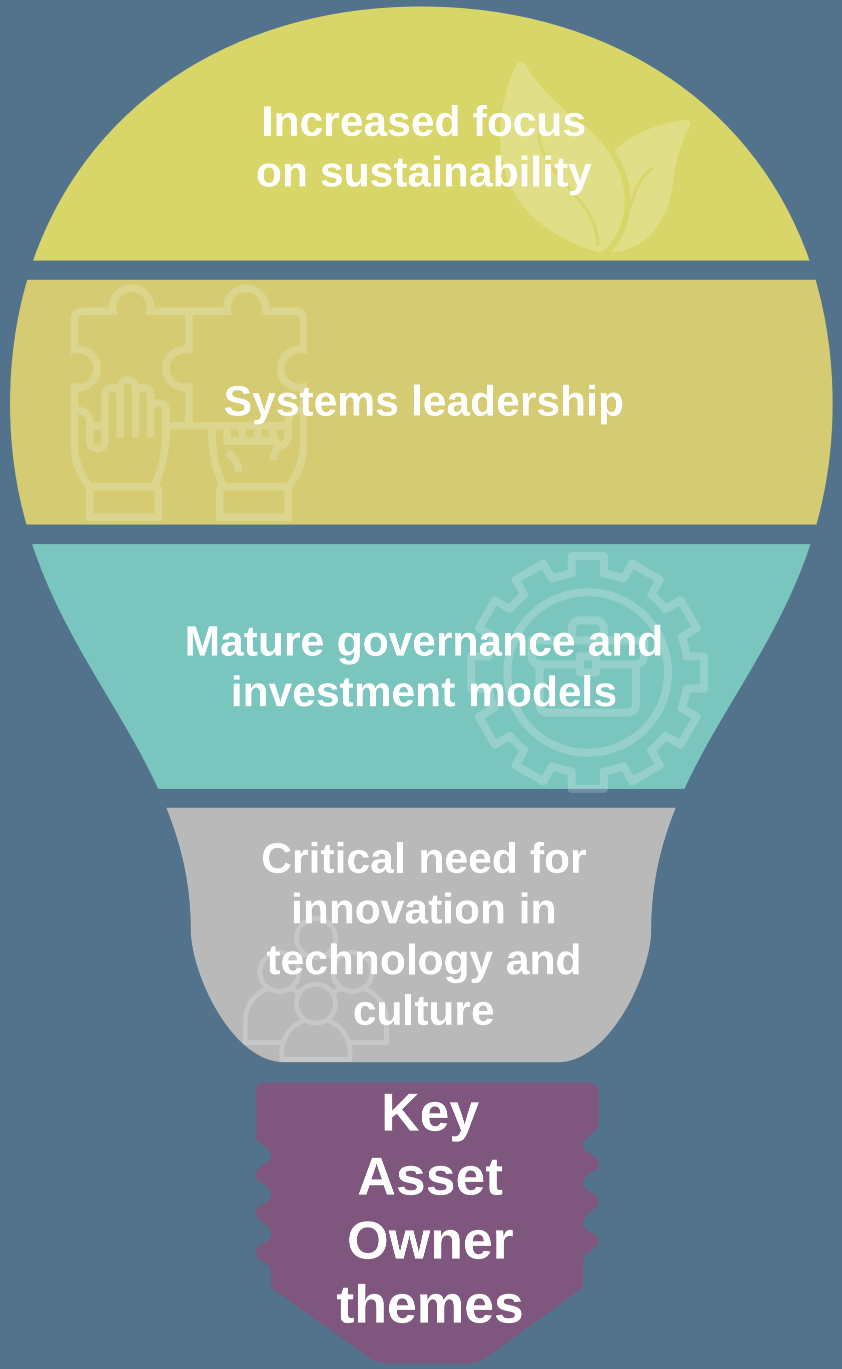
The most influential capital on the planet | November 2021

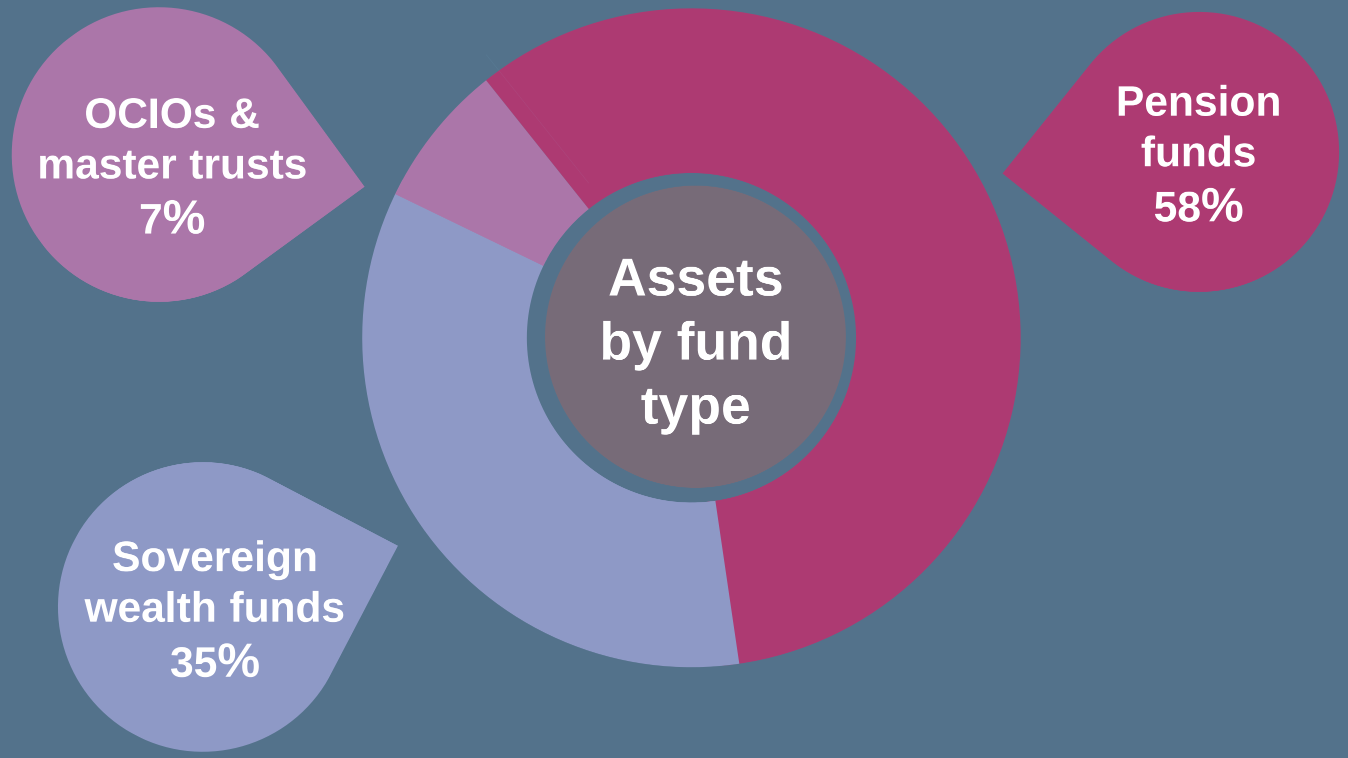
Leadership calls and opportunity beckons

Assets under management (AUM) of the top 100 asset owners totalled $23.5 trillion at end-2020

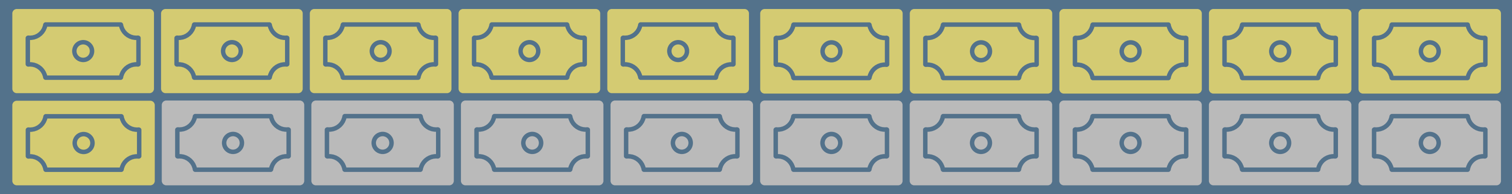
Leading asset owners have the power to drive change in the investments industry, and hold the keys and the pathways to net zero

Such systems leadership calls for a more mature governance and investment model, which can be achieved through innovation





The top 20 asset owners made up 55% of total AUM



This small group of investors are right on the front line of the investment community's fight to become net zero

Data to end 2020 and figures may not sum due to rounding
Source: The Thinking Ahead Institute

Key industry-wide observations (1)

Covid-19 :

Asset owners displayed resilience during the pandemic and successfully adapted their operations to transition smoothly to a working-from-home model and maintain business continuity. While investment returns held up surprisingly well, the balance sheets of many DB pension funds and insurance companies were negatively affected by interest rate declines.

Sustainability:

The world's top 100 asset owners are becoming more prominent in integrating ESG in pursuit of improved long-terms sustainable returns. There is also growth in funds considering the real-world impacts in their investment strategies. The increase in attention to climate issues in the last 12 months has been significant and coincided with the global focus that has been involved with COP26. The most significant areas of attention have been: factoring in member views; using new investment benchmarks and reporting on impacts (increasing reference to the TCFD framework and to the SDGs); reducing emissions from portfolios; investing in assets that will support the transition towards a low-carbon economy; and devising and implementing climate transition strategies that are Paris aligned.

Asset owners coped well with the switch to virtual working

Climate awareness has accelerated the trends associated with sustainable investing

Key industry-wide observations (2)

Changes in the asset owner business model:

Leading asset owners are developing stronger leadership, emphasising culture and diversity, and building processes to turn overabundant data into value-adding intellectual capital and diminishing reliance on external provider networks over time. These changes help to manage the growing complexity in the investments industry and boost investment outcomes. However, at present there remain considerable constraints around the effectiveness of the management and governance of data.

Governance and culture:

These remain areas where asset owners' practices are uneven with most AOs appearing to trail other financial services organizations in how effectively governance and culture influence outcomes. However, there are a small number of very large asset owners globally (we estimate between 15 and 20 organisations) that are well-governed and have built effective cultures. Their example trickles down to others and constitutes a considerable force for change.

Asset owners use people, networks, information and processes to create value over the long term

Large asset owners continue to move towards a more insourced governance model

A few large asset owners provide leadership examples to the rest

Key asset owner challenges (1)

- **Purpose:** Funds need a deeper understanding of and alignment with stakeholders' needs. This implies a refresh of purpose, mission and vision; and changes to strategy and culture
- **Strengthened governance and leadership:** The influence of asset owners on the ecosystem in which they operate is set to rise as they build bigger teams with stronger leadership, and streamline governance in delegations, partners and processes
- **Impact from evolved regulations:** Asset owners can expect further saver and investor protection regulations and further regulatory coverage of what they invest in
- **Factors | Private markets | ESG:** Factors are developing a bigger profile. Private markets are increasingly significant in the opportunity set. ESG is everywhere. Funds should explore these new opportunities in an environment where returns do not meet current targets
- **China:** Building an understanding of special factors governing Chinese markets, establishing strong access routes and building far-sighted strategy will be critical for investing in mainland Chinese assets

Stakeholder management has become a much bigger task to address

Regulation is set to rise as a factor influencing asset owner practice, particularly in ESG and stewardship

AOs face lower expected returns in future. Success in meeting targeted returns will depend on how well they adapt their investment model

Key asset owner challenges (2)

- **Innovation:** Asset owners have not found innovation easy in the past. This has been for a variety of cultural and situational reasons

- **Leadership:** We differentiate between asset owners that pursue their mission in a relatively *self-contained mandate* to perform well and the asset owners that do so in a *system-wide mandate* where they consider their wider impacts on society and the environment as a means of securing a better outcome of which they are a part

- **Climate risk management and alignment to climate outcomes:** Asset owners face a number of challenges in their responses to climate as a factor both in risk management and in organisational objectives with respect to Paris alignment. First, the fiduciary responsibilities of asset owners has been a complication to all asset owners in this area. Secondly, many pension funds and sovereign wealth funds must adapt to the needs of their sponsors which has deepened the complexity involved. In particular, several SWFs have significant legacy fossil fuel connections and influences

We delve deeper into these three topics in the Focus Section next

This year's Focus Section discusses how:

Asset owners are very challenged on innovation

There is an increasing need for asset owners to adopt systems leadership

AOs are adapting to the need to respond to climate change using climate risk management or alignment to climate outcomes

Focus Section:
Systems leadership and innovation

Leadership calls and opportunity beckons

Systems leadership

- **What is systems leadership?** This is where organisations transcend narrow perspectives and acknowledge and work collaboratively within the broader and more interconnected ecosystems in which they operate. The application to asset owners is when they aim to have positive real-world impacts as part of a wider framework to achieve better long-term outcomes.
- **The link to universal ownership**. Systems leadership and universal ownership are two sides of the same coin. Large asset owners with long-term goals can apply systems leadership through a hyper-integrated mindset to safeguard the climate system, protect the financial system, support the goals of sustainable growth, and produce better outcomes for the global economy ultimately benefitting their beneficiaries and contributing positively to wider stakeholders and planet. This involves asset owners recognising that overall economic performance will influence the future value of their portfolios more than the performance of individual companies and so making their activities focus on **building better beta**.
- **The link to COP 26.** The summit has highlighted how the capital of the leading asset owners (and particularly the top 20 asset owners) can use systems leadership and universal ownership to align companies with a net zero pathway.

Systems-leadership: the understanding that everything connects and behaviours matter which manifests itself largely in greater efforts to collaborate and find joint solutions to common problems

Universal-ownership: the committed interest in improving the investment system built around building better beta for the benefit of all stakeholders

The largest asset owners have particular influence through their allocations and ownership muscle trickling down to amplify the capital aligned to net-zero pathways

Universal ownership

- Systems leadership and universal ownership suggest asset owners can avoid the prisoners' dilemma, of acting singly and in a self-contained mandate, and instead act collectively and with solidarity as a better path for all. But asset owners face challenges in the adoption of these principles:
    - Most pension funds and SWFs must adapt to the needs of their sponsors who may not align on these principles. For example, many SWFs come from legacy fossil fuel capital or are dependent on the fossil fuel industry.
    - Many pension funds and SWFs operate in countries where the current interpretation of fiduciary duty does not support the transformation required.

Asset owners face challenges in adopting systems leadership

- These challenges limit the uptake of universal ownership. In practice, many large asset owners will find it unattractive to show leadership in line with universal ownership principles given fiduciary duty concerns, or not seeing themselves as large enough or not having the long-term orientation.

Asset owners may lack the leadership motivations to adopt universal ownership or net-zero commitments

- And in parallel with this, not many asset owners in the AO100 have so far made commitments to align portfolios to net-zero GHG emissions by 2050. There are currently three (GFANZ) accredited net-zero committed organisations in the top 20 and 11 others in the top 100.

Asset owner innovation

- The development of universal ownership practices calls for considerable innovation in the governance model and investment model with support from the enabling areas of technology and culture.

