

# ANNUAL SURVEY OF LARGE PENSION FUNDS AND PUBLIC PENSION RESERVE FUNDS

REPORT ON PENSION FUNDS' LONG-TERM INVESTMENTS

2021



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## FOREWORD

G20 leaders have identified the facilitation of long-term financing through the capital markets as a priority for helping to achieve targets for investment, growth and employment. This survey sheds light on the role that large institutional investors can play in providing a source of stable long-term capital.

This survey report is the eighth edition since the data collection exercise was first established in 2011. The scope of this report covers 100 public and private pension funds from 40 countries. Brazil, India, Indonesia, Nigeria, Mozambique, Peru, the Russian Federation, and South Africa are amongst the non-OECD countries included in the survey report.

This survey is based on a qualitative and quantitative questionnaire sent directly to large pension funds (LPFs) and public pension reserve funds (PPRFs). It helps to provide detailed investment information and insights which complement the aggregated data on portfolio investments gathered by the OECD at a national level through the Global Pension Statistics and Global Insurance Statistics projects. The 2021 edition includes:

- a summary of key trends observed in the investment portfolios of LPFs and PPRFs
- an in-depth analysis of LPF and PPRF investment programmes
- an analysis of infrastructure investment by LPFs and PPRFs
- an analysis of ESG investment by LPFs and PPRFs
- an analysis of ESG considerations in infrastructure investment by LPFs and PPRFs.

This report was made possible by the contributions of pension funds and public pension reserve funds listed. The OECD gratefully acknowledges the efforts of the participants in providing extensive data.

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## ABOUT THE SURVEY

Traditionally, institutional investors have been seen as sources of long-term capital with investment portfolios built around two main asset classes (bonds and equities) and an investment horizon tied to the often long-term nature of their liabilities. Institutional investors have progressively diversified portfolios by adding allocations to alternative investments such as private equity, real estate, infrastructure and hedge funds.<sup>1</sup> However, despite the increasing interest in alternative investments, official data on pension fund investment in alternatives – and in particular infrastructure – is scarce. National statistical agencies do not currently collect separate data on these investments and the different forms available to investors to gain exposure to these asset classes means that information is often buried under different headings.<sup>2</sup>

This survey by contrast collects data on individual pension funds that are amongst the largest in their respective economies, and comparatively, amongst the largest in the world.<sup>3</sup> The data complement insights and detailed administrative data gathered at the national level.<sup>4</sup> The published results in this data pack cover the eighth year of the survey. The scope of this report has been expanded to cover selected OECD countries, IOPS<sup>5</sup> countries, G20 member countries and APEC economies, based on data gathered for the year ending 2020.

The results highlight the depth and breadth of institutional investors, elucidating the importance of long-term capital and the role that pension savings can play in an economy. While the data covers the general state of long-term investment, which will be of prime value to the ultimate investors, it can also be used to inform regulators and other policy makers to help them better understand the operation of institutional investors in different countries. By analysing pools of long-term savings in domestic markets, and also in foreign markets where funds may invest a large portion of assets outside of their home country, policy makers can gain insights into the drivers behind asset allocation decisions and the conditions needed to attract long-term savings.

The survey reviews the trends in assets and asset allocation of 101 large pension funds (LPFs) and public pension reserve funds (PPRFs)<sup>6</sup> that responded to the annual survey, which in total managed USD 10.3 trillion in assets in 2020.

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<sup>1</sup> As noted in the IOPS ‘Good Practices in the Risk Management of Alternative Investments by Pension Funds’, there is no precise definition of alternative investments. The nature of alternative investments is dynamic and ever-evolving, and closely linked to the development of financial markets. While there is no official definition of alternative assets, the term is usually applied to instruments other than listed equities, bonds, and cash. For the purposes of this survey, “alternative” investments comprise the following types of investments: hedge funds, private equity, real estate, infrastructure, commodities and “other” (other includes: timber and currency/interest rate overlays).

<sup>2</sup> For example, infrastructure investment may not occupy a separate allocation, appearing instead as part of private equity or real estate allocations. Pension fund investment in listed infrastructure vehicles is reported by national statistics agencies as national or foreign equities and infrastructure lending is reported as fixed income, while direct investment or participation in private equity vehicles is sometimes reported within the category “other”.

<sup>3</sup> The survey does not utilise a strict definition of a large pension fund, but seeks to capture trends by looking at the largest investors in the world, compared on an absolute basis, followed by the largest investors within specific countries.

<sup>4</sup> See OECD Global Pension Statistics, [www.oecd.org/pensions/globalpensionstatistics.htm](http://www.oecd.org/pensions/globalpensionstatistics.htm).

<sup>5</sup> IOPS: International Organisation of Pension Supervisors, [www.iopsweb.org/](http://www.iopsweb.org/).

<sup>6</sup> PPRFs are reserves/buffers to support otherwise PAYG financed public pension systems as opposed to pension funds which support funded pension plans in both public and private sectors. See Annex for definitions of the types of sovereign and public pension reserve funds. The survey included some SWFs such as Norway’s Government Pension Fund – Global that have at least a partial pension objective.

Eighty-six retirement schemes comprise the section on LPFs, consisting of a mix of defined benefit (DB) and defined contribution (DC) pension plans (mainly public sector funds, but also corporate funds) that together total USD 3.3 trillion in assets under management. This information is presented in combination with the PPRF survey carried out at the same time. Fifteen PPRFs or Sovereign Wealth Funds (SWFs) with a pension focus completed the survey. Total amounts of PPRF assets were equivalent to USD 7 trillion at the end of 2020.

Altogether, data was compiled from funds representing 40 countries around the world including non-OECD countries such as Brazil, India, Nigeria, Mozambique, Peru, the Russian Federation, and South Africa.

This data pack provides the results of the annual survey in charts and tables. The data includes portfolio analysis, such as pension fund size and growth, asset allocation, international exposure, and is divided into two sets of investors: large pension funds and public pension reserve funds. Data on infrastructure investment focusses on capital flows in infrastructure, investment structures, sector and geographies. This part of the report – the infrastructure investment survey – includes data from 60 funds<sup>7</sup> out of the total 101 funds that returned completed questionnaires. Data on ESG and infrastructure focusses on green investment<sup>8</sup> and social impact investment<sup>9</sup>.

### Geographical coverage of the global survey representing USD 10.3 trillion in assets under management

Location of head office of LPFs that responded to the survey		Location of head office of PPRFs that responded to the survey
<b>Europe</b>	<b>North America</b>	<b>Europe</b>
Austria	Canada	Bulgaria
Belgium	United States	Spain
Croatia		Norway
Denmark	<b>Asia-Pacific</b>	Portugal
Finland	Australia	Sweden
Germany	India	
Iceland	China, Hong Kong	<b>North America</b>
Ireland	Malaysia	Canada
Italy		United States
Netherlands	<b>Latin America</b>	
Portugal	Brazil	<b>Asia-Pacific</b>
Romania	Costa Rica	China
Russian Federation	India	Japan
Spain	Mexico	New Zealand
Sweden	Peru	
Switzerland		<b>Latin America</b>
Turkey	<b>Africa</b>	Chile
United Kingdom	Mauritius	Mexico
	Mozambique	
<b>Middle East</b>	Namibia	
Israel	Nigeria	
	South Africa	

<sup>7</sup> Fifty-nine funds reported their exposure to infrastructure investments. The remaining 41 funds did not report their infrastructure investments or did not have infrastructure investments to report.

<sup>8</sup> Green investments refer broadly to low carbon and climate resilient investments made in companies, projects and financial instruments that operate primarily in the renewable energy, clean technology, environmental technology, as well as those investments that are climate change specific or ESG screened.

<sup>9</sup> Social investments refer broadly to investments made into companies, organisations, funds, and financial instruments with the intention to generate social impact alongside financial returns. Impact investing is a rather new phenomenon and there is yet to emerge a widely agreed upon definition.

## DATA PACK

### PART A1 – LARGE PENSION FUND INVESTMENT PORTFOLIOS

#### *Large pension fund size*

**Table 1. Total assets of selected LPFs in 2020**

Country head office	Name of the fund or institution	Total investments or assets (1)		
		USD bn.	% of GDP	% change in AUM (compared to the previous year)
Austria	APK Pensionskasse	6.8	1.5	6.8
Australia	AustralianSuper	158.8	10.5	10.5
Australia	CBUS	45.5	3.0	4.3
Australia	Hostplus	40.4	2.7	1.5
Australia	UniSuper	65.0	4.3	2.8
Austria	VBV Pensionskasse	9.3	2.0	6.2
Belgium	EuroControl	2.4	0.4	5.4
Brazil	Banesprev	5.3	0.4	7.2
Brazil	FORLUZ	3.4	0.2	4.2
Brazil	Petros	18.7	1.3	7.6
Brazil	Previ	45.2	3.2	10.3
Brazil	Real Grandeza	3.6	0.2	8.2
Brazil	Sistel	3.8	0.3	3.9
Brazil	VALIA	4.9	0.3	2.4
Canada	AIMCo	92.3	5.4	-0.1
Canada	LAPP	41.4	2.4	5.5
China, Hong Kong	MPF	146.9	42.4	17.5
Costa Rica	Vida Plena	1.6	2.7	13.6
Costa Rica	Operadora de Pensiones Complementarias	0.4	0.7	17.1
Costa Rica	Teachers' Pension Board	5.4	9.1	13.5
Croatia	Erste Plavi	2.9	4.7	5.5
Croatia	PBZ CO	3.2	5.2	7.0
Germany	Bayer	13.2	0.3	...
Croatia	Raiffeisen Mandatory Pension Funds	5.9	9.7	4.7
Croatia	AZ Mandatory Pension Fund B	6.9	11.4	4.7
Denmark	PFA	98.2	25.5	7.7
Denmark	PensionDanmark	44.5	11.6	9.2
Denmark	Danica	81.0	21.1	19.4
Finland	Keva	71.2	24.6	3.3
Finland	Varma	61.5	21.2	2.7
Iceland	Birta	3.7	16.0	14.0
Iceland	Pension Fund of Commerce	8.0	34.5	16.8
Iceland	Lifeyrissjodur Starfsmanna Ríkisins	9.2	39.7	14.8
India	SBI Pension Fund	28.5	1.1	38.2
India	LIC Pension Fund	21.4	0.8	33.6
India	Kotak Mahindra Pension Fund	0.2	0.0	52.7
India	ICICI Prudential Pension Funds	0.9	0.0	51.4
India	HDFC Pension Management	1.9	0.1	80.8
India	Aditya Birla Sun Life Pension	0.0	0.0	76.8
India	UTI Retirement Solutions	21.4	0.8	35.7
Ireland	Bank of Ireland	8.3	1.8	6.1

