

The value of assets earmarked for retirement declined in most OECD countries in 2022 driven by negative nominal investment rates of return

- Fixed income instruments, the largest asset class for pension providers, have seen large drops in valuations across the globe driven by high inflation and interest rates
- Widespread decreases in equity valuations have exacerbated negative returns in several markets

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GEOGRAPHICAL COVERAGE

All 38 OECD countries
32 other jurisdictions in Africa, Asia, Europe and Latin America

- 15.6%

Nominal growth rate of pension assets in the OECD in 2022 (in USD)

All OECD reporting countries recorded negative real rates of return

Pension Markets in Focus – Preliminary 2022 Data provides a snapshot of asset-backed pension arrangements in OECD countries and in a selection of non-OECD jurisdictions in 2022. The indicators are based on preliminary data for 2022. An Excel file with the underlying data is available at www.oecd.org/daf/pensions/pensionmarkets. This snapshot was made possible by close co-operation between the OECD, the International Organisation of Pension Supervisors (IOPS), the World Bank and the various national bodies that provided data and comments.

A more developed analysis will be published in the 2023 edition of the full report Pension Markets in Focus, forthcoming in Q4 2023.

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The value of pension assets declined in most OECD countries in 2022

After a strong performance in 2021, assets earmarked for retirement fell in 2022 in most OECD countries.¹ Altogether, these plans held USD 48.1 trillion of assets at end-2022, 15.6% less than a year before (Table 1). The decline in pension assets was widespread and visible in 32 out of 38 OECD countries. The sharpest drops occurred in the Netherlands (-20.7%) and the United Kingdom (-20.2%), with eight other OECD countries experiencing a drop in the value of assets between 10% and 20%, including the United States (-15%). As a result of these declines, there was no OECD country where pension assets exceeded twice the GDP at end-2022, unlike at end-2021 when Denmark (233%), Iceland (219%) and the Netherlands (213%) did.

Table 1. Assets in asset-backed pension arrangements at end-2022 (preliminary)