- There is potential support to this innovation through adopting systems leadership. Innovation provides the benefit from more sophistication, specialisation and scale in the investment model but must accommodate the additional complexity (many more factors to consider) and ambiguity (many more issues call for judgements) of such arrangements.

- But there are impediments to this innovation. There are particular barriers introduced by resourcing limits, overly conservative cultures and fragmented technology and data management. *There is more narrative on innovation opportunities and challenges overleaf*

- Funds that have matured furthest in their governance model, investment model and sustainability model are best placed to undertake this innovation. The Canadian model is the furthest forward in this regard. *There is more narrative on page 17.*

Critical need for innovation

Innovation helps with sophistication and specialisation but is subject to some likely costs

Systems leadership is critical to support innovation but requires good culture

The various maturity models have different levels of innovative capacities

Innovation opportunities and challenges

	Sources of innovation opportunity
System leadership supports innovation	This is a time for stronger leadership. The ecosystem is vulnerable and needs the protection of stronger systems-level leadership and interventions
Burning platforms support innovation	Necessity is the mother of invention. Weak change culture is overcome when there are burning/ smouldering platform issues that are present with net-zero ambitions
Innovation in the value chain	Innovations can flow from better use of the ecosystem infrastructure and capturing the innovations from agents in the value chain
Technology innovation	AOs when appropriately resourced can innovate in technology – stronger data platforms, portfolio quality dashboards, AI applications and others

Asset owners have strong incentives to innovate

	Sources of innovation challenge
Conservatism	Strict interpretations of prudent person rules and fiduciary standards push AOs to follow accepted wisdom and follow the leader practices
Disjointed governance	Innovation at AOs is subject to internal dissonance with board, internal leadership, and outsourced agents having different views based on similar data but different beliefs
Political biases	Many AOs must answer to political bodies and can face heavy, unmerited criticism for decisions that are challengeable when results are not immediately positive
Talent limits	Many AOs are prevented from compensating employees at competitive levels with other entities in the financial services industry and cannot secure the talent needed

Asset owners have strong impediments to successful innovation

Systems leadership and innovation

Asset owner 'models' and their maturity

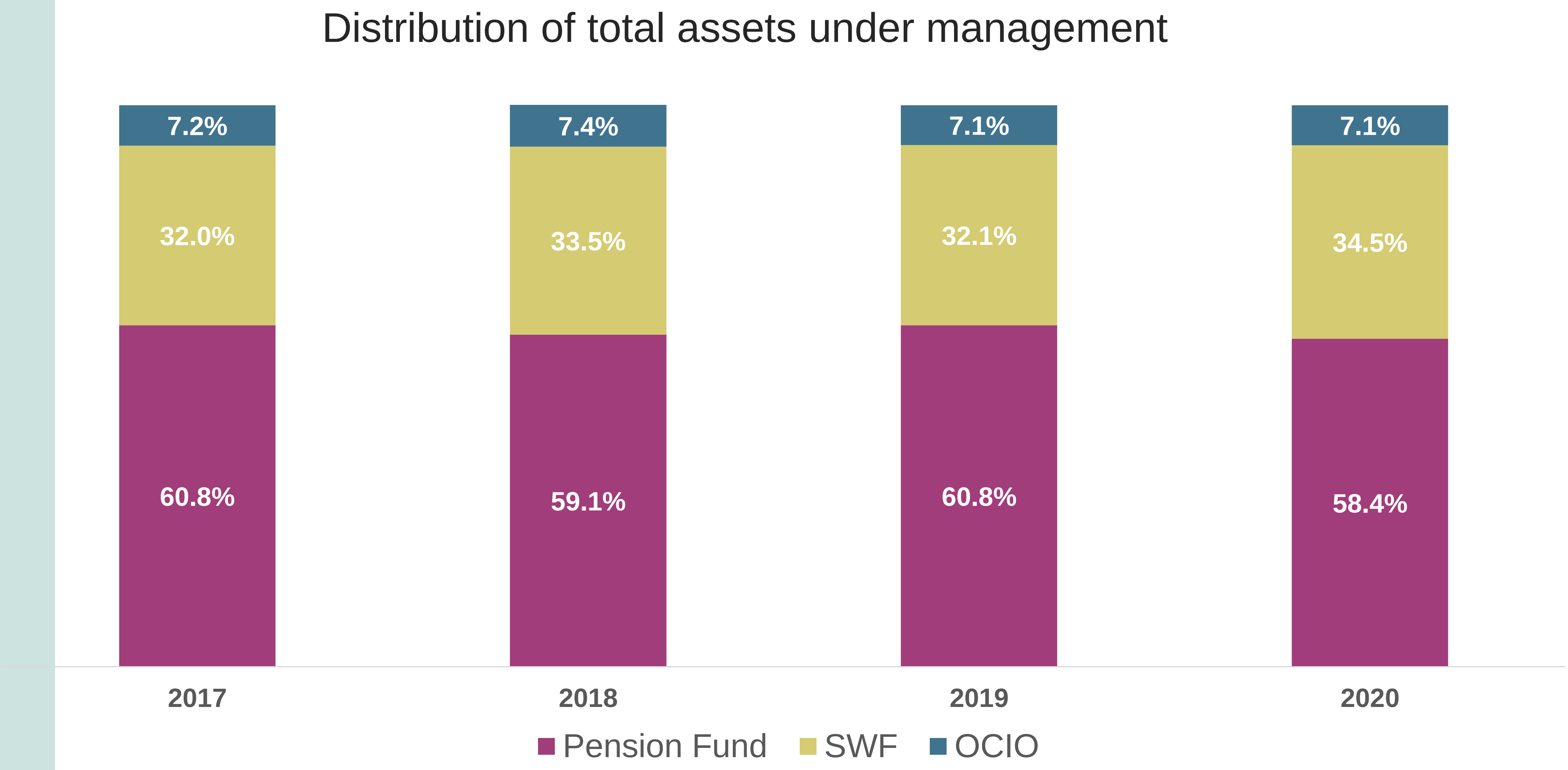
- Various AO models are put forward as characteristic of asset owner practices. Below we identify seven widely-referenced models.
- The maturity model can be viewed as a set of structured levels that describe how well the behaviours, practices and processes of an organization can reliably and sustainably produce required outcomes.
- If we consider a maturity model mediated by governance specialisation and investment sophistication, most would see the Canada and Australia models as leading the pack and their example sets a standard for other asset owners to emulate

Asset owner group	AuM [1]	Top 3 asset owners in type from AO100	Governance Model*	Investment Model*	Sustainability model*
1 Approximate AuM of all AOs in the group taken from AO100 (in Trillion Dollars). No endowments or insurance companies were included in the AO100 listing			Significant insourcing with strong capabilities in strategy/ execution, listed markets and private markets	Significant sophistication including total portfolio thinking, innovative access points in complex markets and sustainability	Significant integration including ESG integration/tilts, active ownership and net-zero ambitions with impact and universal ownership
Canada model	$1.4T	CPPIB | CDPQ | OTPP	Very mature	Very mature	Semi mature
Australia model	$0.7T	FFMA | AusSuper | Aware Super	Semi mature	Semi mature	Semi mature
US public fund	$2.8T	CalPERs | CalSTRS | NY State	Maturing	Semi mature	Not very mature
Endowment model	NA	Gates | Harvard | Wellcome	Semi mature	Semi mature	Not very mature
SWF	$8T	Norges | CIC | ADIA	Very mature	Very mature	Maturing
Insurance Company	NA	Ping An | Allianz | AXA	Very mature	Semi mature	Semi mature
OCIO	$1.7T	Mercer | Aon | Russell	Very mature	Semi mature	Semi mature

* Level of maturity			
Very mature	Semi-mature	Maturing	Not very mature
Has developed fully fit-for-purpose state	Small gaps in maturity needed to attain fit-for-purpose state	Moderate gap in maturity needed to attain fit-for-purpose state	Large gap in maturity needed to attain fit-for-purpose

Section 1 | Total value of assets

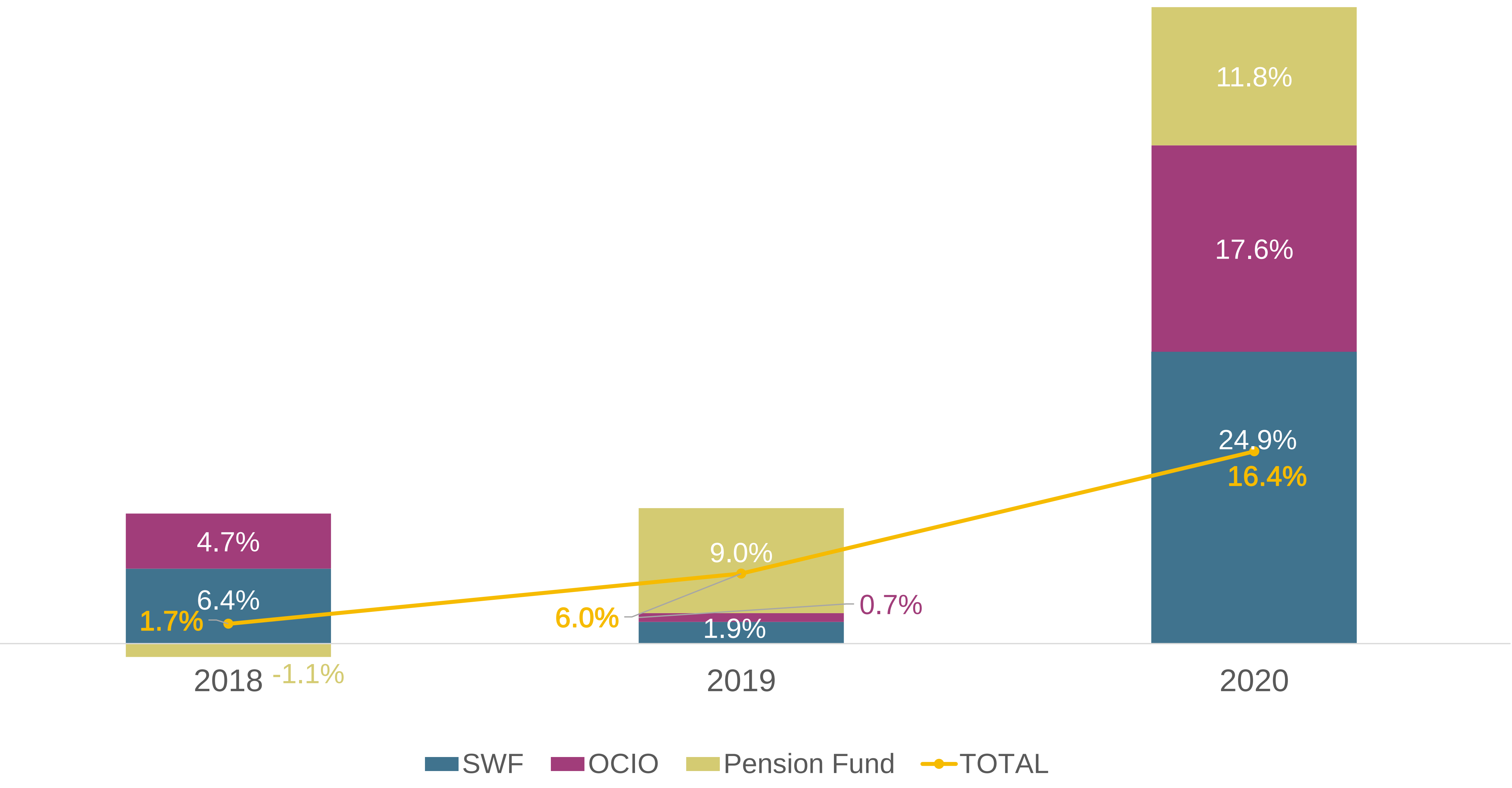
Evolution by fund type



Pension funds dominate the AO100 and manage 58.4% of total AUM (US$ 13.7 trillion)

Total value of assets

Annual growth by fund type



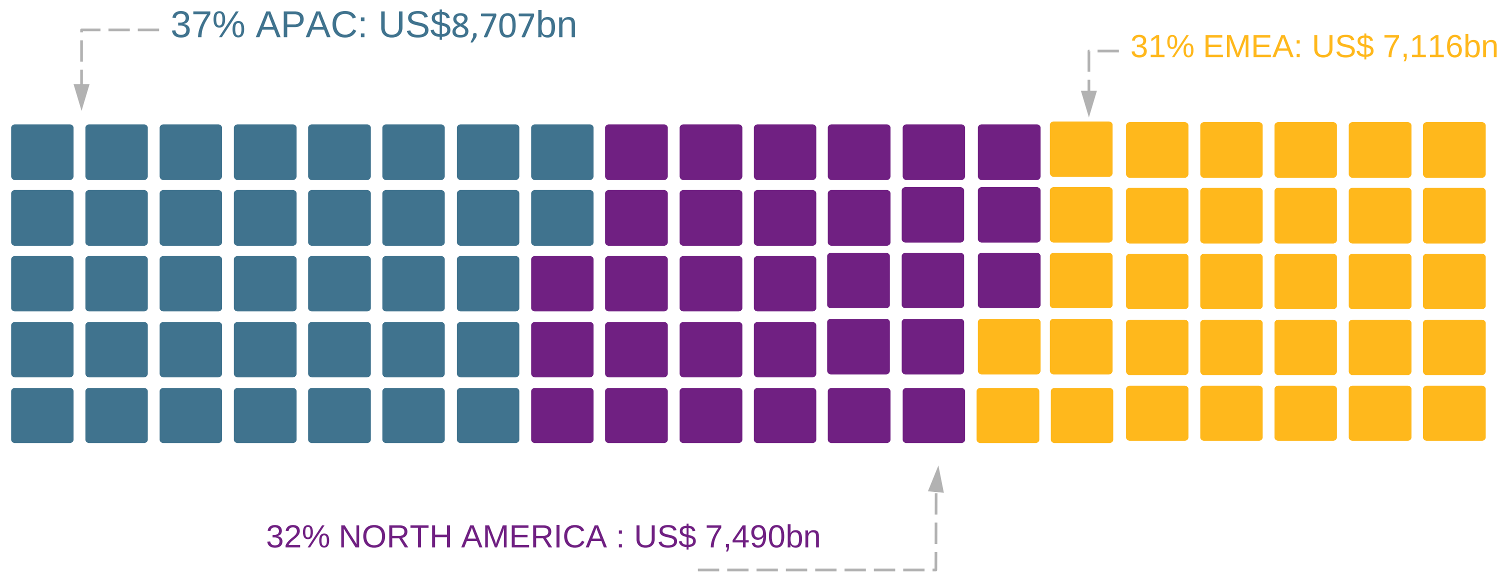
Assets under management increased considerably for all types of funds in 2020