Ireland	Bank of Ireland	8.3	1.8	6.1
Israel	Makefet	25.8	5.9	9.0
Israel	Menora-Mivtachim	47.8	11.0	11.9
Italy	Cometa	15.6	0.8	6.3
Italy	Fonchim	9.2	0.5	7.9
Malaysia	EPF	0.0	0.0	...
Mauritius	Sicom Pooled Private Pension Fund	0.2	2.1	5.0
Mauritius	IBL Pension Fund	0.1	1.1	8.7
Mauritius	Swan	0.2	1.5	14.4
Mauritius	Rogers Pension Fund	0.1	1.1	2.4
Mauritius	MCB	0.2	1.9	-0.2
Mexico	Afore Profuturo	36.2	3.1	22.5
Mozambique	Insurance Supervisory Institute	0.1	0.8	9.5
Namibia	GIPF	8.7	72.6	6.2
Netherlands	PME	69.9	7.1	6.6
Netherlands	PFZW	311.6	31.7	6.5
Netherlands	PMT	106.1	10.8	6.4
Netherlands	Stichting Pensioenfonds ABP	702.0	71.5	8.0
Nigeria	Premium Pension Limited	1.8	0.4	7.8
Nigeria	Stanbic IBTC Pension Managers	9.1	2.1	18.8
Nigeria	SNCPFA	2.1	0.5	25.5
Nigeria	ARM Pension Managers	2.5	0.6	16.3
Peru	AFP Integra	16.7	8.3	-7.5
Portugal	Banco BPI	2.1	0.8	1.1
Portugal	CGD Pensoes	4.1	1.7	12.4
Romania	Azt Viitorul Tau (2)	4.1	1.5	21.2
Romania	Raiffeisen Acumulare	0.0	0.0	14.8
Russian Federation	Pension Fund of the Russian Federation	27.0	1.8	5.6
Russian Federation	VTB	3.9	0.3	9.8
Russian Federation	Future	3.6	0.2	0.4
Russian Federation	Sberbank	9.9	0.7	7.7
Russian Federation	Otkritie	7.3	0.5	1.9
Russian Federation	Gazfond	7.8	0.5	3.4
South Africa	GEPP	111.8	33.0	-11.1
South Africa	Sentinel Retirement Fund	2.7	0.8	-5.9
South Africa	Transnet Retirement Fund	4.1	1.2	-2.3
Spain	Fonditel (3)	3.7	0.3	-3.8
Spain	Ibercaja	2.3	0.2	3.1
Sweden	AP7	88.4	14.5	7.2
Sweden	Alecta	127.1	20.9	8.0
Switzerland	Pensionskasse Post	19.5	2.4	0.5
Switzerland	Publica	47.8	6.0	3.7
Turkey	Isbank	0.4	0.1	-3.0
Turkey	OYAK	9.9	1.4	27.0
United Kingdom	Rolls-Royce and Bentley Pension Fund	1.6	0.1	11.0
United States	CalSTRS	246.0	1.2	3.8
<b>Total</b>		<b>3,294.1</b>	<b>27.2</b>	<b>13.0</b>

"..." means not available. (1) Data correspond to all forms of investment with a value associated with a pension fund/plan. (2) Data refer to the largest pension plan managed by Azt Viitorul Tau. (3) Data refer to Fonditel's biggest pension plan: Empleados de Telefónica de España.

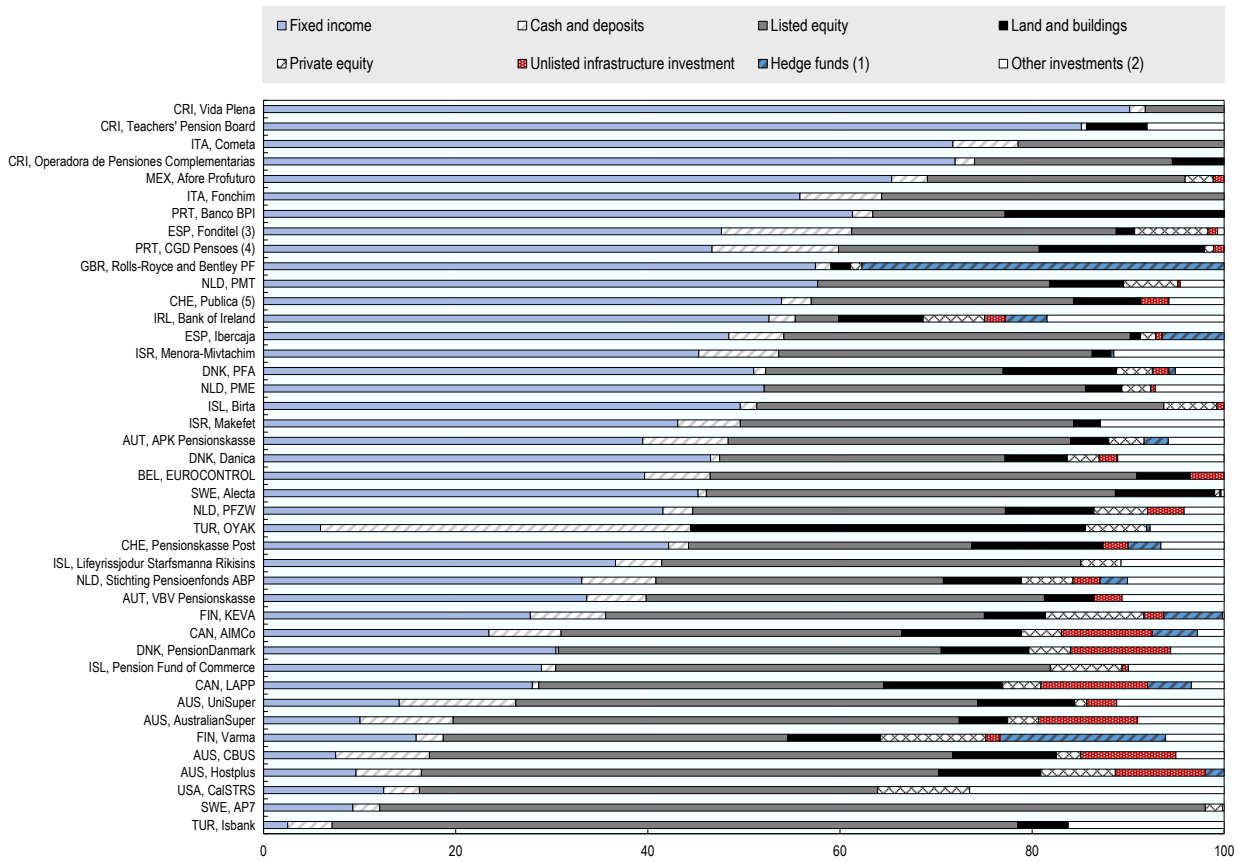
Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.



**LPF asset allocation**

**Figure 1. Asset allocation of selected LPFs based in OECD countries, 2020**

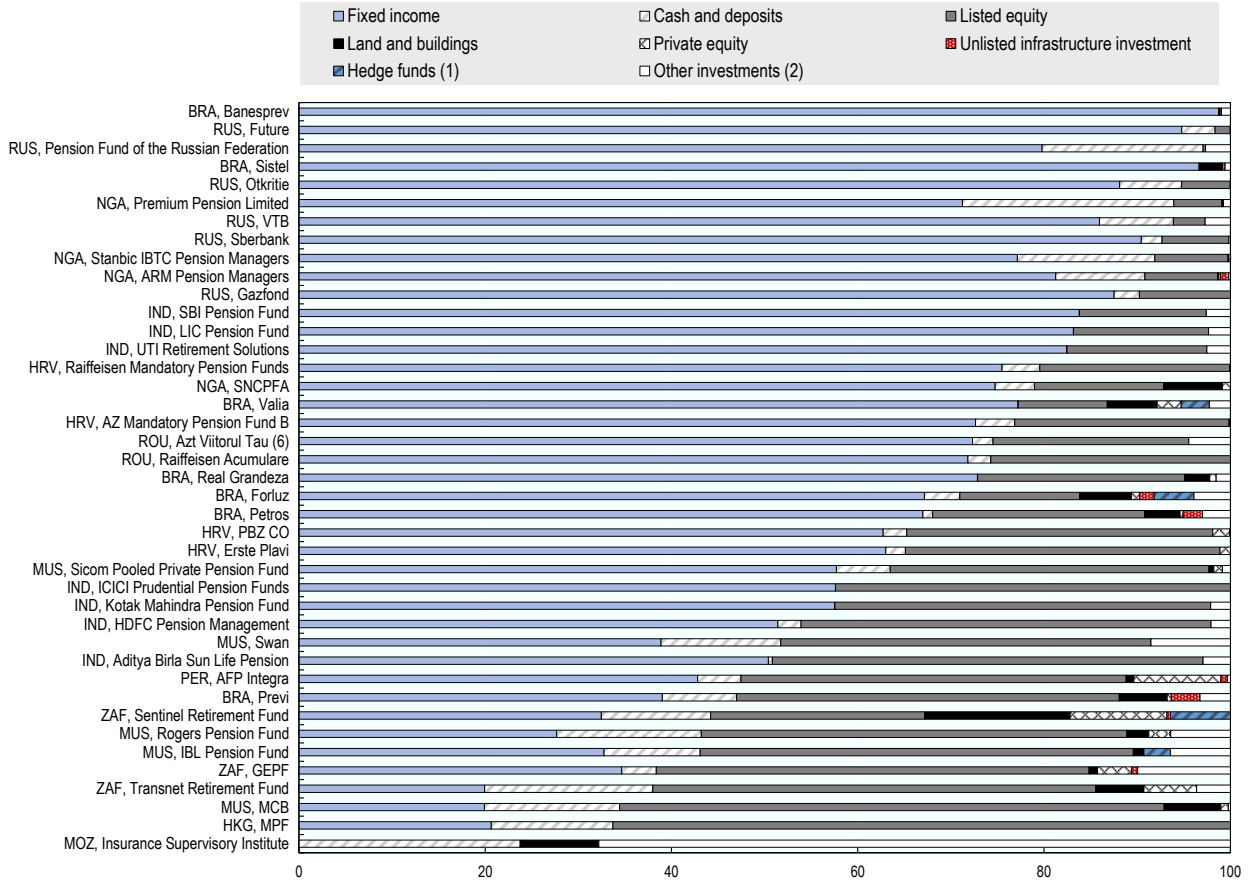
As a percentage of total investment



Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 2. Asset allocation of selected LPFs based in non-OECD countries, 2020**