OECD countries	% change	in USD million	% of GDP	data coverage	Selected other jurisdictions	% change	in USD million	% of GDP	data coverage
Australia	-1.5	2,087,259	131.2	all available plans	Albania	24.3	53	0.3	all system
Austria	-11.3	32,990	6.9	all available plans	Armenia	16.4	1,428	6.6	all available plans
Belgium	-12.2	36,550	6.2	21% of available plans	Brazil	9.2	454,805	23.9	all system
Canada	-6.0	1,551,508	77.4	55% of available plans	Bulgaria	-1.7	10,520	11.7	all system
Chile	4.4	174,792	57.7	all available plans	Croatia	-0.3	20,210	28.1	all system
Colombia	-0.5	71,785	23.6	all system	Egypt	10.0	5,045	1.6	all system
Costa Rica	-0.1	26,684	36.1	all system	Georgia	48.5	1,104	4.2	all system
Czech Republic	4.4	26,527	8.8	all system	Ghana	26.1	4,119	5.7	all system
Denmark	-8.5	766,796	191.1	all system	Guyana	24.5	530	3.6	all system
Estonia	-8.4	5,032	13.0	all system	Hong Kong (China)	-9.4	179,296	49.5	all system
Finland	-5.7	154,477	54.3	88% of available plans	India	22.1	103,086	3.1	23% of the system
France (1)	197.2	236,145	8.4	27% of the system	Indonesia	5.2	21,200	1.7	all available plans
Germany	-10.1	275,299	6.7	all available plans	Isle of Man	7.0	18,841	..	all system
Greece	-1.4	1,934	0.9	all available plans	Jamaica	-1.4	4,657	28.4	all system
Hungary	-2.6	7,468	4.2	all available plans	Kazakhstan	8.6	31,705	14.1	all system
Iceland	-1.4	48,592	183.2	99% of the system	Kenya	1.9	12,776	11.5	all system
Ireland	-11.3	146,222	27.3	all available plans	Kosovo	2.4	2,581	27.1	all system
Israel	-3.6	307,330	61.7	all available plans	Macau (China)	-1.4	4,846	22.0	all system
Italy	-3.9	230,396	11.3	all system	Malawi	29.7	1,601	14.1	all system
Japan	-1.1	1,258,225	30.0	all available plans	Maldives	12.5	1,270	20.4	all system
Korea	14.7	268,287	15.8	45% of the system	Morocco	5.0	7,035	5.3	all system
Latvia	-5.5	6,794	16.3	all system	Namibia	-3.3	12,062	101.3	all system
Lithuania	-4.7	6,231	8.7	all system	Nigeria	11.7	32,593	7.4	all system
Luxembourg	-17.2	1,706	2.0	all available plans	North Macedonia	7.6	2,029	14.6	all system
Mexico	-0.2	269,095	18.4	90% of available plans	Peru	-20.6	27,756	11.1	all system
Netherlands	-20.7	1,543,016	153.7	all available plans	Romania	8.2	21,594	7.1	all system
New Zealand	5.1	78,423	32.0	all system	Serbia	-1.8	438	0.7	all system
Norway	-5.0	44,004	7.8	all available plans	Suriname	12.0	261	9.6	all available plans
Poland	-16.5	35,798	5.1	81% of the system	Uganda	9.1	5,191	11.3	all system
Portugal	-11.3	39,844	15.6	91% of available plans	Uruguay	0.4	19,434	26.3	all system
Slovak Republic	-2.3	16,069	14.0	all system	Zambia	3.2	709	2.7	all available plans
Slovenia	-2.8	4,232	6.7	all system	Zimbabwe	246.1	1,570	8.3	all available plans
Spain	-9.2	166,388	11.8	all system	Total (3)	4.7	1,010,345	10.8	75% of available plans
Sweden	-8.2	561,147	98.7	all available plans					
Switzerland	-7.1	1,148,286	137.5	90% of the system					
Türkiye (2)	79.1	23,019	2.9	all available plans					
United Kingdom	-20.2	2,402,270	88.7	all available plans					
United States	-15.0	34,003,885	133.5	all system					
Total (3)	-15.6	48,064,506	81.3	96% of available plans					

Note: ".." means not available. See the end of this factsheet for methodological notes and more details for some jurisdictions.