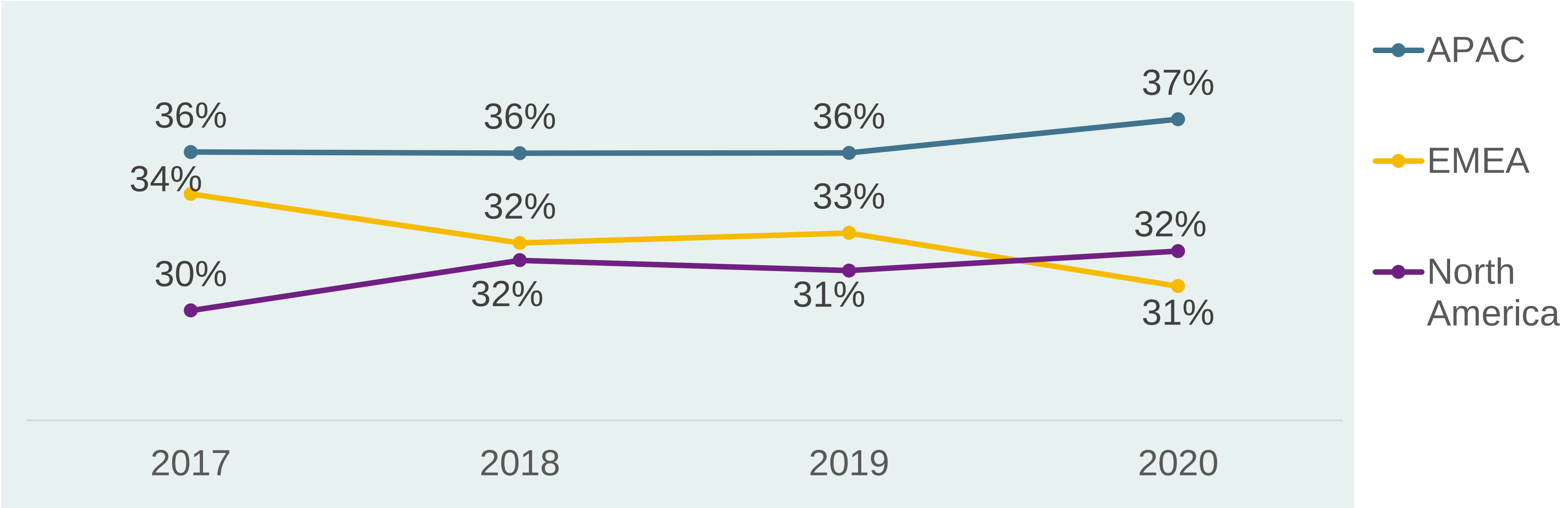
Sovereign wealth funds experienced the strongest growth with 24.9% y/y

Changes in AuM are caused by a combination of organic growth and sample composition

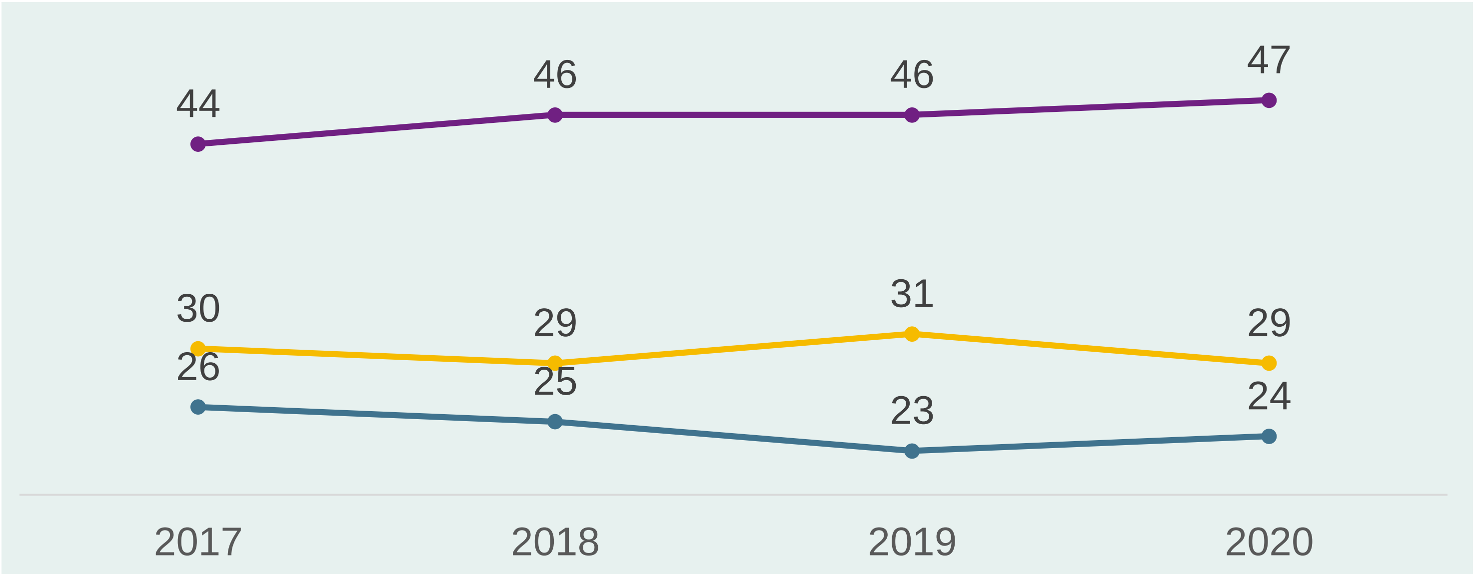
Evolution by region

Distribution by assets





Distribution by number of funds



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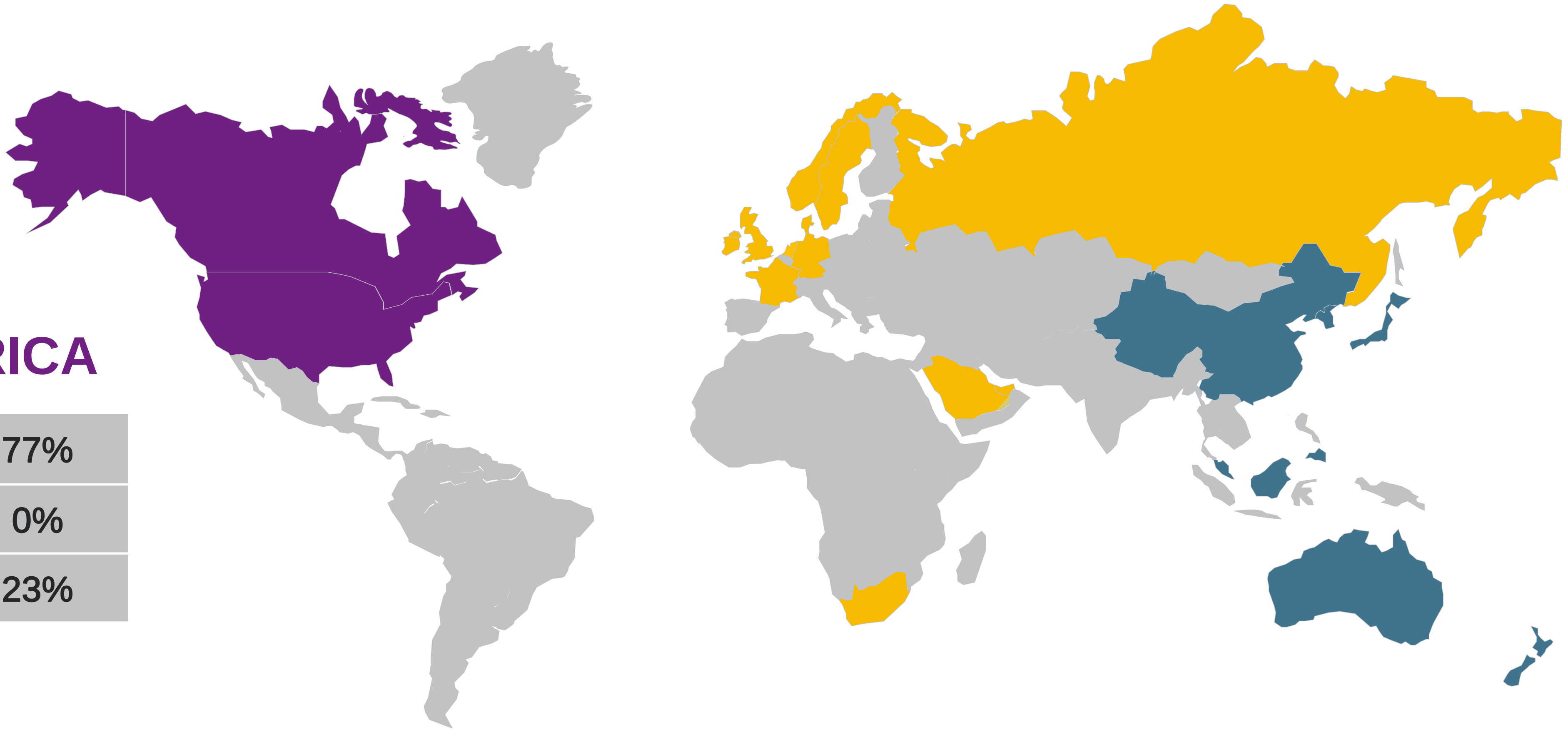
Total value of assets

Split by fund type and region



EMEA

Pension funds	40%
SWF	60%
OCIO	0%

NORTH AMERICA

Pension funds	77%
SWF	0%
OCIO	23%

APAC

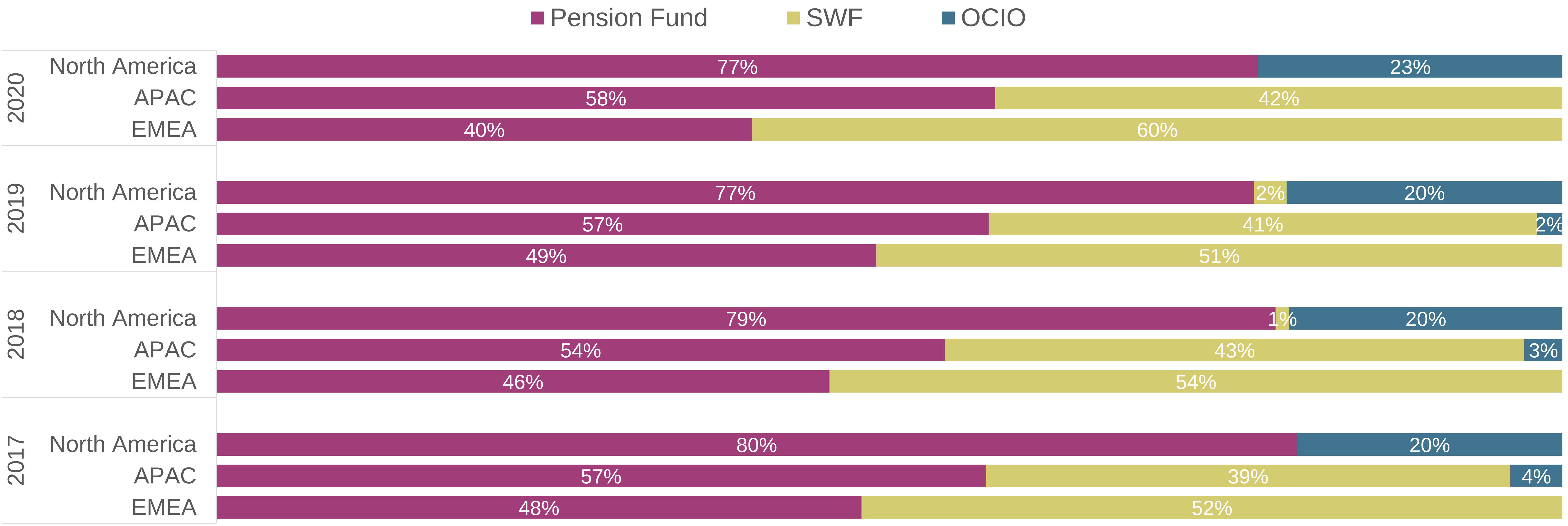
Pension funds	58%
SWF	42%
OCIO	0%

- Pension funds dominated in North America where they represent 77% of assets. Pension funds also dominated in APAC although to a smaller extent with 58%
- Sovereign Wealth funds accounted for a significant share of the assets in the EMEA region (60%), in particular due to the Middle East sovereign funds

Note: OCIO and Master trust assets are shown in the region of their corporate headquarters. We note that all OCIOs and Master Trusts have clients globally.

Evolution of split by fund type and region

Total value of assets



- Pension Funds continue to dominate in North América with 77% on average for the period, followed by APAC with 58% on average
- OCIO and Master trust have more presence in North America with 23% on average for the period

Note: OCIO and Master trust assets are shown in the region of their corporate headquarters. We note that all OCIOs and Master Trusts have clients globally.