As a percentage of total investment



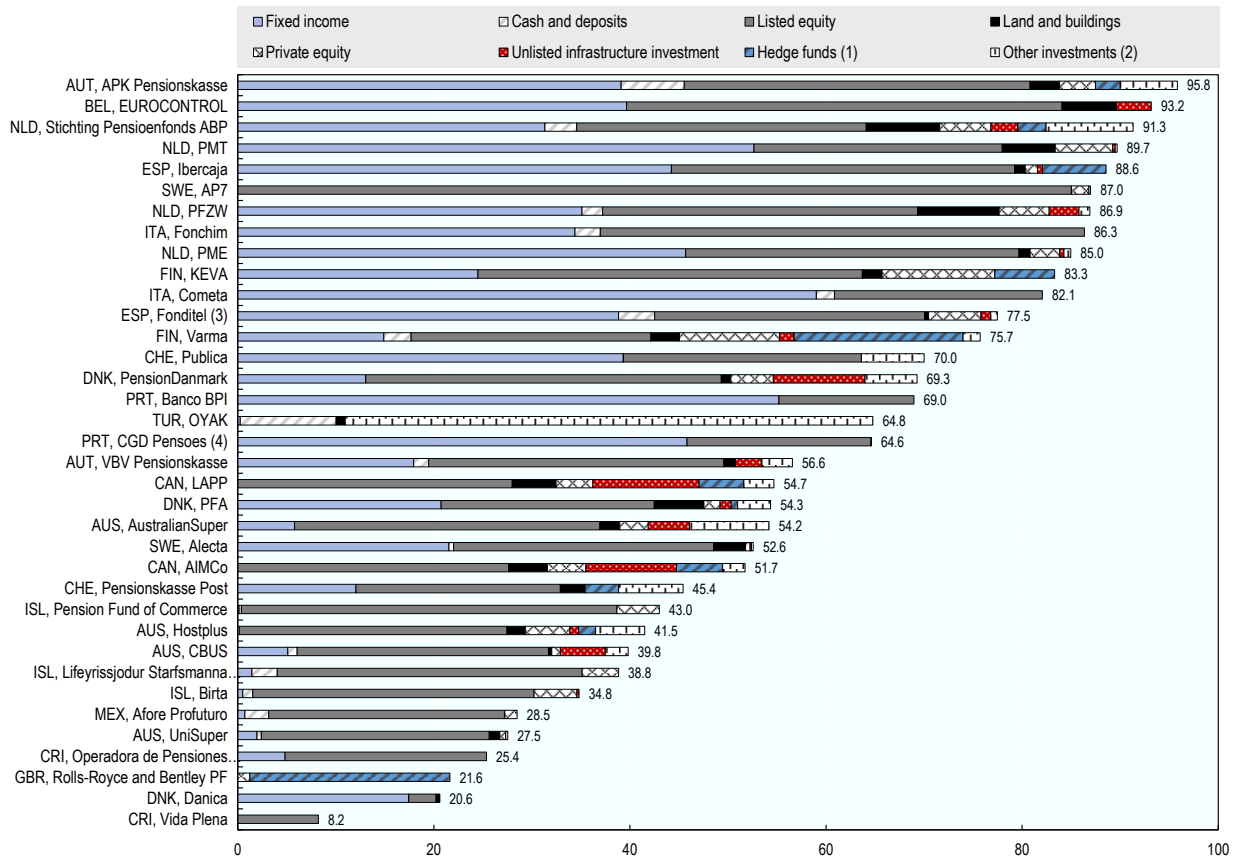
(1) Managed pool of capital which employs investing strategies unavailable to Collective Investment Schemes, including selling short, leverage, program trading, swaps, arbitrage, and derivatives. Includes funded Absolute Return Strategies. (2) The "other" category includes loans, commodities, and other investments. (3) Data refer to Fonditel's biggest pension plan: Empleados de Telefónica de España. (4) Data cover the CGD Staff's Pension Fund. (5) The Swiss Publica's unlisted infrastructure investments refer to debt investment and not to infrastructure equity investment. (6) Data refer to the biggest pension plan managed by Azt Viitorul Tau.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

*LPF foreign investment*

**Figure 3. Foreign investment by asset class, selected LPFs based in OECD countries, 2020**

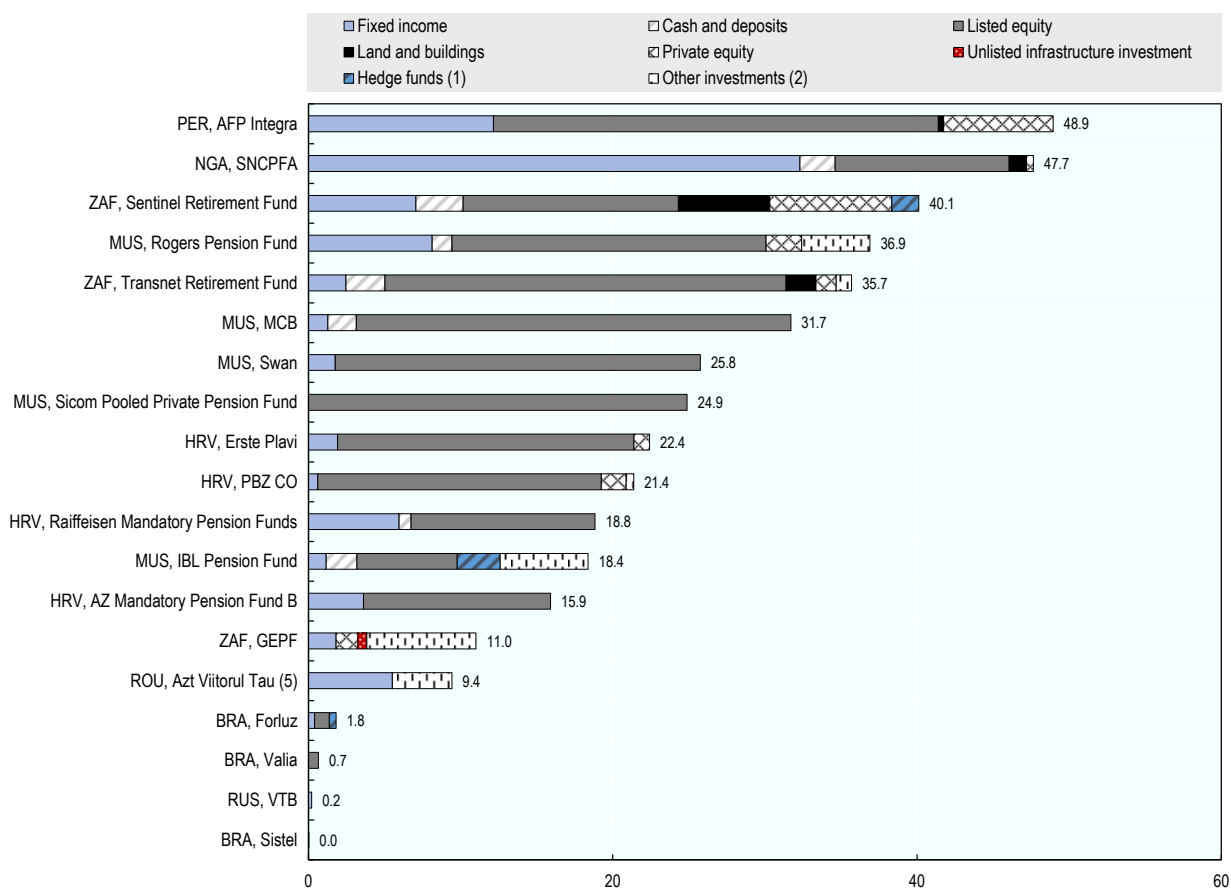
As a percentage of total investment



Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 4. Foreign investment by asset class, selected LPFs based in non-OECD countries, 2020**

As a percentage of total investment

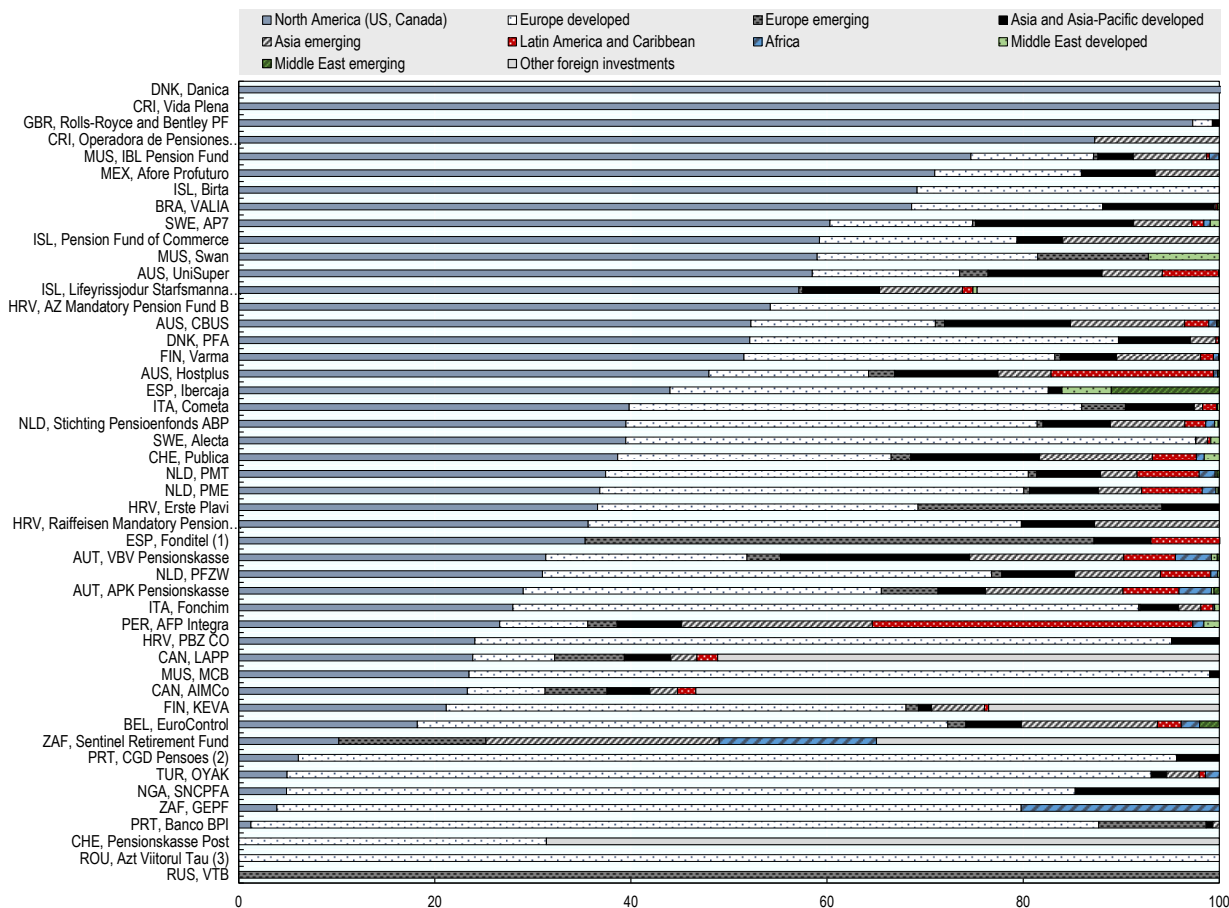


(1) Managed pool of capital which employs investing strategies unavailable to Collective Investment Schemes, including selling short, leverage, program trading, swaps, arbitrage, and derivatives. Includes funded Absolute Return Strategies. (2) The "other" category includes loans, commodities, and other investments. (3) Data refer to Fonditel's biggest pension plan: Empleados de Telefónica de España. (4) Data cover the CGD Staff's Pension Fund. (5) Data refer to the biggest pension plan managed by Azt Viitorul Tau.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 5. Foreign investment by region and asset class, selected LPFs, 2020**