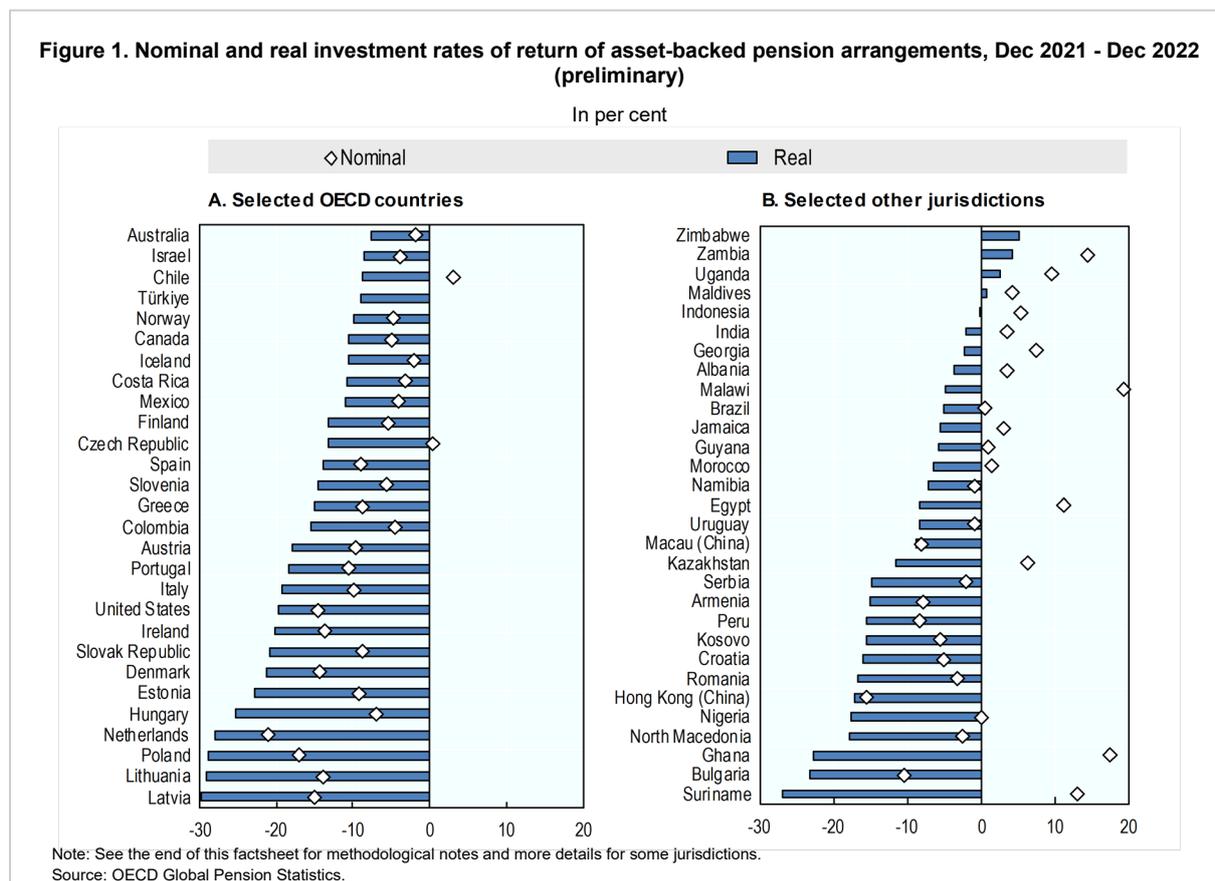
Source: OECD Global Pension Statistics; EIOPA (for Belgium); Bank of Japan; Korea's Financial Supervisory Service; Swiss Occupational Pension Supervisory Commission.

In contrast, pension assets grew in 24 out of 32 reporting jurisdictions from outside the OECD area. The aggregate growth in pension assets across these 32 jurisdictions was 4.7%. Asset-backed pension arrangements were introduced relatively recently in a number of non-OECD jurisdictions. For example, Georgia, which had one of the largest increases in pension assets (48.5%), introduced mandatory pension plans in 2019. These newly introduced plans, in Georgia and elsewhere, are gaining new members and benefit from growing amounts of contributions. These contributions exceed benefit payments that have just or not started yet and offset potential investment losses.

¹ Preliminary data for 2022 were available for 96% of the plans monitored in the OECD area at the time of the drafting of this note. See the methodological notes at the end of this factsheet for more information about the plans covered.

Negative nominal investment rates of return explain most of the drop in pension assets

Investment rates of return were negative in almost all reporting OECD countries in nominal terms, and in all of them in real terms (Figure 1), explaining most of the drop in assets earmarked for retirement. The lowest real returns were close to -30% and were recorded in the Netherlands (-28%), Poland (-29%), Lithuania (-29.2%) and Latvia (-29.7%).