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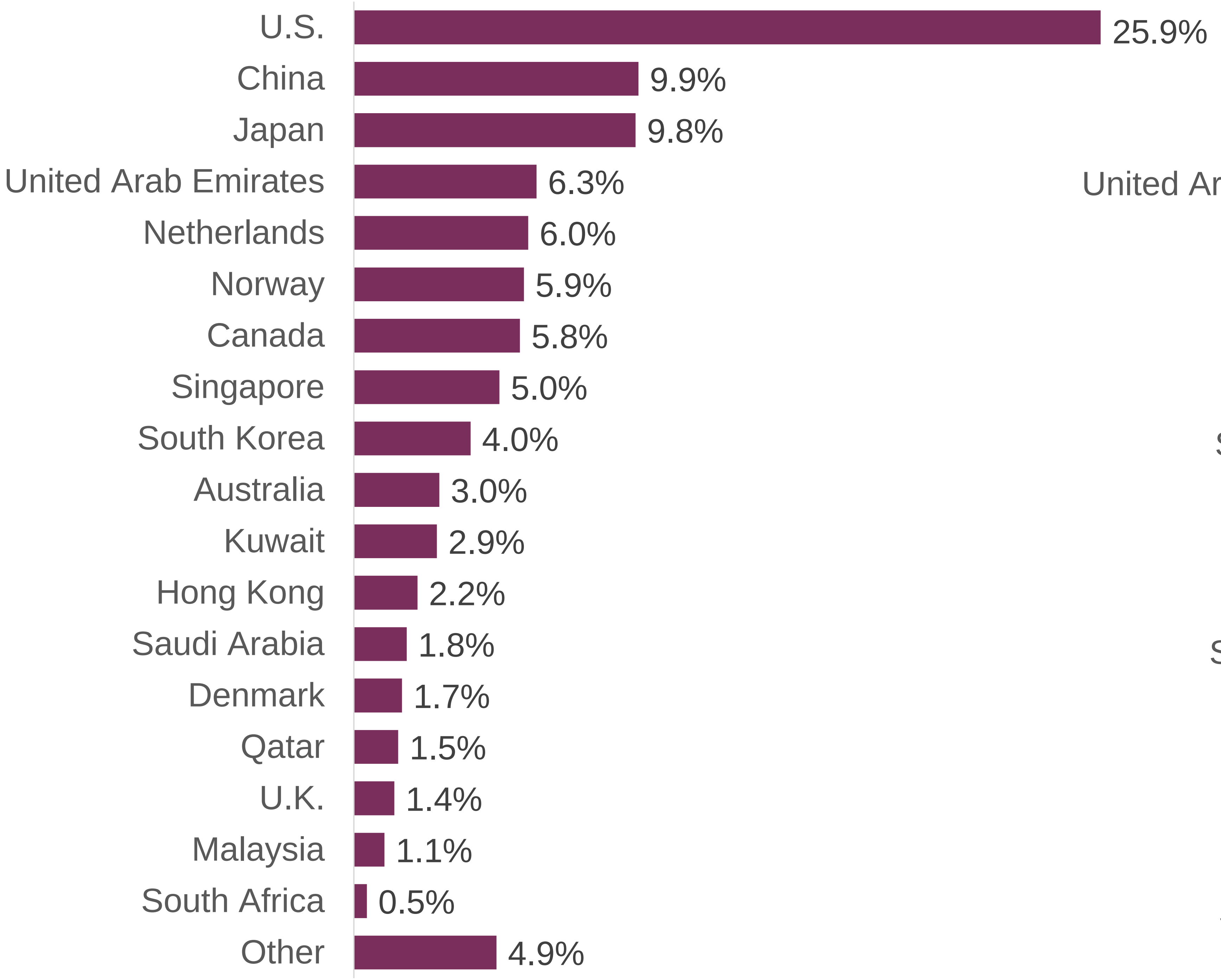
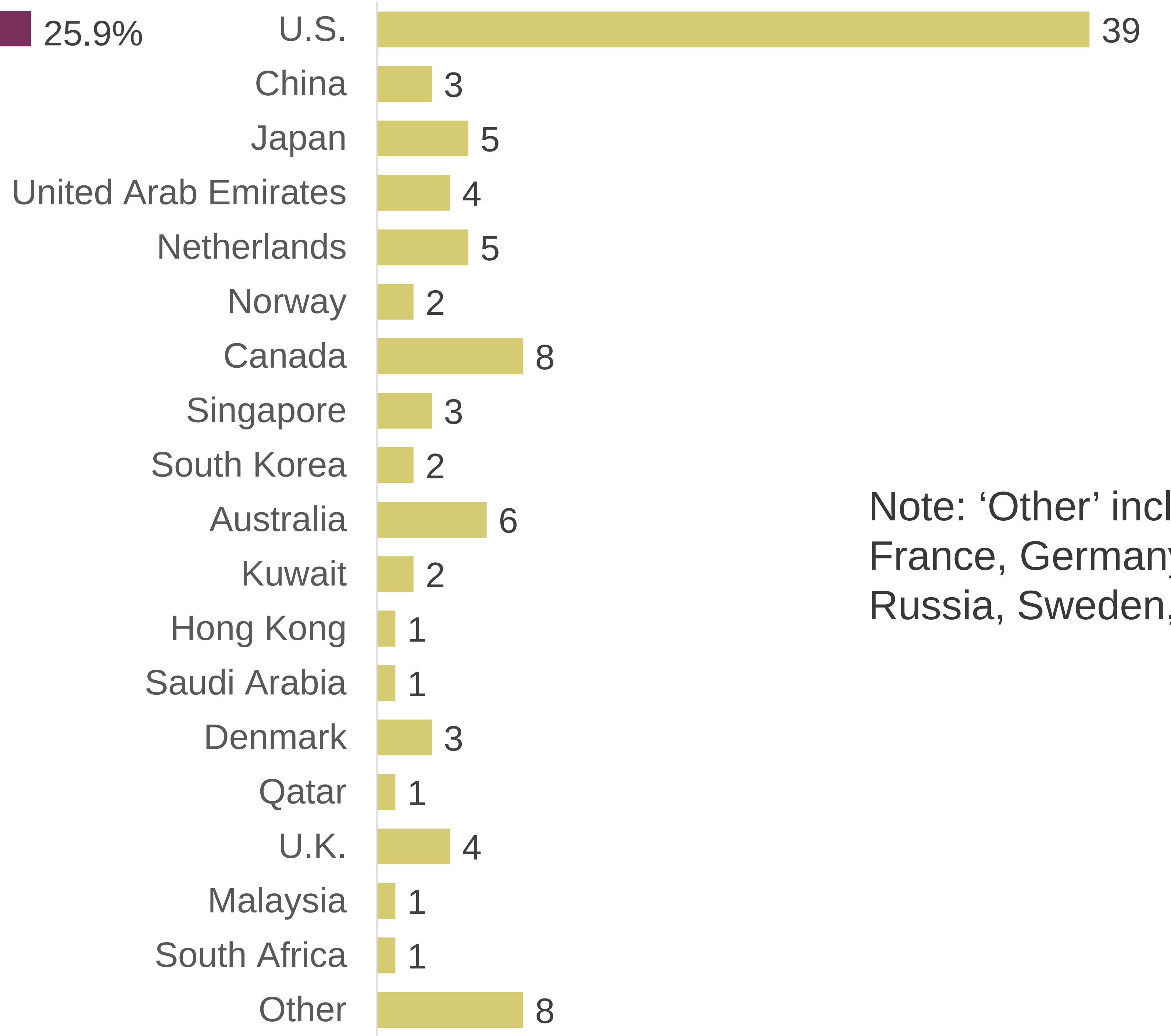
Split by fund domicile

Share of top 100 discretionary assets



Number of funds per country

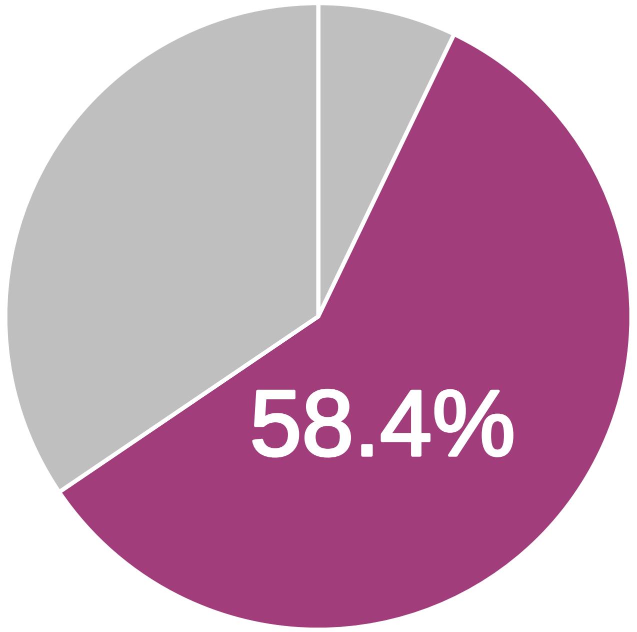


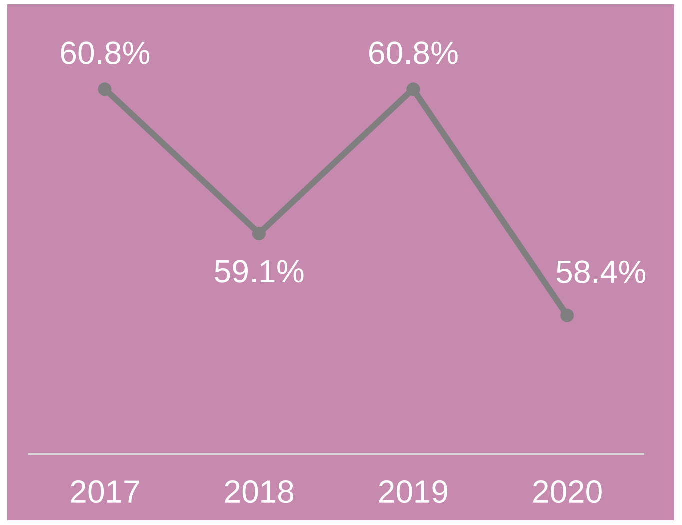
Note: ‘Other’ includes: France, Germany, India, Russia, Sweden, Taiwan

Section 2 | Pension funds

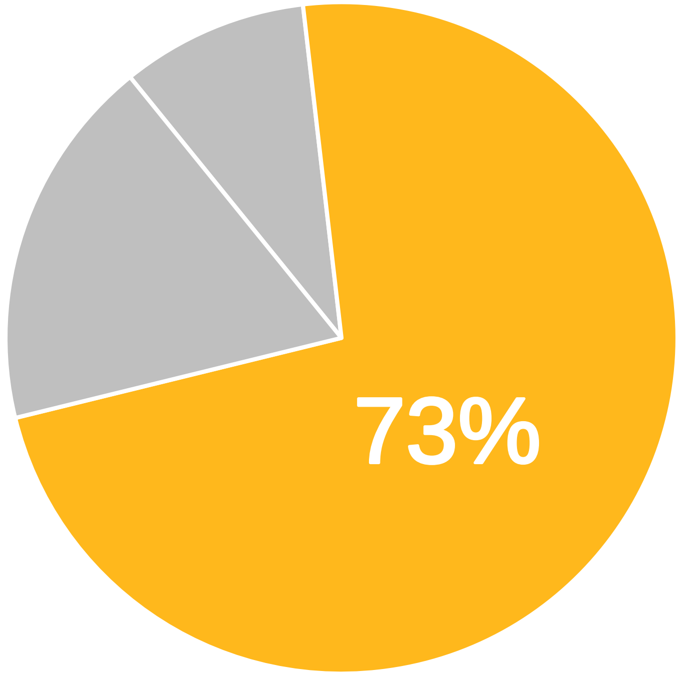
Pension funds

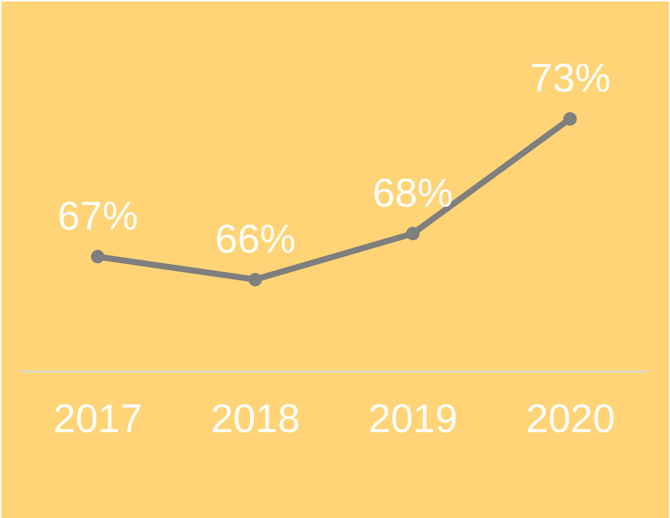
Percentage of assets





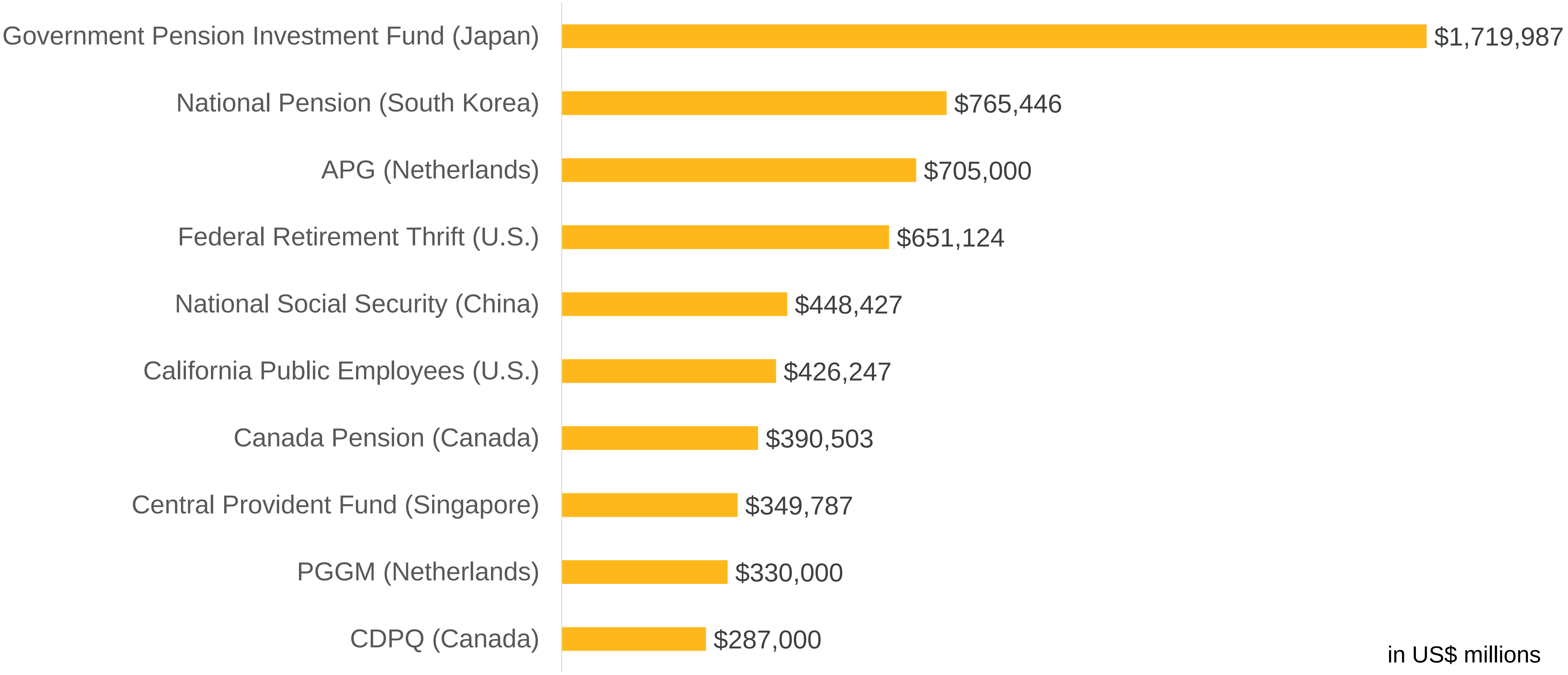
Number of funds





- Pension Funds represent 58.4% of the ranking's assets and 73% of the number of funds
- Of the top 20 funds, 9 are Pension Funds
- The average assets of Pension Funds account for US$188 billion, below the average of US$235 billion for all funds
- Pension funds assets decreased since 2017, where they represented 60.8%, even though the number of funds increased by 6 funds in the AO 100