As a percentage of total foreign investment



(1) Data refer to Fonditel's biggest pension plan: Empleados de Telefónica de España. (2) Data cover the CGD Staff's Pension Fund. (3) Data refer to the biggest pension plan managed by Azt Viitorul Tau.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

## PART A2 – PUBLIC PENSION RESERVE FUND INVESTMENT PORTFOLIOS

### *Public pension reserve fund size*

**Table 2. Total assets of selected PPRFs in 2020**

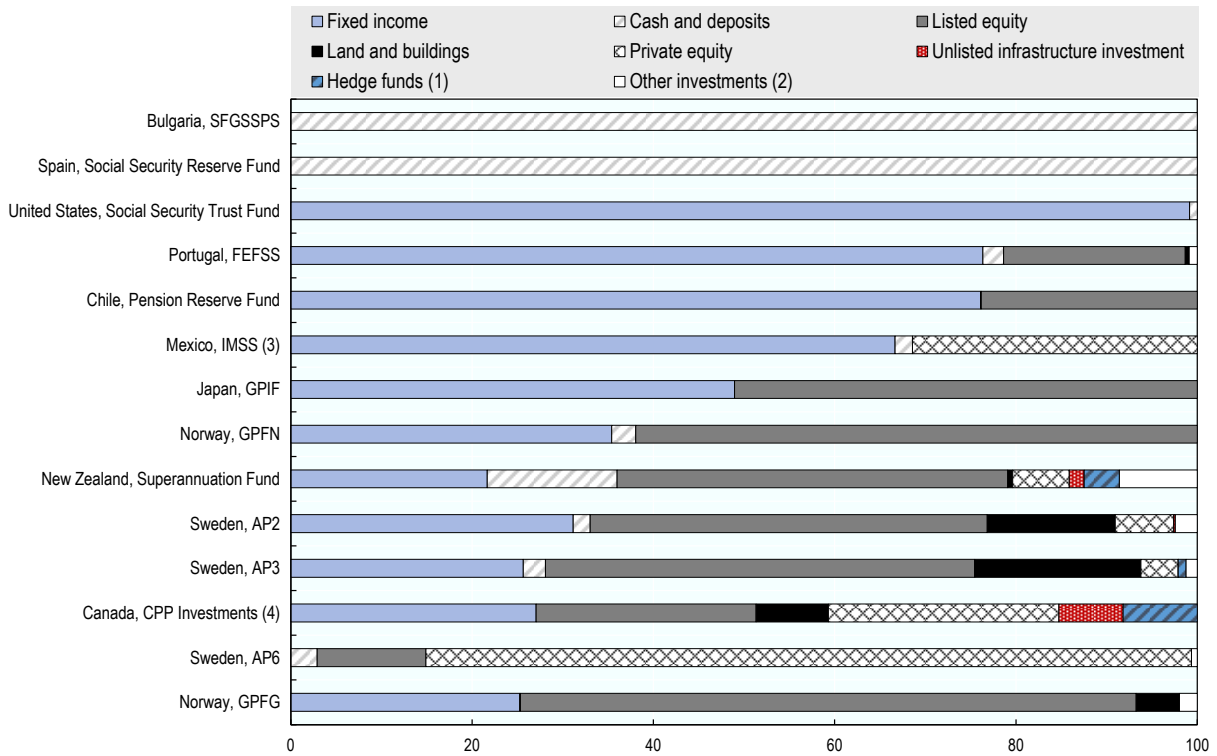
Country head office	Name of the fund or institution	Year of establishment	Total investments or assets (1)		
			USD bn.	% of GDP	% increase (compared to the previous year)
Bulgaria	State Fund for Guaranteeing the Stability of the State Pension System	1989	2	2.8	6.1
Canada	Canada Pension Plan Investment Board	1997	370	21.6	13.2
Chile	Pension Reserve Fund	2006	10	3.6	-10.3
China	National Social Security Fund	2000	402	17.9	...
Spain	Social Security Reserve Fund	1997	3	0.2	-0.7
Japan	Government Pension Investment Fund	2006	1,796	34.6	28.1
Mexico	IMSS Reserve (2)	n.d.	2	0.2	9.9
Norway	Government Pension Fund - Global (GPF)	1990	1,329	332.2	8.5
Norway	Government Pension Fund - Norway (GPFN)	1967	36	9.0	7.1
New Zealand	New Zealand Superannuation Fund	1989	38	16.3	12.9
Portugal	Social Security Financial Stabilisation Fund	1989	27	10.7	6.9
Sweden	National Pension Funds (AP1, AP3 and AP6) (3)	2000	104	17.2	5.1
United States	Social Security Trust Fund	1940	2,908	13.9	0.4
Total selected countries (4)			7,028	80.0	9.8

(1) Data correspond to all forms of investment with a value associated to a pension fund/plan. 2020 valuations are for year-end, unless otherwise noted. (2) IMSS's data only refer to reserves constituted to guarantee early retirement due to invalidity or work-related injuries. (3) Total investments are the sum of assets of AP2, AP3 and AP6. (4) Weighted average for assets as a % of GDP and % increase.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

*PPRF asset allocation*

**Figure 6. Asset allocation of selected PPRFs – actual 2020**  
As a percentage of total investment



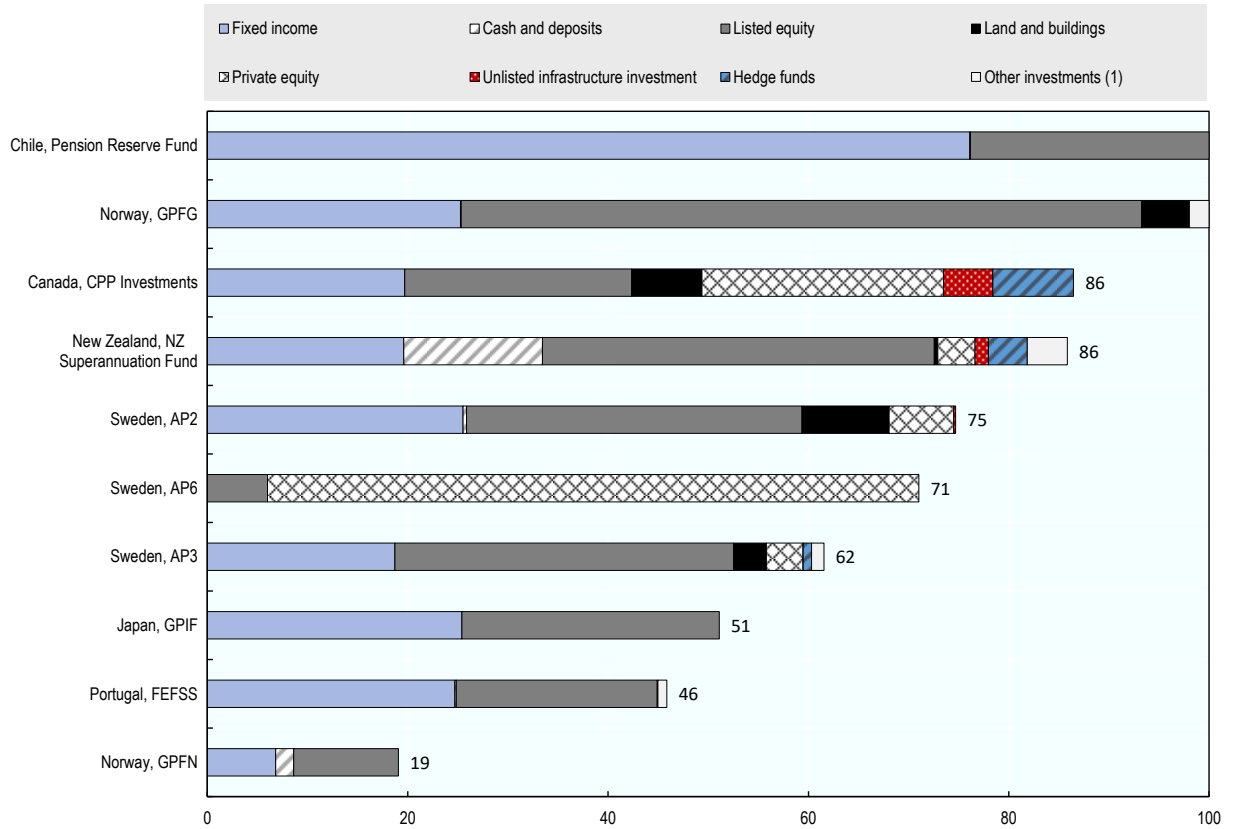
(1) Managed pool of capital which employs investing strategies unavailable to Collective Investment Schemes, including selling short, leverage, program trading, swaps, arbitrage, and derivatives. Includes funded Absolute Return Strategies. (2) The "other" category includes loans, commodities and other investments. (3) IMSS's data only refer to reserves constituted to guarantee early retirement due to invalidity or work-related injuries. (4) CPP Investments' cash and deposits balances have been excluded from asset allocation calculations as they are reported net of investment liabilities and were negative in 2020. For an accurate overview of CPP Investments' investments and investment liabilities in 2020, please refer to its Financial Statements at: <https://cdn1.cppinvestments.com/wp-content/uploads/2020/08/ CPP-Investments-Q3-F2021-Financial-Statements-Feb-11-2021-ENG.pdf>.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

*PPRF foreign investment*

**Figure 7. Foreign investment by asset class in selected PPRFs in 2020**

As a percentage of total investment



Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.



## PART B – INFRASTRUCTURE INVESTMENT

**Table 3. Detailed infrastructure investment of selected LPFs and PPRFs, 2020**  
As a percentage of total investment

Country head office	Name of the fund or institution	Total investments in 2020 (in USD m.)	Infrastructure investment (as a % of total investments)		
			Unlisted equity	Listed equity	Debt
<b>LPFs</b>					
Australia	AustralianSuper	158,849.6	10.3	...	1.7
Australia	UniSuper	65,015.6	3.1	...	...
Australia	CBUS	45,520.3	9.9	0.1	...
Australia	Hostplus	40,421.6	9.3	...	0.1
Austria	VBV Pensionskasse	9,299.7	2.9	...	...
Belgium	EUROCONTROL	2,357.0	3.5	...	...
Brazil	BANESPREV	5,303.7	0.0	...	...
Brazil	Petros	18,720.1	1.2	...	0.7
Brazil	Previ	45,174.8	3.1	1.0	...
Brazil	FORLUZ	3,354.1	1.5	...	...
Brazil	Sistel	3,842.5	0.3	...	...
Brazil	VALIA	4,867.8	0.3	2.0	0.7
Canada	AIMCo	92,283.2	7.8	...	...
Costa Rica	Operadora de Pensiones Complementarias	390.0	...	5.4	...
Costa Rica	Teachers' Pension Board	5,377.6	...	0.0	0.1
Denmark	Danica	81,028.6	1.9	...	...
Finland	KEVA	71,182.8	2.1	...	...
Finland	Varma	61,492.0	1.5	...	...
Iceland	Birta	3,694.5	0.8	...	0.7
Iceland	Pension Fund of Commerce	7,965.0	1.5	1.8	1.9
Iceland	Lifeyrissjodur Starfsmanna Ríkisins	9,171.7	0.5	0.8	1.3
India	SBI Pension Fund	28,454.9	...	0.5	4.1
India	LIC Pension Fund	21,414.4	...	...	0.8
India	Kotak Mahindra Pension Fund	194.4	...	...	9.0
India	ICICI Prudential Pension Funds	895.3	...	8.1	14.0
India	HDFC Pension Management	1,900.7	...	3.1	7.8
India	Aditya Birla Sun Life Pension	34.9	...	46.2	19.9
India	UTI Retirement Solutions	21,449.0	...	...	26.2
Ireland	Bank of Ireland	8,324.6	2.2	2.6	...
Israel	Makefet	25,801.1	...	...	4.9
Israel	Menora-Mivtachim	47,830.1	...	0.3	2.2
Mexico	Afore Profuturo	36,176.9	1.1	...	...
Namibia	GIPF	8,749.8	1.2	...	1.2
Netherlands	PME	69,908.5	0.5	...	...
Netherlands	PFZW	311,561.9	3.8	...	...
Netherlands	PMT	106,054.7	0.3	...	...
Netherlands	Stichting Pensioenfonds ABP	702,043.7	2.8	...	...

Nigeria	Premium Pension Limited	1,772.2	...	0.7	...
Nigeria	Stanbic IBTC Pension Managers	9,064.9	...	0.4	...
Nigeria	ARM Pension Managers	2,510.7	0.9	0.0	0.1
Peru	AFP Integra	16,712.2	0.7	2.4	3.5
Portugal	CGD Pensoes	4,143.8	1.1	...	...
Romania	Azt Viitorul Tau	4,090.1	...	12.2	...
Russia	VTB	3,860.7	...	...	2.6
Russia	Future	3,583.4	...	...	16.5
Russia	Otkritie	7,251.8	...	...	0.2
Russia	Gazfond	7,784.9	...	...	3.1
South Africa	GEPF	111,804.1	0.6	...	...
South Africa	Sentinel Retirement Fund	2,735.7	0.4	...	3.9
South Africa	Transnet Retirement Fund	4,111.3	4.2	...	4.5
Spain	Fonditel	3,652.3	1.0	...	...
Spain	Ibercaja	2,329.7	0.7	0.8	...
Sweden	Alecta	127,091.9	0.1	...	0.5
Switzerland	Pensionskasse Post	19,504.9	2.6	...	...
United States	CalSTRS	246,028.0	2.4	...	...
<b>PPRFs</b>					
Canada	CPP Investments	419,965.6	7.1	0.0	0.0
Chile	Pension Reserve Fund	9,909.9	0.0	6.0	0.0
New Zealand	New Zealand Superannuation Fund	37,788.4	1.7	0.4	0.0
Sweden	AP2	47,410.4	1.4	0.0	0.0
Sweden	AP3	51,723.1	3.5	0.0	0.0

"..." means not available.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

## Analysis of infrastructure allocations in the total portfolio

**Table 4. Infrastructure investment in 2020 – portfolio allocation**  
As a percentage of total investment

Country head office	Name of the fund or institution	Infrastructure allocation	Where does it fit in the portfolio allocation	Invest in greenfield projects	Actual allocation to unlisted infrastructure (% of total assets)	Most recent reported target asset allocation to unlisted infrastructure (if separate) (% of total)
Australia	AustralianSuper	Seperate	Infrastructure/ Cash in Infrastructure	No	10.3	...
Australia	UniSuper	Non-Seperate	...	Yes	3.1	...
Australia	CBUS	Seperate	Infrastructure	Yes	9.9	...
Australia	Hostplus	Seperate	Infrastructure	Yes	9.3	...
Austria	APK Pensionskasse	...	...	...	0.0	...
Austria	VBV Pensionskasse	Seperate	Infrastructure	Considering	2.9	7.0
Belgium	EUROCONTRDL	Seperate	...	Yes	3.5	10.0
Brazil	BANESPREV	Seperate	...	No	0.0	...
Brazil	Previ	Non-Seperate	...	Yes	3.1	...
Brazil	FORLUZ	Non-Seperate	...	Yes	1.5	2.5
Brazil	Real Grandeza	Non-Seperate	...	No	...	...
Brazil	Sistel	Seperate	Infrastructure	No	0.3	...
Brazil	VALIA	Non-Seperate	Private equity	No	0.3	...
Canada	AIMCo	Seperate	...	...	7.8	...
Canada	LAPP	Seperate	...	...	0.0	...
Costa Rica	Operadora de Pensiones Complementarias	Non-Seperate	...	Considering	0.0	...
Costa Rica	Teachers' Pension Board	Seperate	...	No	0.0	...
Denmark	Danica	Seperate	Infrastructure	Yes	1.9	...
Finland	KEVA	Non-Seperate	Private equity	No	2.1	...
Finland	Varma	Non-Seperate	Infrastructure	...	1.5	...
Iceland	Birta	Seperate	...	Yes	0.8	...
Iceland	Pension Fund of Commerce	Non-Seperate	Infrastructure/ Equity/ Other	No	1.5	...
Iceland	Lifegrissjodur Starfsmanna Ríkisins	Non-Seperate	...	No	0.5	...
India	SBI Pension Fund	Seperate	...	...	0.0	...
Israel	Makefet	Seperate	...	...	0.0	...
Israel	Menora-Mivtachim	Seperate	...	...	0.0	...
Mexico	Afore Profuturo	Non-Seperate	Infrastructure	Yes	1.1	...
Namibia	GIPF	Seperate	...	Yes	1.2	...
Netherlands	PME	Seperate	Infrastructure	Yes	0.5	...
Netherlands	PFZ'v	Seperate	...	Yes	3.8	...
Netherlands	PMT	Seperate	...	Yes	0.3	...
Netherlands	Stichting Pensioenfonds ABP	Seperate	Infrastructure	Yes	2.8	4.0
Nigeria	Premium Pension Limited	...	...	No	0.0	...
Nigeria	Stanbic IBTC Pension Managers	Seperate	...	No	0.0	...
Nigeria	SNCPFA	Seperate	...	No	0.0	...
Nigeria	ARM Pension Managers	Seperate	...	No	0.9	...
Peru	AFP Integra	Non-Seperate	Infrastructure/ Private equity	Yes	0.7	0.7
Portugal	CGD Pensoes	Non-Seperate	...	No	1.1	...
Romania	Azt Viitorul Tau	Non-Seperate	...	No	0.0	...
Russia	Future	Non-Seperate	...	No	0.0	...
Russia	Otkritie	Seperate	...	No	0.0	...
Russia	Gazfond	Seperate	...	Yes	0.0	...
South Africa	GEPP	Non-Seperate	...	Yes	0.6	...
South Africa	Sentinel Retirement Fund	Non-Seperate	...	Yes	0.4	...
South Africa	Transnet Retirement Fund	Non-Seperate	...	Yes	4.2	...
Spain	Ibercaja	Non-Seperate	...	No	0.7	...
Sweden	Alecta	Non-Seperate	Alternative Investment	...	0.1	...
Switzerland	Pensionskasse Post	Seperate	...	Yes	2.6	...
Switzerland	Publica	Seperate	...	Yes	2.9	...
United States	CalSTRS	Non-Seperate	Inflation Sensitive (Infra)	Yes	2.4	...
<b>PPRFs</b>						
Canada	CPP Investments	Seperate	Infrastructure	Yes	7.1	...
New Zealand	New Zealand Superannuation Fund	...	Infrastructure	...	1.7	...
Sweden	AP2	Seperate	Sustainable Infrastructure	Yes	1.4	...
Sweden	AP3	Seperate	Infrastructure	Yes	3.5	...

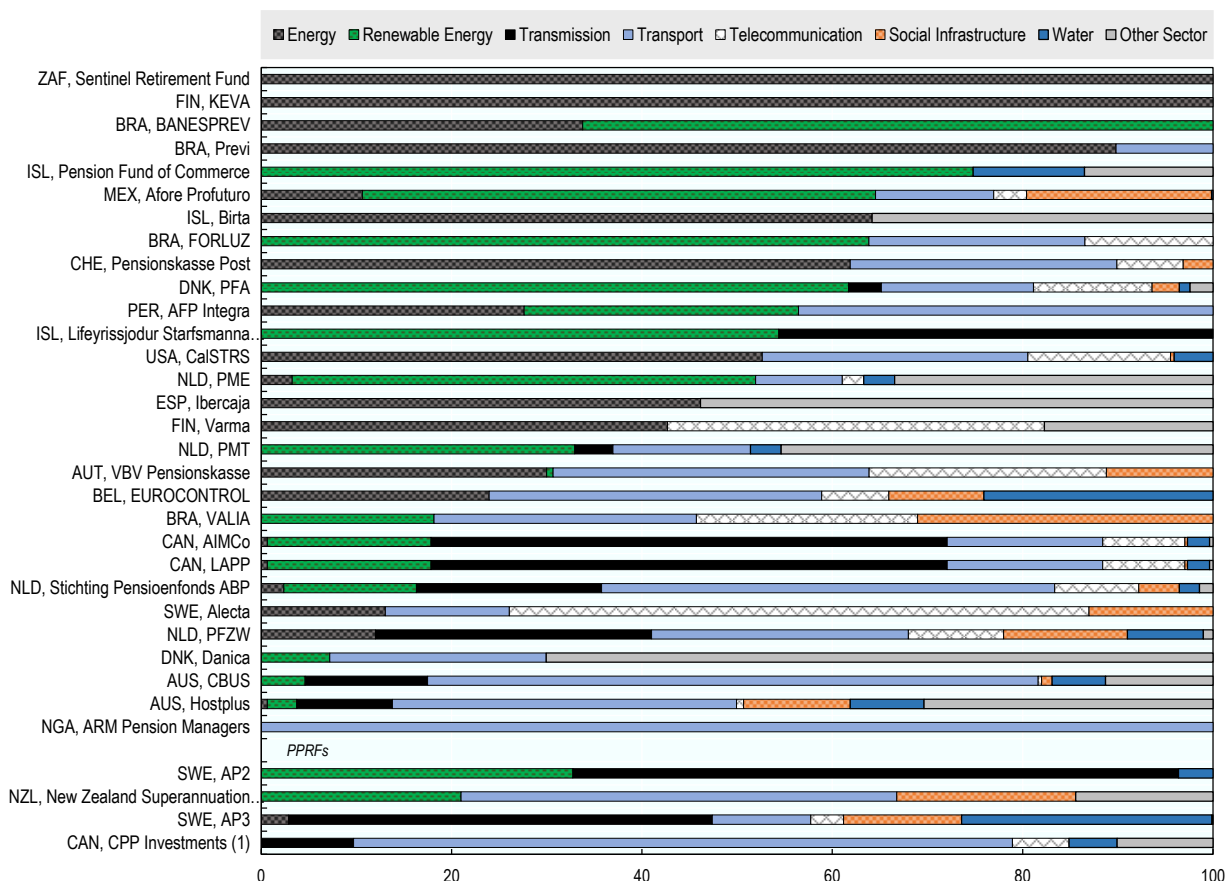
"..." means not available.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