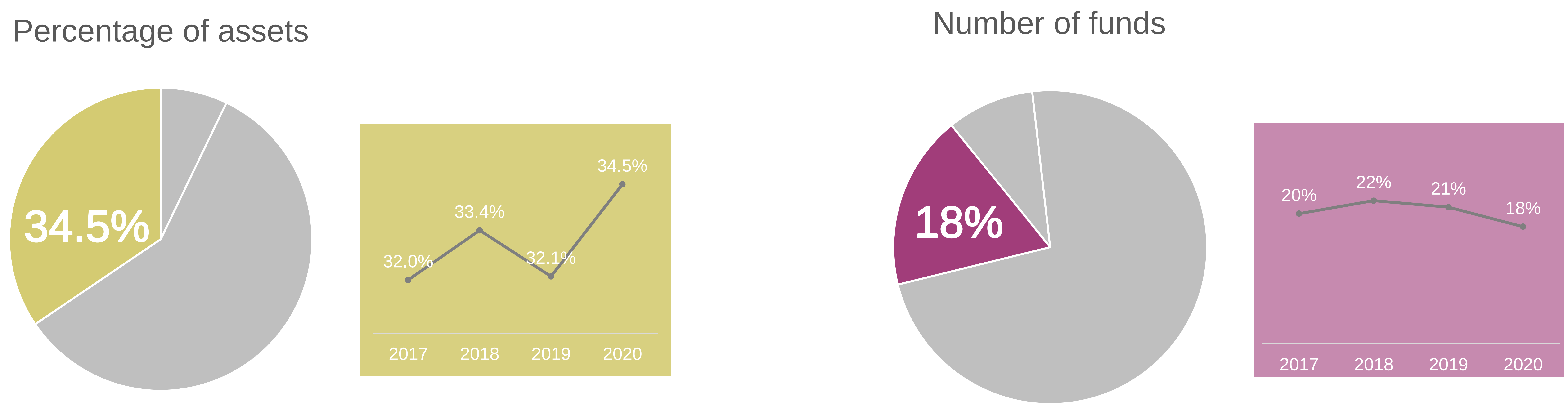
Top 10 pension funds



in US$ millions

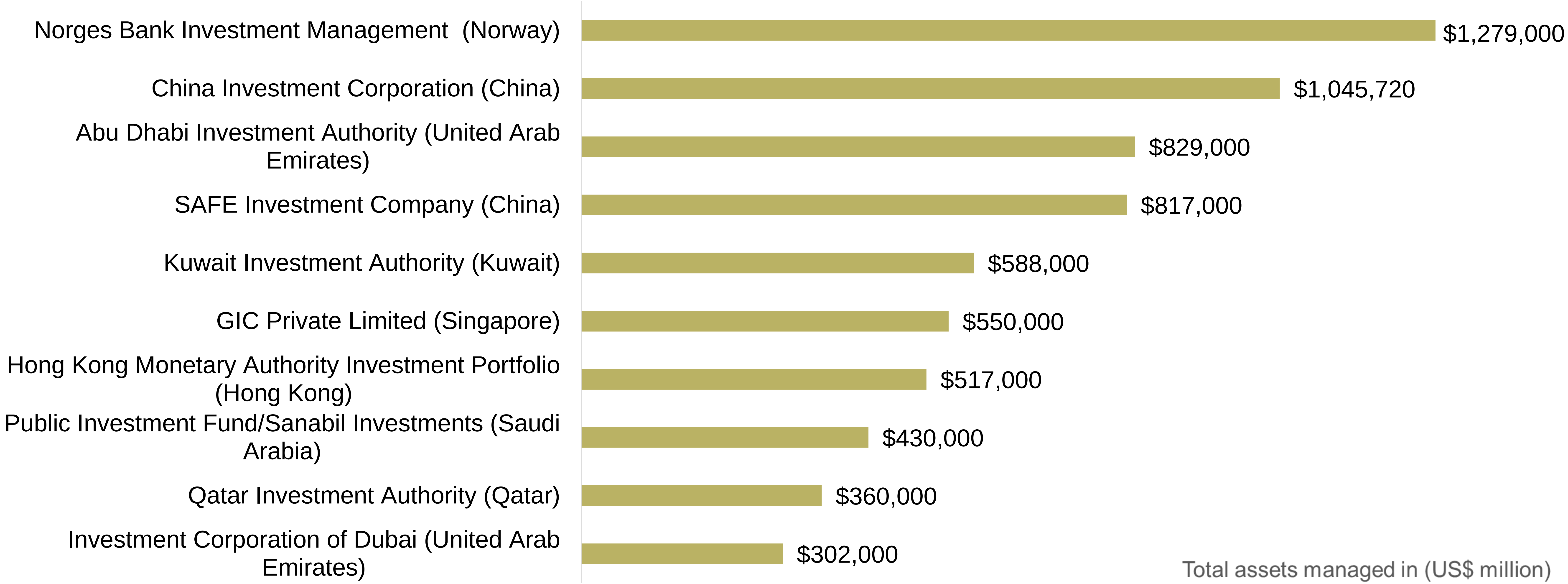
Section 3 | Sovereign wealth funds

Sovereign wealth funds



- Sovereign Wealth Funds (SWFs) represent 34.5% of the ranking’s assets and 18% of the number of funds
- Of the top 20 funds, 10 funds are SWFs
- The average assets of SWFs account for US$449 billion, above the average of US$235 billion for all funds
- SWF’s assets have increased their participation in total assets compared to 2017 even though the number of funds ranked have decreased by 2 funds in the AO 100

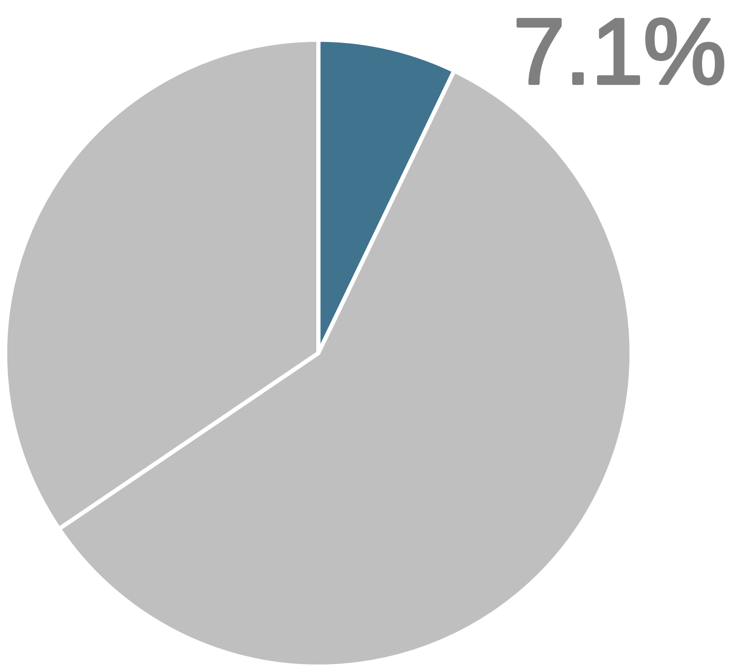
Top 10 sovereign wealth funds

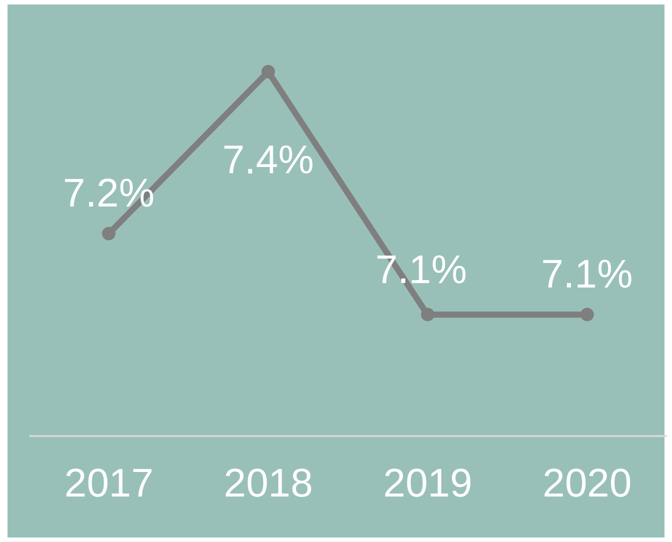


Section 4 | OCIOs and Master trusts

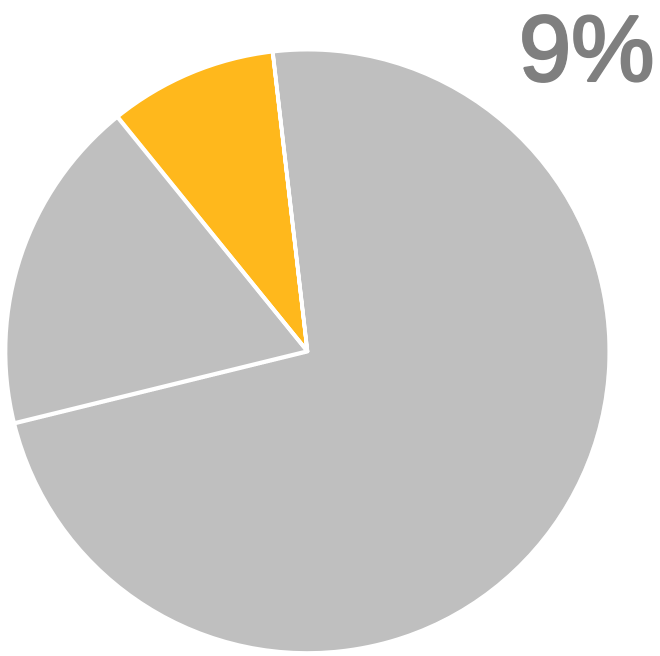
OCIOs and master trusts

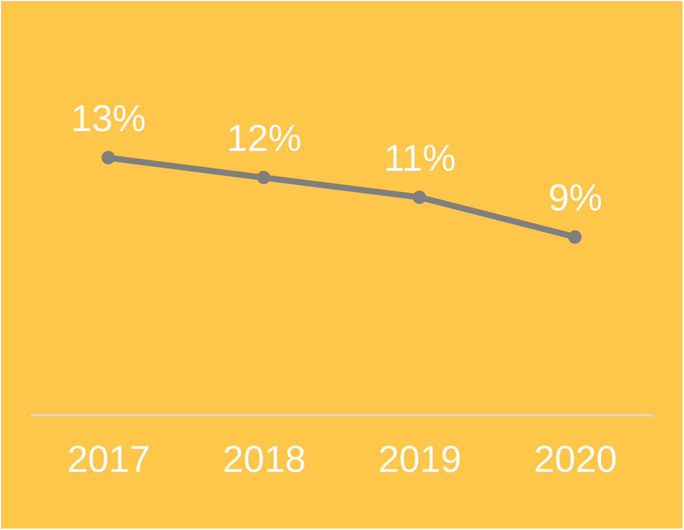
Percentage of assets





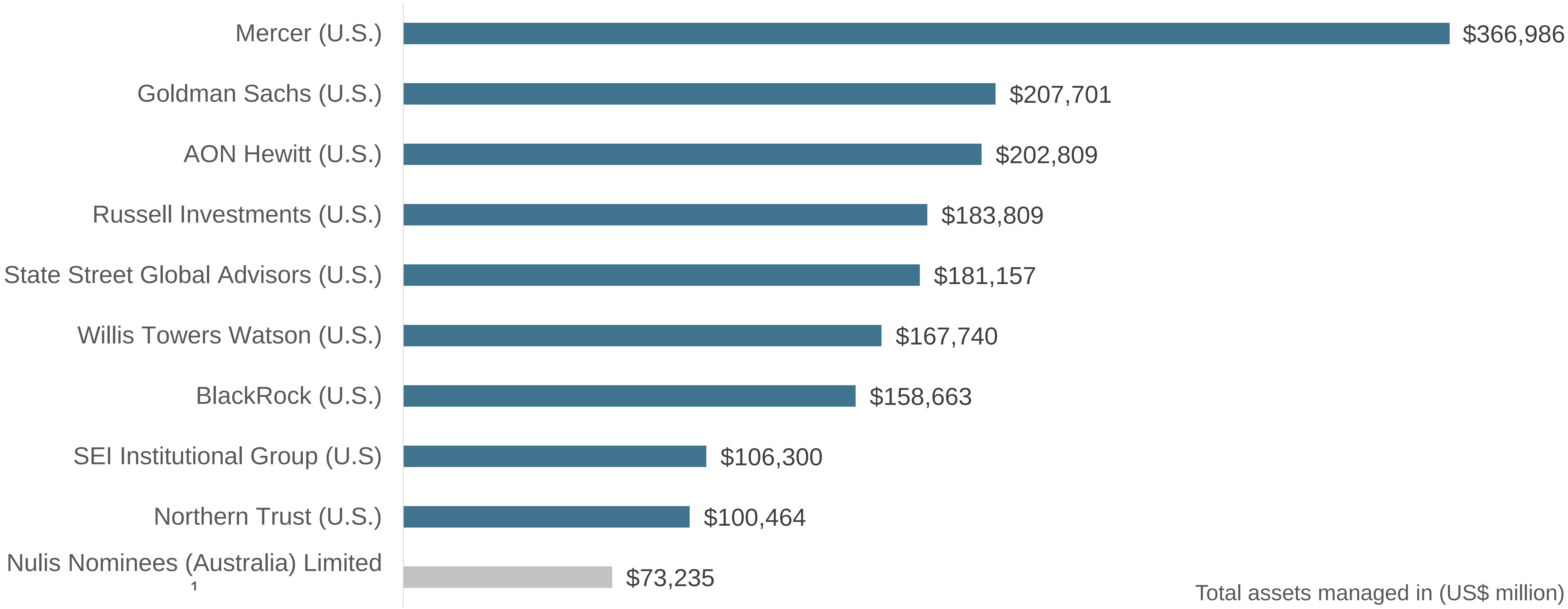
Number of funds





- OCIOs and Master Trusts represented 7.1% of the ranking's assets and 9% of the number of funds
- Mercer is the only OCIO and master trust in the top 20
- The average assets of OCIOs and master trusts accounted for US$186 billion which is below the average of US$235 billion for all funds
- OCIOs and master trusts' assets have the same participation in total assets compared to 2017 even though the number of funds ranked have decreased by 4 funds in the AO 100

Top 10 OCIOs and master trusts

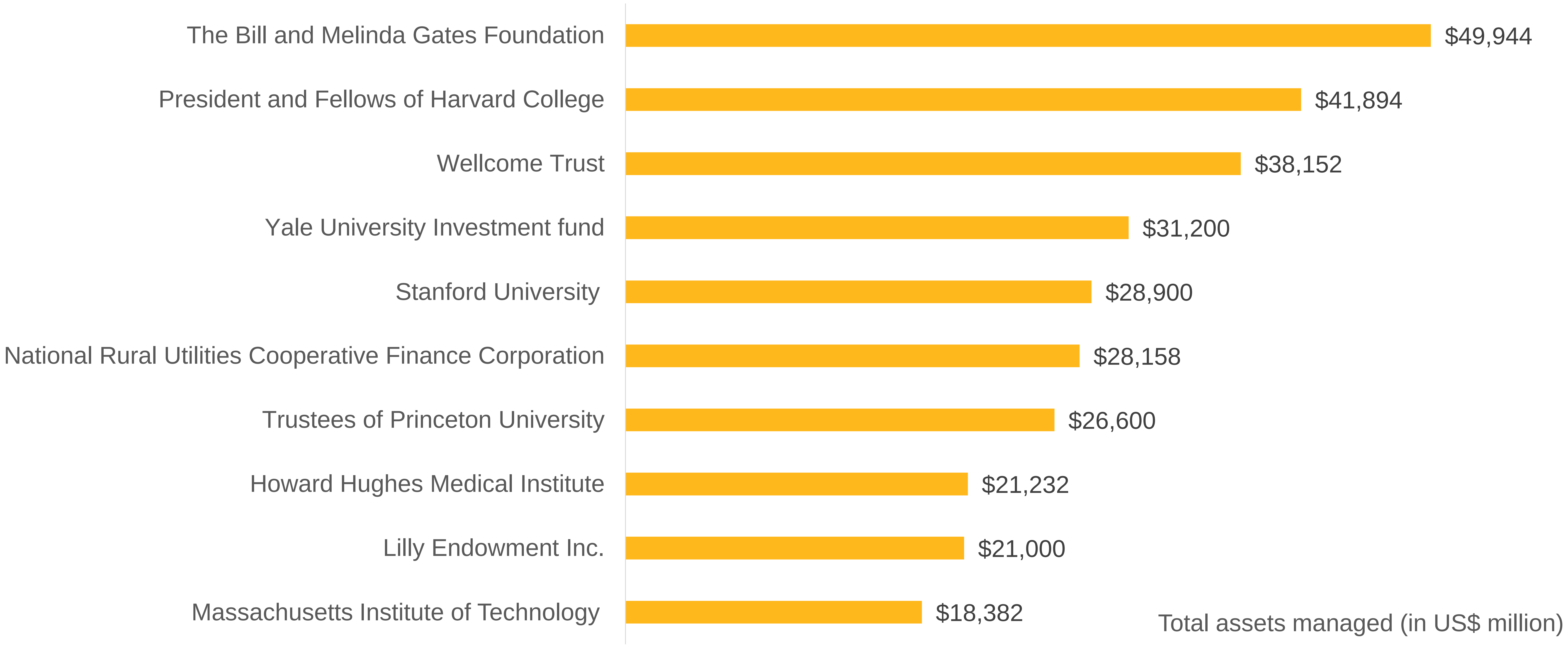


[1]Did not enter the Asset Owners top 100

Note: OCIO and Master trust assets are shown in the region of their corporate headquarters. We note that all OCIOs and Master Trusts have clients globally.

Section 5 | Foundations and endowments

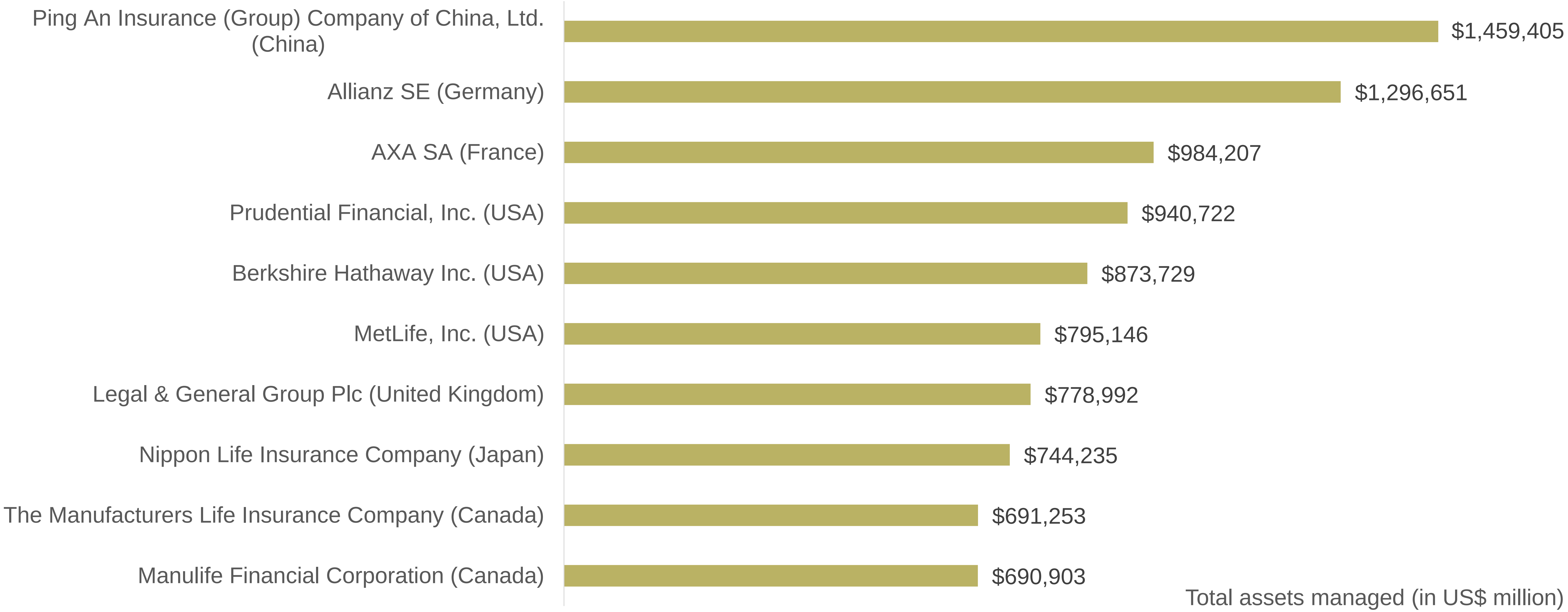
Foundations and endowments



None of the Foundations and Endowments listed above are large enough to enter the top 100 asset owners

Section 6 | Insurance companies

Top 10 insurance companies



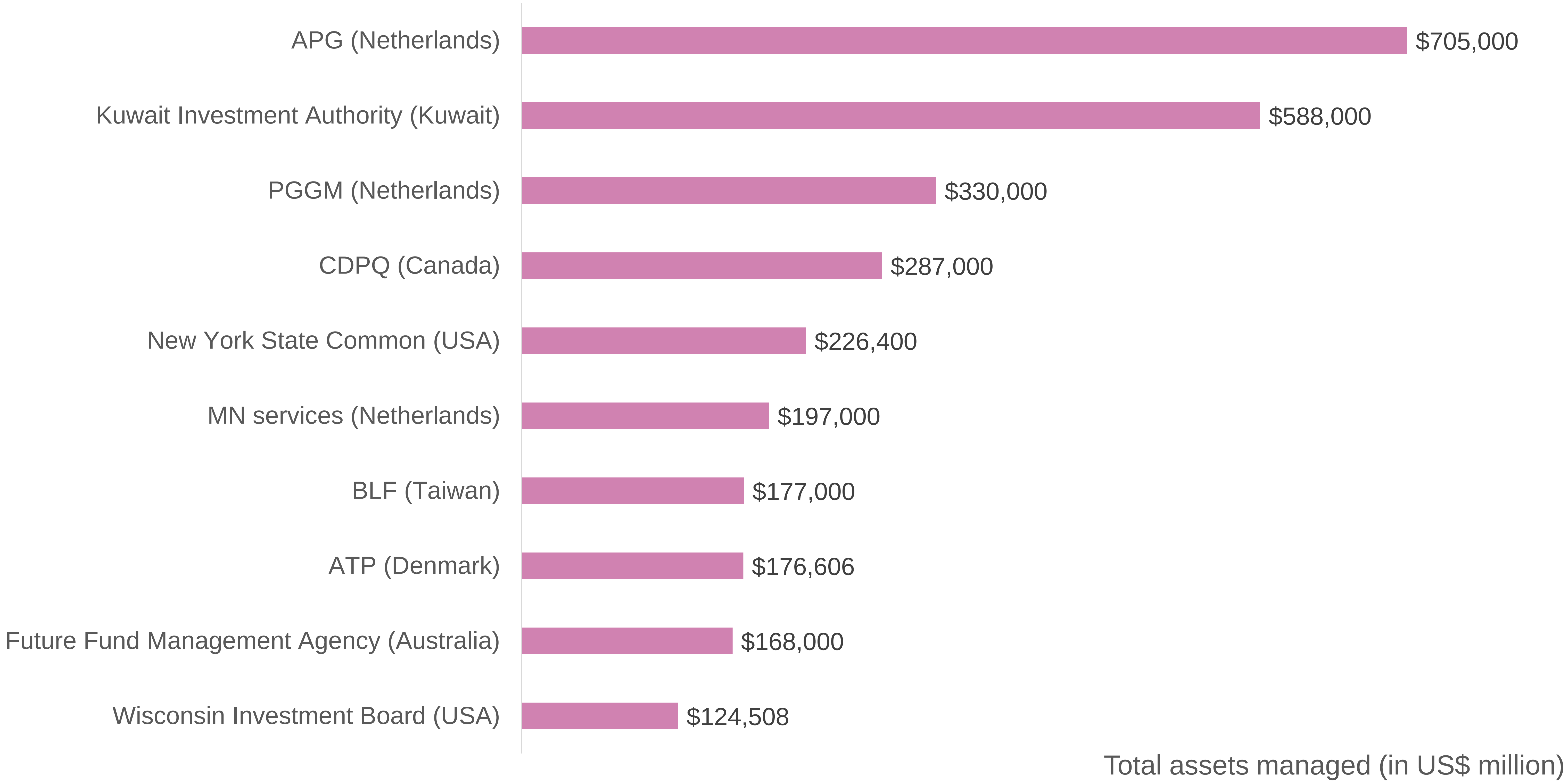
Total assets presented for insurance companies include assets managed by third parties, so are not included in the top 100 ranking

Section 7 | State investment platforms

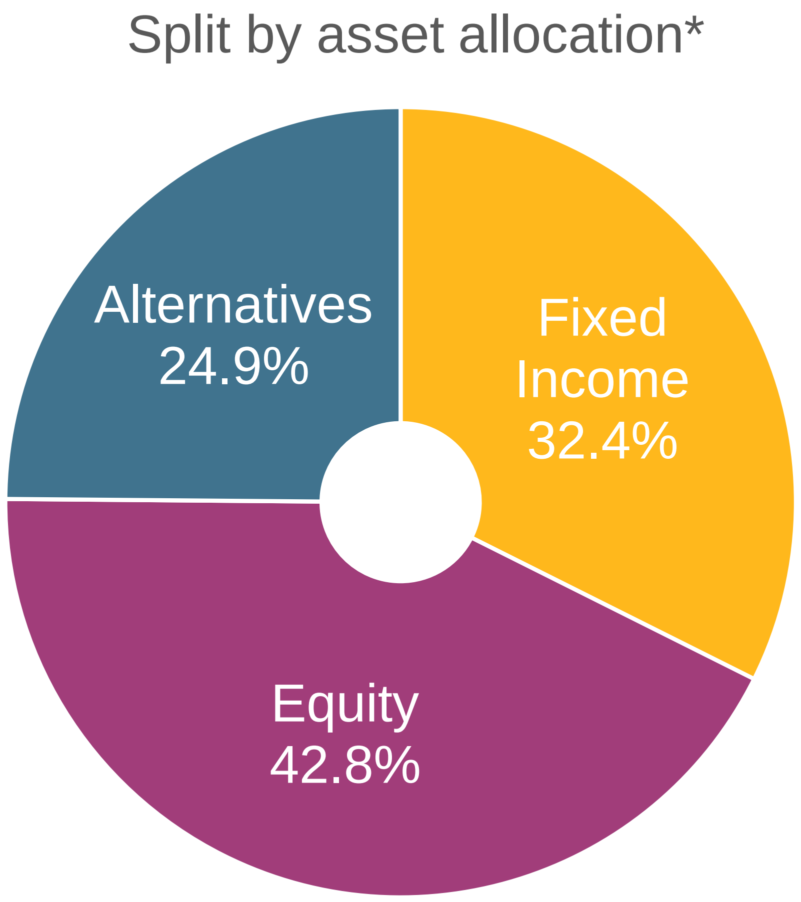
What are state investment platforms (SIPs)?

- State investment platforms are institutional investors based in one particular state or drawn from one sector which are entrusted with managing and investing a pool of capital from various depositors or funds drawn from that state / sector
- These depositors/funds can range from pension funds, insurance plans, sovereign wealth funds, endowment funds and other investment organisations each with their own governance arrangements
- SIPs should not be considered as a mutually exclusive category like the ones examined in above sections of this report, but as an additional layer to understand the nature of some funds
- These funds warrant special consideration in our report on account of the considerable size of AUMs across these platforms. With their delegated authorities over all platform assets this enables them to leverage their scale
- We have identified 18 SIPs in the AO100, representing total AUM of US$ 3.8 trillion
- There is usually one fund which forms the *majority* of asset under management in any SIP. This majority fund is used to categorise a state investment platform eg APG from Netherlands is a SIP, and the majority of assets under management are from ABP, which is a pension fund. So APG is categorized as a pension fund in AO100 and a state investment platform. Another example is QIC, which is a hybrid case