## Analysis of infrastructure portfolios

**Figure 8. Infrastructure sector allocations of selected LPFs and PPRFs in 2020**

As a percentage of total unlisted infrastructure equity investment

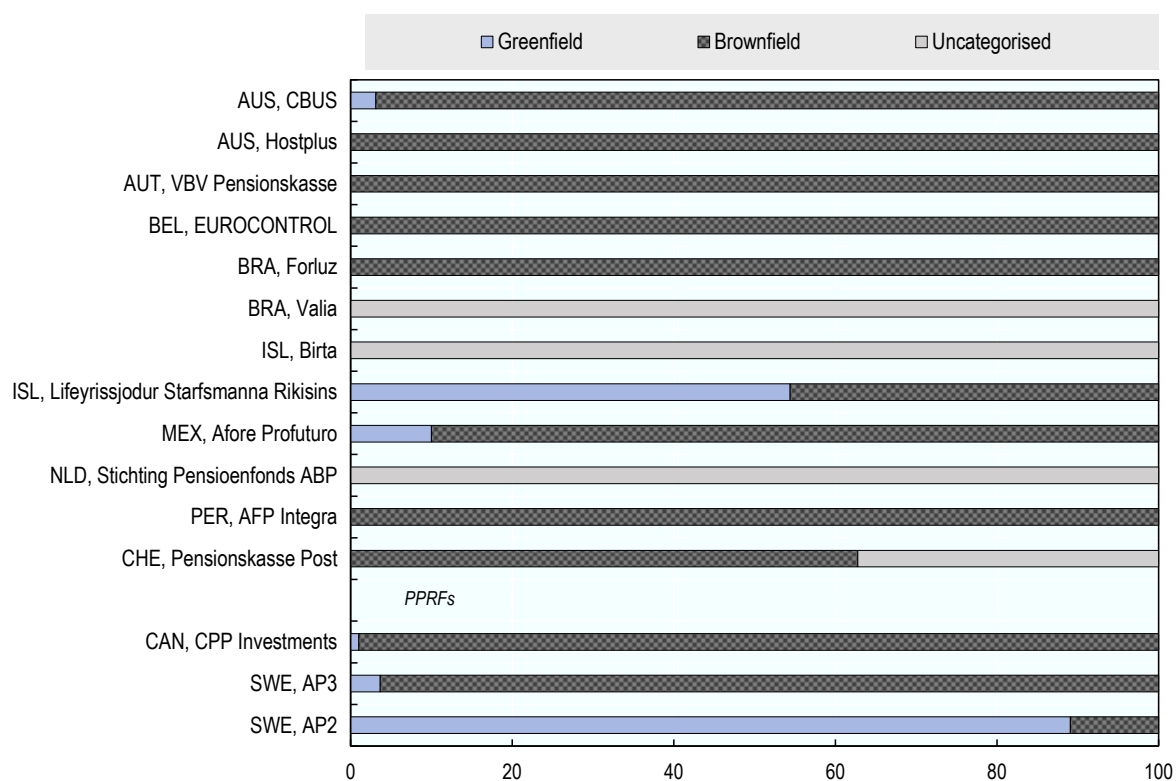


(1) CPP Investments invested 1.5% of total investment in renewable energy in 2020. Renewable energy investment, defined as those assets in a) public equities using the GICS classification - 55105020 Renewable Electricity b) the renewable energy holdings in CPP Investments' Power & Renewables group, is not reported in this survey under CPP Investments' infrastructure asset class and therefore not included in the infrastructure sector allocation.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 9. Infrastructure allocations, by development phase of selected LPFs and PPRFs in 2020**

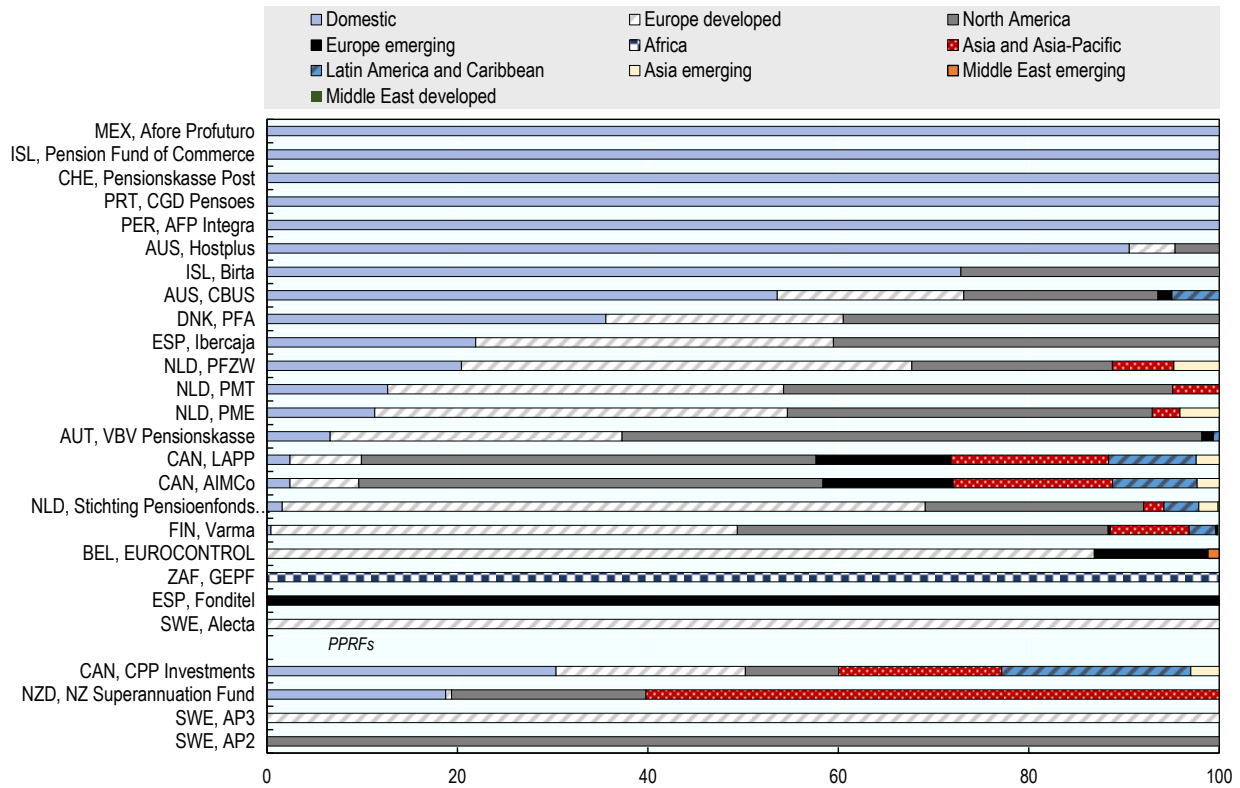
As a percentage of total unlisted infrastructure equity investment



Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 10. Infrastructure allocations, by geographic region of selected LPFs and PPRFs in 2020**

As a percentage of total unlisted infrastructure equity investment



Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

## Analysis of infrastructure investment vehicles

**Table 5. Detailed infrastructure investment vehicles of selected LPFs and PPRFs in 2020**

As a percentage of total unlisted infrastructure equity investment

Country head office	Name of the fund or institution	Total unlisted infrastructure equity in 2020 (in USD m.)	Unlisted infrastructure investment breakdown (as a % of total unlisted infrastructure equity investments)		
			Unlisted infrastructure funds	Direct and co-investment infrastructure equity	Other unlisted infrastructure equity
<b>LPFs</b>					
Australia	AustralianSuper	16,327	55	45	1
Australia	UniSuper	2,012	100	0	0
Australia	CBUS	4,498	81	19	0
Australia	Hostplus	3,745	87	13	0
Austria	VBV Pensionskasse	271	100	0	0
Belgium	EUROCONTROL	84	100	0	0
Brazil	BANESPREV	2	100	0	0
Brazil	Petros	229	0	100	0
Brazil	Previ	1,388	0	100	0
Brazil	FORLUZ	52	100	0	0
Brazil	Sistel	11	100	0	0
Brazil	VALIA	13	100	0	0
Denmark	Danica	1,500	79	21	0
Finland	KEVA	1,492	54	46	0
Finland	Varma	921	49	51	0
Iceland	Birta	28	36	64	0
Iceland	Pension Fund of Commerce	121	56	44	0
Iceland	Lifeyrissjodur Starfsmanna Ríkisins	47	46	54	0
Ireland	Bank of Ireland	180	100		
Mexico	Afore Profuturo	411	0	0	100
Namibia	GIPF	103	0	100	0
Netherlands	PME	345	100	0	0
Netherlands	PFZW	11,876	11	89	0
Netherlands	PMT	306	100	0	0
Netherlands	Stichting Pensioenfonds ABP	19,497	38	62	0
Nigeria	ARM Pension Managers	23	100	0	0
Peru	AFP Integra	116	82	0	18
Portugal	CGD Pensoes	46	100	0	0
South Africa	GEPF	671	100	0	0
South Africa	Sentinel Retirement Fund	11	100	0	0
Spain	Fonditel	36	100	0	0
Spain	Ibercaja	15	100	0	0
Sweden	Alecta	153	52	48	0
Switzerland	Pensionskasse Post	506	100	0	0
United States	CalSTRS	5,995	34	66	0
<b>PPRFs</b>					
Canada	CPP Investments	29,686	0	100	0
New Zealand	New Zealand Superannuation Fund	626	29	71	0
Sweden	AP2	679	50	50	0
Sweden	AP3	1,820	35	65	0