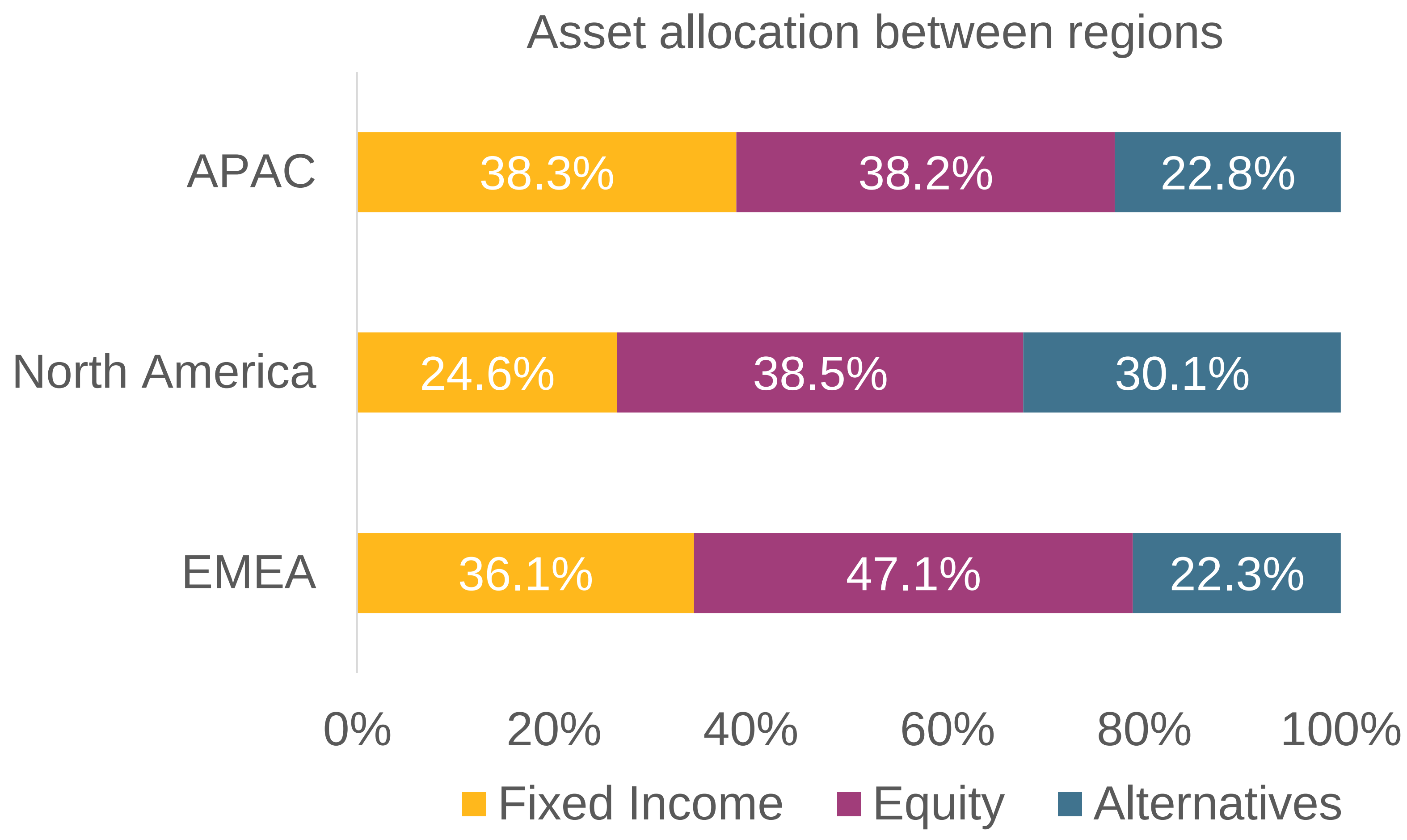
Top 10 State Investment Platforms



Split by asset allocation and fund domicile



*weighted average

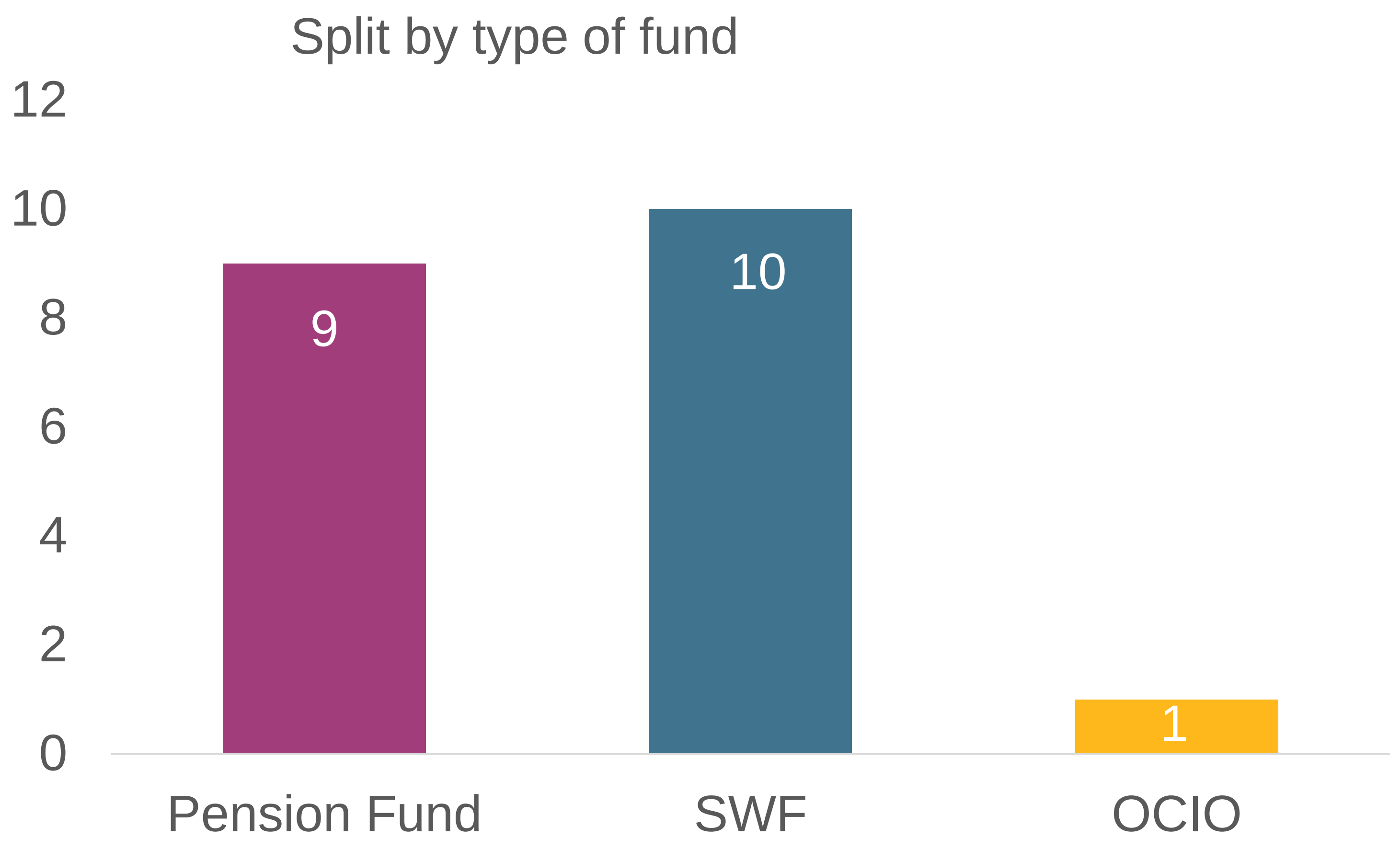


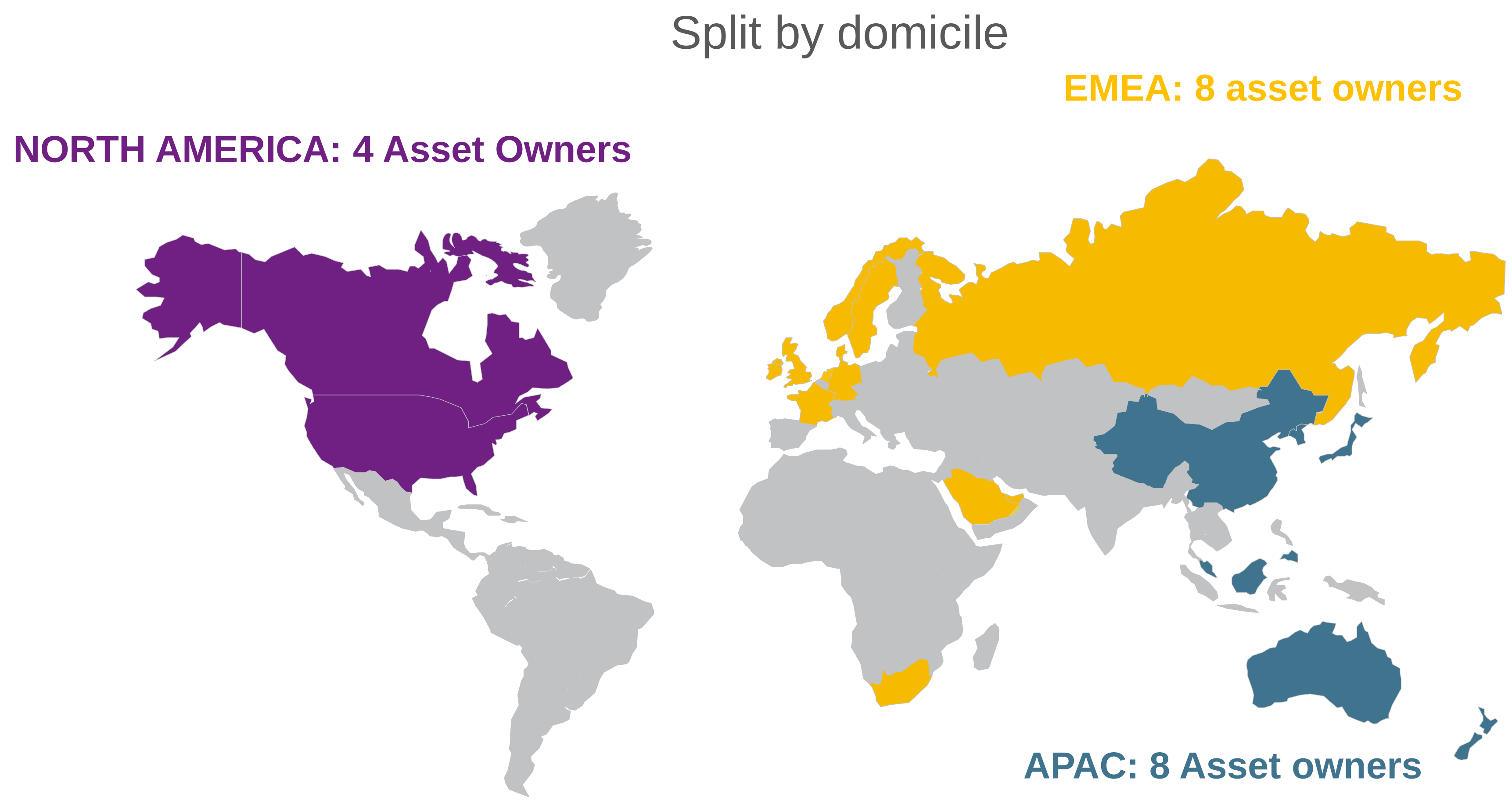
- The average portfolio for SIP shows the highest proportion of assets were invested in equities, followed by fixed income securities and lastly, alternative assets
- North American SIP assets are invested in equities (38.5%), followed by alternative assets (30.1%)
- EMEA SIPs have invested a majority share in equities (47.1%), with 36.1% invested in fixed income and 22.3% invested in alternative assets
- Asia-Pacific funds have allocated assets equally between fixed income and equity assets

Section 8 | Top 20 Asset Owners

Top 20 asset owners

Top 20 split by type of fund and domicile



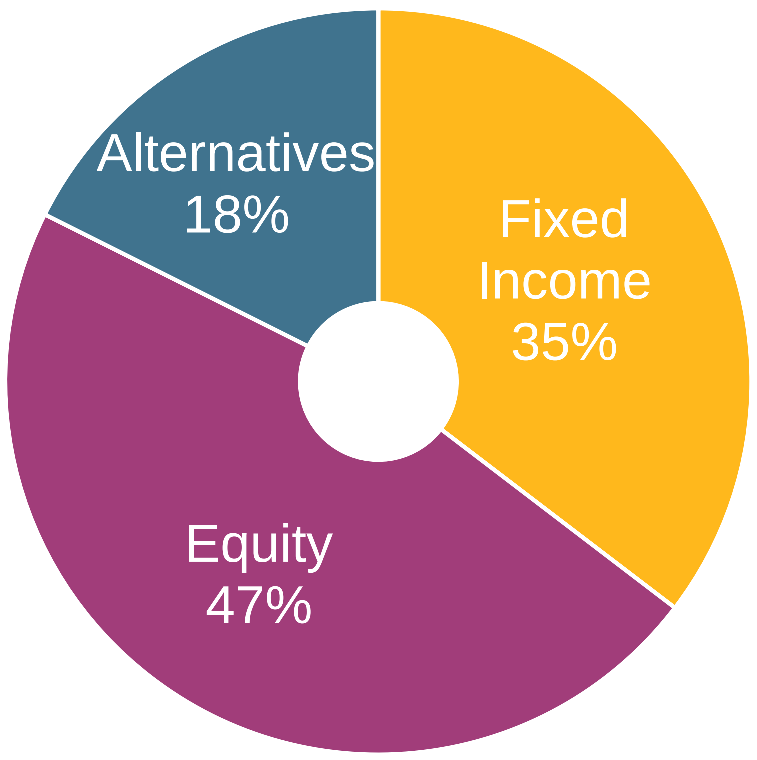


- The top 20 funds AUM totals US$12.9 trillion and represent 54.9% of the total AUM in the AO100
- In fact, the top 5 funds have an AUM of US$5.6 trillion, which makes up 24.3% of the total AUM in the ranking
- Of the top 20 funds, 10 are sovereign wealth funds (52.2% of AUM in top 20), 9 are pension funds (45.0% of top 20 AUM) and 1 is an OCIO (2.9% of top 20 AUM)
- There are 4 asset owners from North America and 8 asset owners each from EMEA and APAC in the top 20

Top 20 asset owners

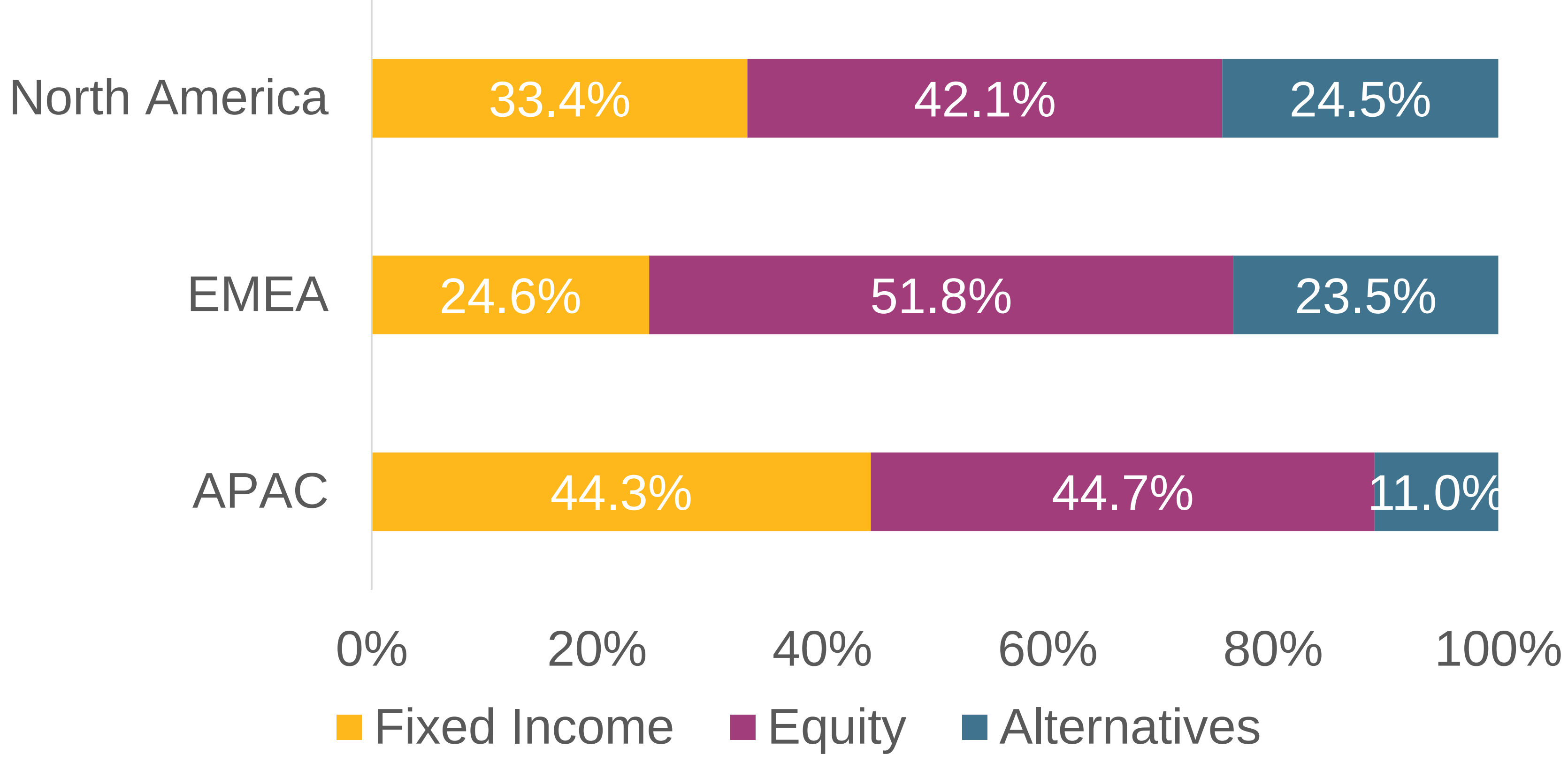
Split by asset allocation and fund domicile

Split by asset allocation*



*Weighted average

Asset allocation between regions



- The average portfolio for the top 20 funds shows the highest proportion of assets were invested in equities, followed by fixed income securities and lastly, alternative assets
- North American funds have predominantly invested in equities (42.1%), followed by fixed income (33.4%)
- EMEA funds have invested a majority share in equities (51.8%), followed by a fairly rough allocation to fixed income and alternative assets
- Asia-Pacific funds have allocated assets equally between fixed income and equity assets, with an 11% share in alternative assets

Section 9 | Universal owners

What is a universal owner?

Universal owners are large long-term holders of index-like portfolios that are exposed to the entire market and economy

Universal owners also own a significant slice of corporate externalities which risk being internalized to their funds' net cost, now or in the future

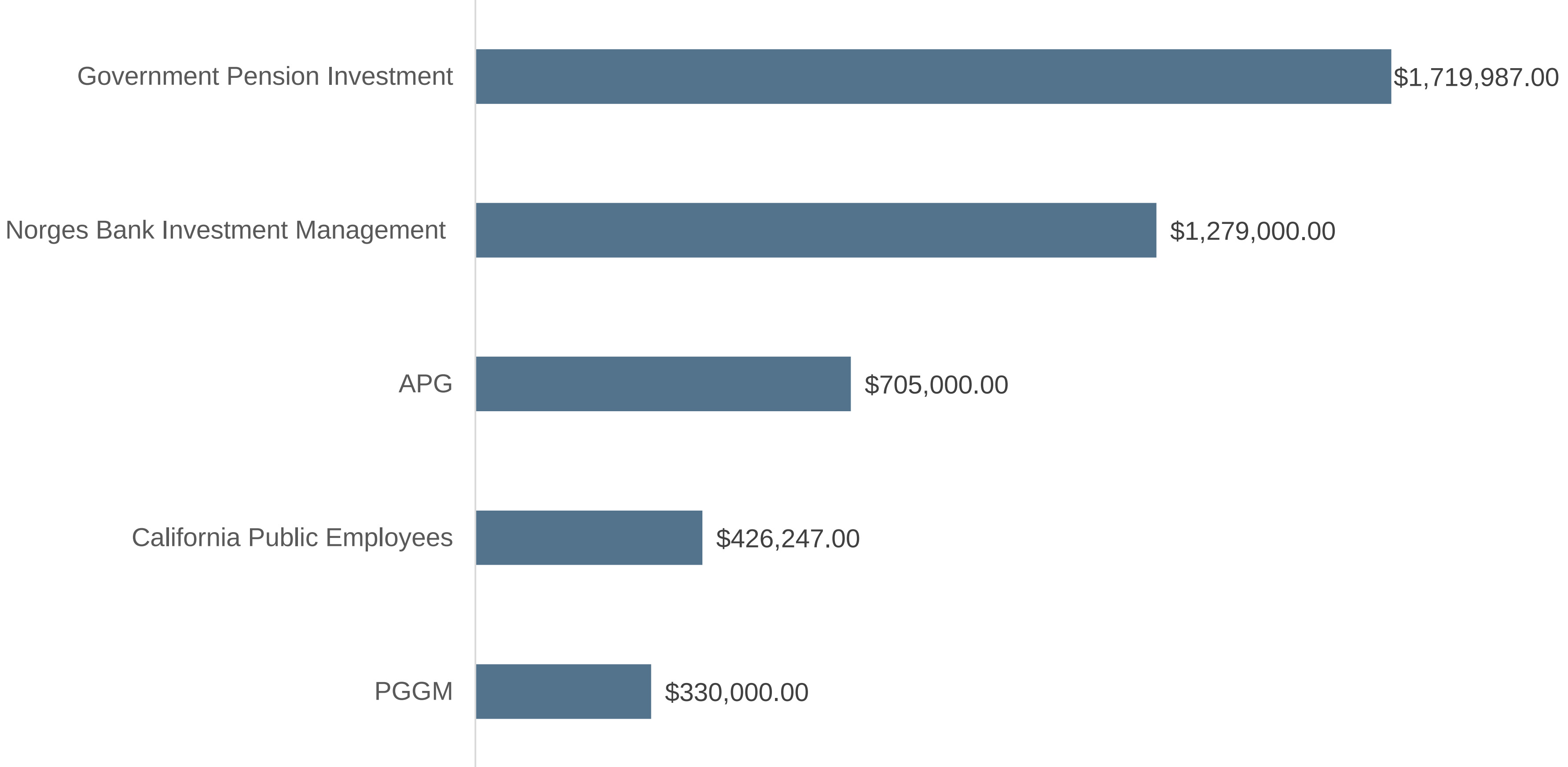
Universal owners are leadership-minded to grow the value and utility of their sponsor/member wealth by managing their long-term risk exposures inter-dependencies across the portfolio, across the stakeholders and over time

Universal owners and sustainability strategies:

- Universal owners have distinctive investment strategies regarding sustainability that aim to achieve real-world impacts on the environmental/societal system and drive better outcomes for beneficiaries (or not suffering worse outcomes)
- The activities adopted by universal investors in these strategies are both allocating to specific assets (security selection and asset allocation) and active ownership practices – voting and engagement
- The engagement here is often concerned with system-level factors to contribute to safeguarding the financial system and contributing positively to wider stakeholders
- Universal owner strategies play a key part in Paris alignment and COP26 strategies, consistent with net zero emissions by 2050
- The challenge for universal owners is hyper-integrated risk management which can be carried out in two main areas:
  - allocation of assets where as large investors they will generally work within-the-system
  - stewardship of assets where as universal owners there are change-the-system opportunities

Universal owners

Top 5 Universal Owners (in US$ million)



" The core idea of a universal owner is a large institution investing long-term in widely diversified holdings across multiple industries and asset classes, and adapting its investment strategy to these circumstances. For universal owners, overall economic performance will influence the future value of their portfolios more than the performance of individual companies or sectors. This suggests that universal owners will support the goals of sustainable growth and well-functioning financial markets. A universal owner will also view these goals holistically and seek ways to reduce the company level externalities that produce economy-wide efficiency losses."

Definition of universal owners comes from : Urwin, Pension Funds as Universal Owners; Opportunity Beckons and Leadership Calls | Rotman International Pensions Management Journal | Spring 2011.

Relatively few asset owners in this study have held claim to being universal owners

Section 10 | Full AO 100 Ranking

AO 100 ranking (in US$ million)

Rank	Fund	Market	Total Assets	Type of Fund
1	Government Pension Investment	Japan	$1,719,987	Pension Fund
2	Norges Bank Investment Management	Norway	$1,279,000	SWF
3	China Investment Corporation [1]	China	$1,045,720	SWF
4	Abu Dhabi Investment Authority	United Arab Emirates	$829,000	SWF
5	SAFE Investment Company	China	$817,000	SWF
6	National Pension	South Korea	$765,446	Pension Fund
7	APG	Netherlands	$705,000	Pension Fund
8	Federal Retirement Thrift [2]	U.S.	$651,124	Pension Fund
9	Kuwait Investment Authority	Kuwait	$588,000	SWF
10	GIC Private Limited	Singapore	$550,000	SWF
11	Hong Kong Monetary Authority Investment Portfolio	Hong Kong	$517,000	SWF
12	National Social Security [3]	China	$448,427	Pension Fund
13	Public Investment Fund/Sanabil Investments	Saudi Arabia	$430,000	SWF
14	California Public Employees [2]	U.S.	$426,247	Pension Fund
15	Canada Pension [4]	Canada	$390,503	Pension Fund
16	Mercer [4]	U.S.	$366,986	OCIO
17	Qatar Investment Authority	Qatar	$360,000	SWF
18	Central Provident Fund	Singapore	$349,787	Pension Fund
19	PGGM	Netherlands	$330,000	Pension Fund
20	Investment Corporation of Dubai	United Arab Emirates	$302,000	SWF

AO 100 ranking (in US$ million)

Rank	Fund	Market	Total Assets	Type of Fund
21	CDPQ	Canada	$287,000	Pension Fund
22	Temasek Holdings	Singapore	$283,000	SWF
23	California State Teachers [2]	U.S.	$259,246	Pension Fund
24	Employees Provident Fund	Malaysia	$248,203	Pension Fund
25	Local Government Officials	Japan	$248,094	Pension Fund
26	Mubadala Investment Company	United Arab Emirates	$243,000	SWF
27	New York State Common [2]	U.S.	$226,400	Pension Fund
28	New York City Retirement [2]	U.S.	$225,450	Pension Fund
29	Goldman Sachs [4]	U.S.	$207,701	OCIO
30	AON [4]	U.S.	$202,809	OCIO
31	MN Services N.V.	Netherlands	$197,000	Pension Fund
32	Employees' Provident [3]	India	$193,801	Pension Fund
33	Russell Investments [4]	U.S.	$183,809	OCIO
34	Russian National Wealth Fund	Russia	$183,360	SWF
35	Korea Investment Corporation	South Korea	$183,100	SWF
36	State Street Global Advisors [4]	U.S.	$181,157	OCIO
37	CDC	France	$181,000	Pension Fund
38	Florida State Board [2]	U.S.	$180,221	Pension Fund
39	BLF	Taiwan	$177,000	Pension Fund
40	ATP	Denmark	$176,606	Pension Fund

AO 100 ranking (in US$ million)

Rank	Fund	Market	Total Assets	Type of Fund
41	Ontario Teachers	Canada	$173,741	Pension Fund
42	Future Fund Management Agency	Australia	$168,000	SWF
43	Willis Towers Watson [4]	U.S.	$167,740	OCIO
44	Texas Teachers [2]	U.S.	$162,656	Pension Fund
45	BlackRock [4]	U.S.	$158,663	OCIO
46	AustralianSuper	Australia	$156,265	Pension Fund
47	Boeing [2]	U.S.	$133,688	Pension Fund
48	Washington State Board [2]	U.S.	$128,897	Pension Fund
49	Alecta	Sweden	$127,381	Pension Fund
50	AT&T [2]	U.S.	$127,365	Pension Fund
51	Wisconsin Investment Board [2]	U.S.	$124,508	Pension Fund
52	New York State Teachers [2]	U.S.	$122,767	Pension Fund
53	Pension Fund Association [4]	Japan	$121,292	Pension Fund
54	British Columbia Investment	Canada	$121,000	Pension Fund
55	North Carolina [2]	U.S.	$120,727	Pension Fund
56	Public Service Pension Investment Board	Canada	$120,000	Pension Fund
57	Bayerische Versorgungskammer	Germany	$118,740	Pension Fund
58	National Federation of Mutual Aid	Japan	$118,015	Pension Fund
59	MPFA	Hong Kong	$115,000	Pension Fund
60	Danica Pension	Denmark	$110,686	Pension Fund

AO 100 ranking (in US$ million)

Rank	Fund	Market	Total Assets	Type of Fund
61	ADQ	United Arab Emirates	$110,000	SWF
62	IBM [2]	U.S.	$109,027	Pension Fund
63	Aware Super	Australia	$106,947	Pension Fund
64	SEI Investments [4]	U.S.	$106,300	OCIO
65	Public Investment Corporation	South Africa	$106,000	SWF
66	Ohio Public Employees [2]	U.S.	$104,307	Pension Fund
67	PFA Pension	Denmark	$103,733	Pension Fund
68	California University [2]	U.S.	$103,107	Pension Fund
69	KLP	Norway	$103,000	Pension Fund
70	Royal Dutch Shell [5]	Netherlands	$102,678	Pension Fund
71	Agirc-Arrco	France	$100,625	Pension Fund
72	Northern Trust [4]	U.S.	$100,464	OCIO
73	Raytheon Technologies [2]	U.S.	$99,717	Pension Fund
74	Alberta Investment Management Corporation	Canada	$93,000	Pension Fund
75	QIC	Australia	$93,000	Pension Fund/ SWF
76	TCorp (NSW Treasury Corporation)	Australia	$91,000	SWF
77	Universities Superannuation [6]	U.K.	$90,906	Pension Fund
78	Virginia Retirement [2]	U.S.	$90,111	Pension Fund
79	General Motors [2]	U.S.	$87,325	Pension Fund
80	Public Institute for Social Security [3]	Kuwait	$86,895	Pension Fund

AO 100 ranking (in US$ million)

Rank	Fund	Market	Total Assets	Type of Fund
81	Michigan Retirement [2]	U.S.	$86,659	Pension Fund
82	Lockheed Martin [2]	U.S.	$86,317	Pension Fund
83	Minnesota State Board [2]	U.S.	$85,722	Pension Fund
84	Georgia Teachers [2]	U.S.	$85,027	Pension Fund
85	Rothesay Life	U.K.	$84,450	Pension Fund
86	New Jersey [2]	U.S.	$83,126	Pension Fund
87	Ontario Municipal Employees	Canada	$82,908	Pension Fund
88	Oregon Public Employees [2]	U.S.	$82,860	Pension Fund
89	Kaiser [2]	U.S.	$82,516	Pension Fund
90	Healthcare of Ontario	Canada	$81,658	Pension Fund
91	Bouwinvest	Netherlands	$81,000	Pension Fund
92	National Public Service	Japan	$80,798	Pension Fund
93	General Electric [2]	U.S.	$80,699	Pension Fund
94	Ohio State Teachers [2]	U.S.	$80,108	Pension Fund
95	Massachusetts PRIM [2]	U.S.	$79,525	Pension Fund
96	Qsuper	Australia	$79,248	Pension Fund
97	Royal Bank of Scotland Group [5]	U.K.	$78,259	Pension Fund
98	AP Fonden 7	Sweden	$77,120	Pension Fund
99	United Parcel Service [2]	U.S.	$75,438	Pension Fund
100	BT Group [4]	U.K.	$74,655	Pension Fund

Notes:

[1] As of February 28, 2021

[2] As of September 30, 2020

[3] Estimate

[4] As of March 31, 2021

[5] Global figure

[6] As of March 31, 2020

Sources:

- **Willis Towers Watson**
- **Pensions & Investments:** A leading US investment newspaper
- **Global SWF:** a leading financial boutique providing the most up-to-date and reliable data around State-Owned Investors

Pension Funds and SWF data was sourced from the P&I 300 and GSWF, OCIO figures were sourced from P&I research center and Australian Prudential Regulation Authority (APRA), while F&E and Insurers data was sourced form annual reports, websites, and direct communication with organisations

New sources of information were used for some countries in 2020

Limitations of reliance

Limitations of reliance

Limitations of reliance – Thinking Ahead Group 2.0
This document has been written by members of the Thinking Ahead Group 2.0. Their role is to identify and develop new investment thinking and opportunities not naturally covered under mainstream research. They seek to encourage new ways of seeing the investment environment in ways that add value to our clients.
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Contact Details
Samar Khanna, +44 750055 4182
Samar.Khanna@willistowerswatson.com

Website: www.thinkingaheadinstitute.org/en
LinkedIn: Thinking Ahead Institute
Twitter: @InstituteTAG

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