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

## PART C – ESG CONSIDERATIONS IN INVESTMENTS

### Green investment

**Table 6: Detailed green investments of selected LPFs and PPRFs in 2020**

As a percentage of total investment

Country head office	Name of the fund or institution	Total investments in 2020 (in USD m.)	Green investments (as a % of total investments)				Total Green Investment
			Green equity	Green bonds	Alternative green asset classes (1)	Other green investments	
<b>LPFs</b>							
Australia	UniSuper	65,016	11.2	0.5	1.1	...	12.8
Australia	CBUS	45,520	...	0.1	...	18.8	18.9
Australia	Hostplus	40,422	...	...	...	3.4	3.4
Austria	APK Pensionskasse	6,801	11.5	9.0	...	...	20.5
Austria	VBV Pensionskasse	9,300	32.9	0.0	1.6	...	34.4
Belgium	EUROCONTROL	2,357	5.8	4.0	...	...	9.8
Brazil	Previ	45,175	...	...	2.2	...	2.2
Brazil	FORLUZ	3,354	...	...	1.2	...	1.2
Brazil	VALIA	4,868	8.0	0.2	3.7	...	11.9
Canada	AIMCo	92,283	...	0.1	6.9	...	7.0
Canada	LAPP	41,369	...	...	3.6	...	3.6
Costa Rica	Operadora de Pensiones Complementarias	390	...	0.6	...	...	0.6
Croatia	Erste Plavi	2,867	0.7	...	...	...	0.7
Denmark	PFA	98,203	6.7	0.6	7.1	...	14.4
Denmark	Danica	81,029	1.0	2.8	0.5	1.2	5.5
Finland	Varma	61,492	8.4	1.5	2.7	0.0	12.5
Iceland	Birta	3,694	...	0.5	...	1.5	2.0
Iceland	Pension Fund of Commerce	7,965	...	0.7	...	...	0.7
Iceland	Lifeyrissjodur Starfsmanna Ríkisins	9,172	0.6	0.8	...	...	1.5
Mexico	Afore Profuturo	36,177	0.2	0.7	0.6	...	1.5
Netherlands	PME	69,908	38.6	1.1	0.9	...	40.5
Netherlands	PFZW	311,562	4.8	1.3	2.1	...	8.2
Netherlands	PMT	106,055	32.3	1.4	0.2	...	33.9
Netherlands	Stichting Pensioenfonds ABP	702,044	1.4	2.0	1.3	4.0	8.8
Nigeria	Stanbic IBTC Pension Managers	9,065	...	0.2	...	...	0.2
Nigeria	ARM Pension Managers	2,511	...	0.1	...	...	0.1
Peru	AFP Integra	16,712	1.8	0.4	...	...	2.2
Russian Feder:	Sberbank	9,895	0.1	...	...	...	0.1
Russian Feder:	Gazfond	7,785	...	1.7	...	...	1.7
Russian Feder:	VTB Pension Fund	3,861	0.9	4.7	0.0	0.0	5.5
South Africa	GEPF	111,804	...	0.3	...	...	0.3
South Africa	Sentinel Retirement Fund	2,736	0.4	3.9	...	...	4.3
Spain	Fonditel (2)	3,652	2.1	4.6	0.1	...	6.8
Spain	Ibercaja	2,330	...	0.9	...	0.1	1.0
Sweden	AP7	88,369	0.3	0.4	0.1	...	0.9
Sweden	Alecta	127,092	42.9	4.8	0.0	...	47.7
Switzerland	Publica	47,846	13.7	0.4	0.5	...	14.6
United States	CalSTRS	246,028	3.3	0.2	0.5	...	3.9
<b>PPRFs</b>							
Canada	CPP Investments (3)	419,966	0.1	...	1.4	...	1.5
Japan	GPIF	1,796,414	3.1	0.2	...	...	3.3
New Zealand	NZ Superannuation Fund	37,788	50.5	...	0.2	5.8	56.5
Norway	GPPG	1,329,477	6.3	...	...	...	6.3
Norway	GPFN	35,975	...	0.9	...	...	0.9
Sweden	AP3	51,723	38.2	4.4	4.1	...	46.7
Sweden	AP2	47,410	30.3	12.6	10.7	3.9	57.4

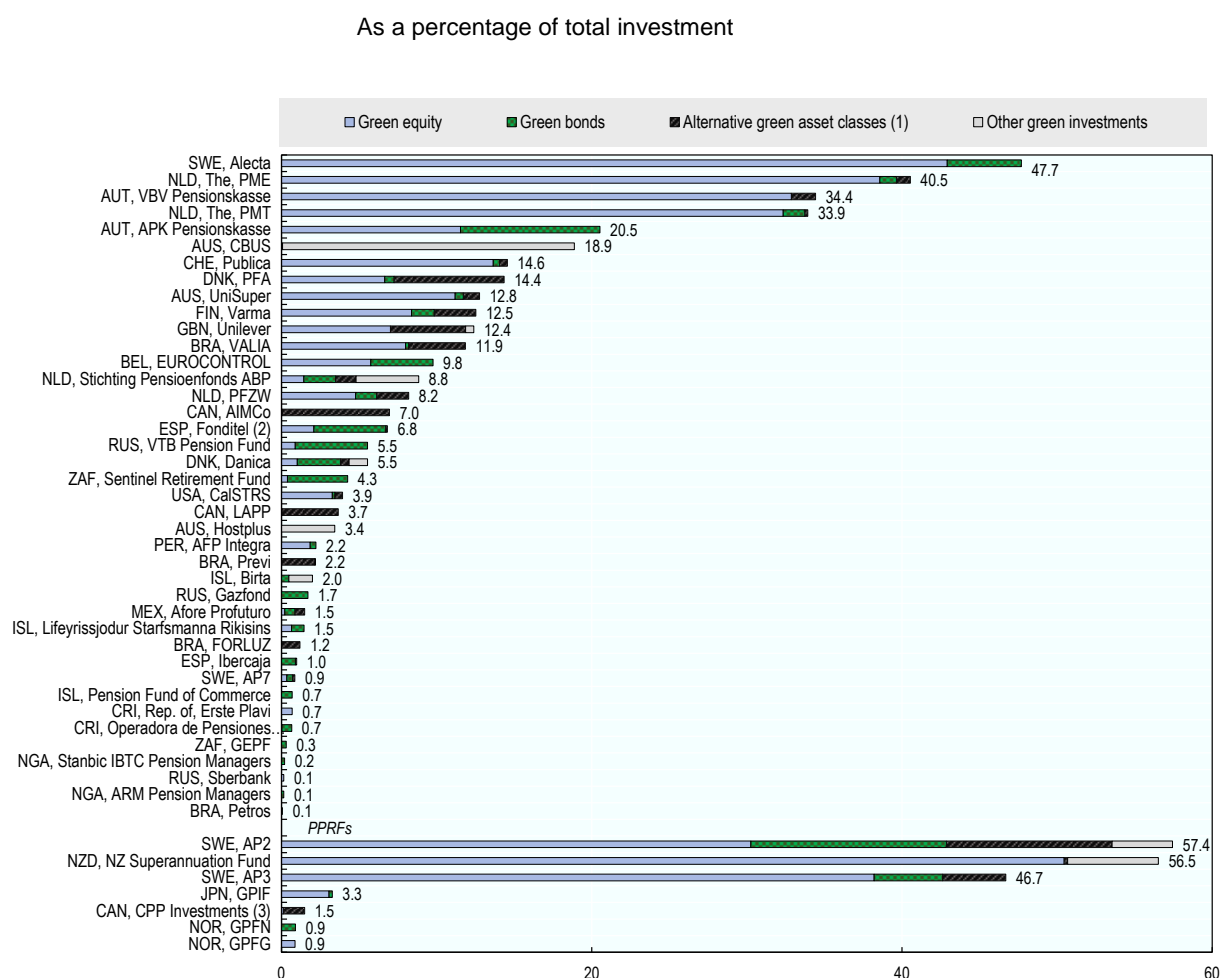
"..." means not available, or zero.



(1) The alternative green asset classes can include hedge funds, natural resources, private equity, infrastructure, and inflation-linked bonds. (2) Data refer to Fonditel's largest pension plan: Empleados de Telefónica de España. (3) CPP Investments does not categorize investments using "green" definitions or have "green" target allocations. However, consistent with CPP Investments' long-term investment horizon and investment-only mandate, environmental, social and governance (ESG) factors are integrated into CPP Investments' investment decisions, where relevant, across all asset classes in our portfolio. The "green" holdings above only include a small subset of CPP Investments' assets in this space, i.e. a) public equities using the GICS classification -55105020 Renewable Electricity b) the renewable energy holdings in CPP Investments' Power & Renewables group. While CPP Investments has "green" holdings that are expected to significantly extend beyond these categories, they only report these two types at this time.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 11. Green investments of selected LPFs and PPRFs in 2020**



(1) The alternative green asset classes can include hedge funds, natural resources, private equity, infrastructure, and inflation-linked bonds. (2) Data refer to Fonditel's largest pension plan: Empleados de Telefónica de España. (3) CPP Investments does not categorize investments using "green" definitions or have "green" target allocations. However, consistent with CPP Investments' long-term investment horizon and investment-only mandate, environmental, social and governance (ESG) factors are integrated into CPP Investments' investment decisions, where relevant, across all asset classes in our portfolio. The "green" holdings above only include a small subset of CPP Investments' assets in this space, i.e. a) public equities using the GICS classification -55105020 Renewable Electricity b) the renewable energy holdings in CPP Investments' Power & Renewables group. While CPP Investments has "green" holdings that are expected to significantly extend beyond these categories, they only report these two types at this time.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

## Social investment

**Table 7: Detailed social investments of selected LPFs and PPRFs in 2020**

As a percentage of total investment

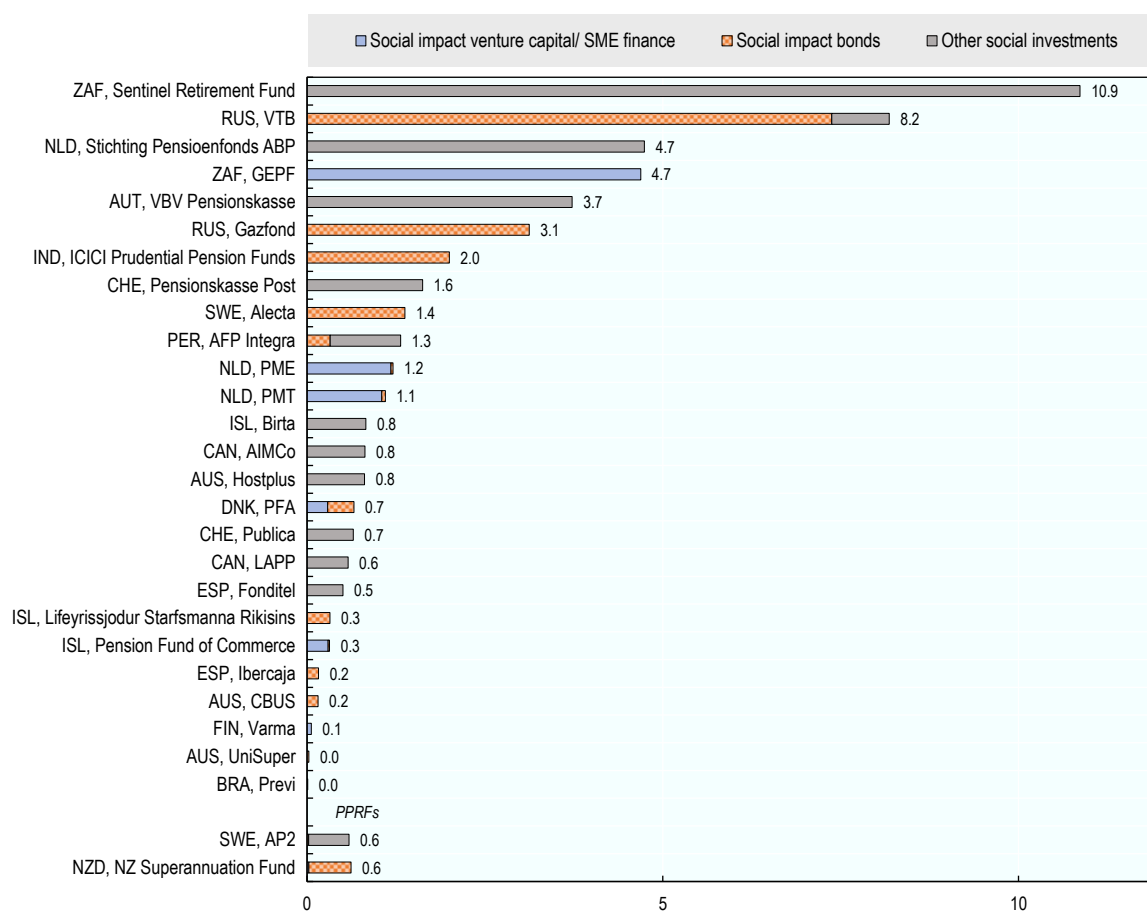
Country head office	Name of the fund or institution	Total investments in 2020 (in USD m.)	Social investments (as a % of total investments)			
			Social/development impact venture capital/SME finance	Social impact bonds/Development impact bonds	Other social investments	Total social investments
<b>LPFs</b>						
Australia	UniSuper	65,016	...	0.0	...	0.0
Australia	CBUS	45,520	...	0.2	...	0.2
Australia	Hostplus	40,422	...	...	0.8	0.8
Austria	VBV Pensionskasse	9,300	...	...	3.7	3.7
Brazil	Previ	45,175	...	...	0.0	0.0
Canada	AIMCo	92,283	...	...	0.8	0.8
Canada	LAPP	41,369	...	...	0.6	0.6
Denmark	PFA	98,203	0.3	0.4	...	0.7
Finland	Varma	61,492	0.1	...	...	0.1
Iceland	Birta	3,694	...	...	0.8	0.8
Iceland	Pension Fund of Commerce	7,965	0.3	0.0	...	0.3
Iceland	Lifeyrissjodur Starfsmanna Ríkisins	9,172	...	0.3	...	0.3
India	ICICI Prudential Pension Funds	895	...	2.0	...	2.0
Netherlands	PME	69,908	1.2	0.0	...	1.2
Netherlands	PMT	106,055	1.0	0.1	...	1.1
Netherlands	Stichting Pensioenfonds ABP	702,044	...	...	4.7	4.7
Peru	AFP Integra	16,712	...	0.3	1.0	1.3
Russian Federation	Gazfond	7,785	...	3.1	...	3.1
Russian Federation	VTB	3,861	...	7.4	0.8	8.2
South Africa	GEPF	111,804	4.7	...	...	4.7
South Africa	Sentinel Retirement Fund	2,736	...	...	10.9	10.9
Spain	Fonditel	3,652	...	...	0.5	0.5
Spain	Ibercaja	2,330	...	0.2	...	0.2
Sweden	Alecta	127,092	...	1.4	...	1.4
Switzerland	Pensionskasse Post	19,505	...	...	1.6	1.6
Switzerland	Publica	47,846	...	...	0.7	0.7
<b>PPRFs</b>						
Sweden	AP2	47,410	0.0	0.6	...	0.6
New Zealand	NZ Superannuation Fund	37,788	...	0.0	0.6	0.6

".." means not available, or zero.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 12. Social investments of selected LPFs and PPRFs in 2020**

As a percentage of total investment

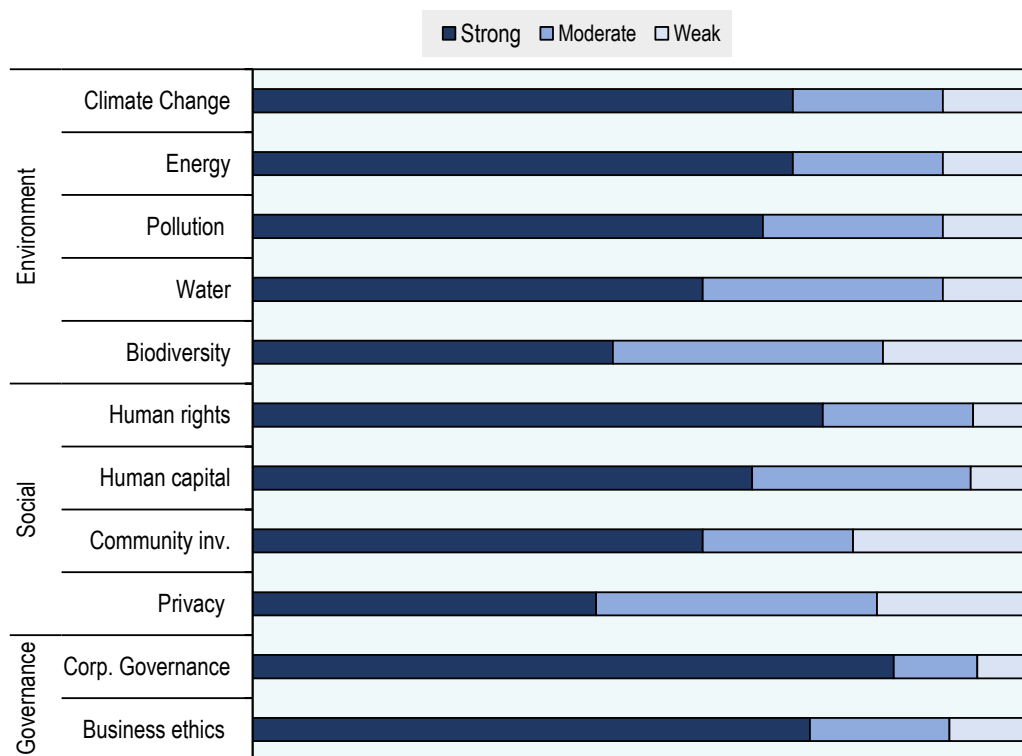


Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

*ESG considerations in investments*

**Figure 13. Level of ESG aspects considered in infrastructure investments by LPFs and PPRFs in 2020**

As a percentage of total respondents to the survey question (1)

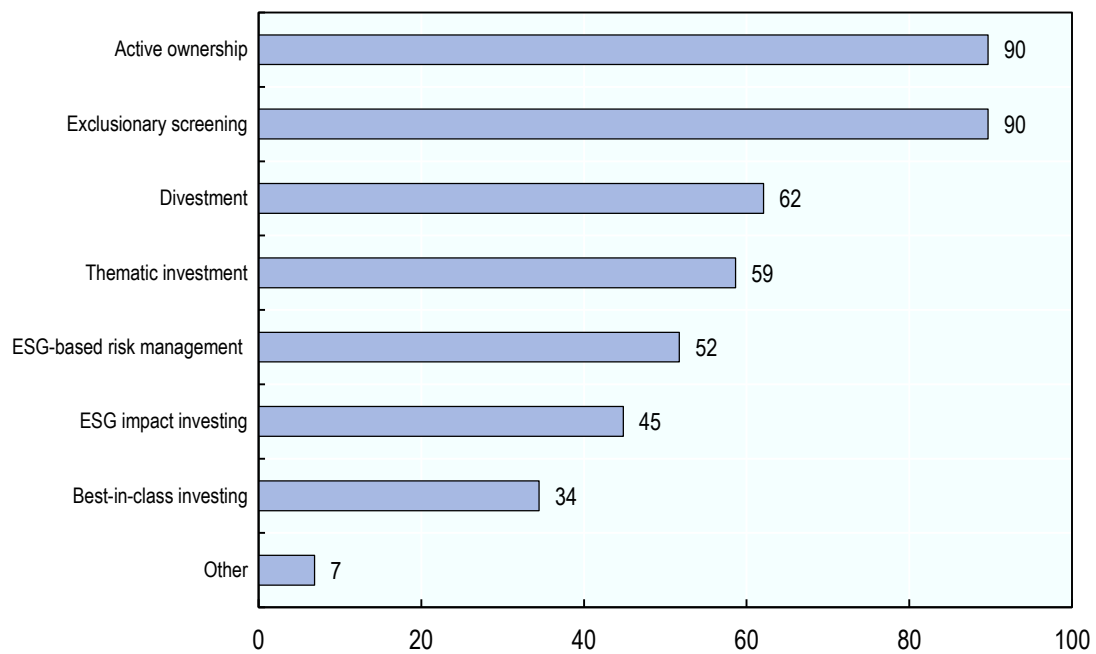


(1) In total 28 LPFs and PPRFs responded to the question. The following survey question: Which of the below (or other) ESG aspects do you mainly consider in infrastructure investments? Please provide a rating from 0-3, 3=strong, 2=moderate, 1=weak, 0=not considered.

Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

**Figure 14. ESG strategy in all investments by LPFs and PPRFs in 2020**

As a percentage of total respondents



Source: OECD calculations based on responses to the OECD Survey of LPFs and PPRFs.

## Survey Annex - Types of sovereign and public pension reserve funds

Although there is no single widely accepted definition, Sovereign and Public Pension Reserve Funds (SPFs) could be defined as funds set up by governments or social security institutions with the objective of contributing to finance the relevant pay-as-you-go pension plans. There are two types of SPFs. Although both have the same ultimate objective (i.e. meeting the potential financial liabilities relating to the social security system), they vary in terms of funding sources, investment strategies, and payout phases, among others.

- One is the fund that is part of the overall social security system, where the inflows are mainly surpluses of employee and/or employer contributions over current payouts, as well as top-up contributions from the government via fiscal transfers and other sources. Among others, Denmark's Social Security Fund, Japan's Government Pension Investment Fund, and USA's Social Security Trust Fund fall within this category. These funds may be managed by the social security institution itself or an independent -often public sector- fund management entity.
- The other type refers to those funds which are established directly by the government (completely separated from the social security system), and whose financial inflows are mainly from direct fiscal transfers from the government. Unlike the first type of SPFs, those within this category have been set up by governments to meet future deficits of the social security system. Some are not allowed to make any payouts for decades. All of these funds are under autonomous management entities. Examples include the Australia Future Fund, the New Zealand Superannuation Fund, the Norwegian Government Pension Fund, and the French "Fond de Réserve pour les Retraites". These funds are also sometimes classified as sovereign wealth funds (SWFs). Though they do not all have high foreign investment allocations.

Source: OECD Pension Markets in Focus <https://www.oecd.org/finance/pensionmarketsinfocus.htm>



[www.oecd.org/finance/lti](http://www.oecd.org/finance/lti)