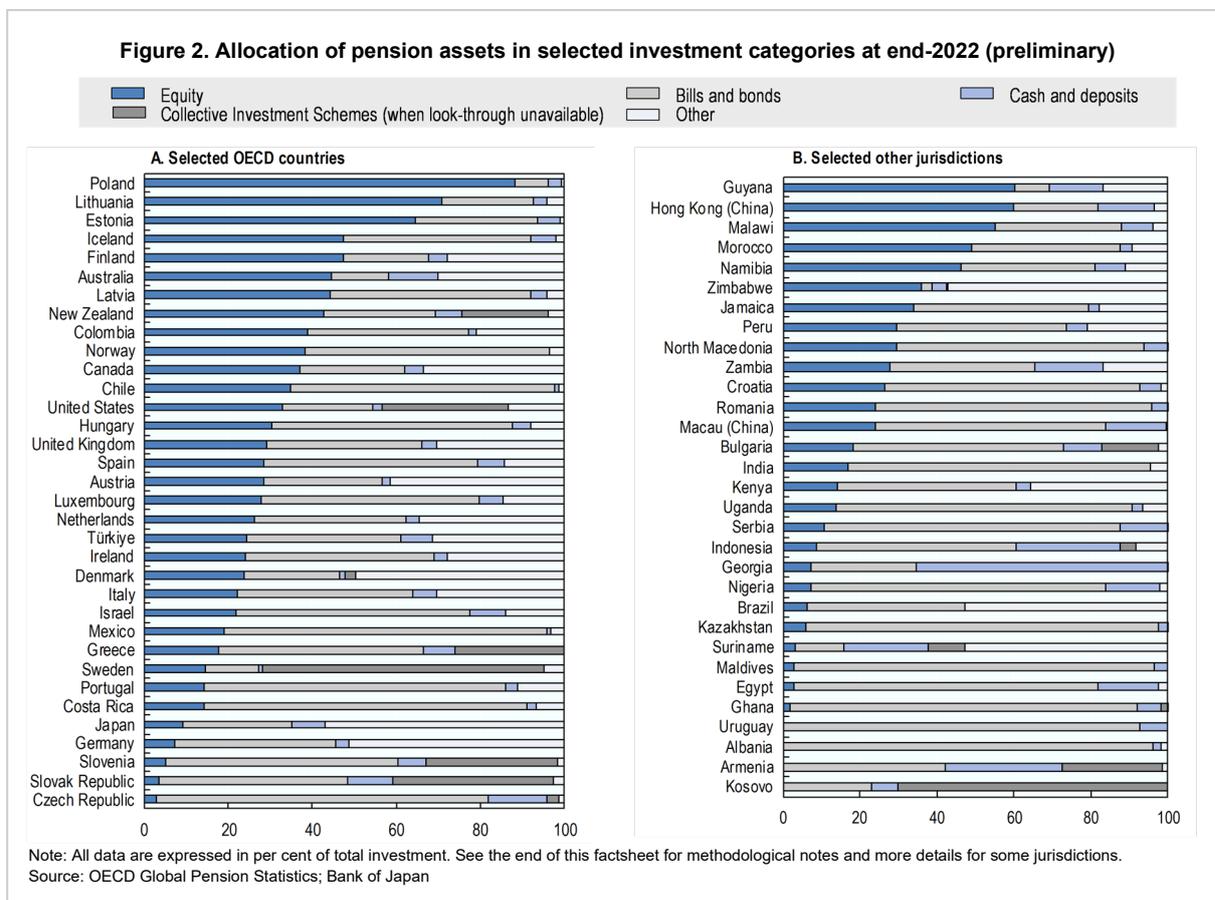
Pension plans also recorded negative real rates of return in all but four reporting non-OECD jurisdictions. In African countries with positive real returns, investment gains could be attributed to the performance of government securities (Uganda and Zambia), real estate (Zimbabwe) and foreign exchange gains (Zambia). The Maldives Retirement Pension Scheme also recorded investment gains in real terms as it benefited from the economic recovery following the rebound of tourism in 2022.

The full version of the 2023 edition of Pension Markets in Focus will look into the investment performance of asset-backed pension arrangements over a longer time period, as performance over several years is a better indicator than performance in a single year of the ability of pension arrangements to generate income to finance benefits.

Inflation, rising interest rates and declines in equity valuations are behind the low investment returns in 2022

Rising inflation in 2022, coupled with rising interest rates, led to a loss in the value of bonds in the portfolio of pension plan providers. Bonds accounted for 48% of the investments of pension plan providers at end-2022 on average among 65 reporting jurisdictions, and exceeded 50% of their investments in 27 of them (Figure 2). Albania recorded the largest proportion of pension assets in bonds (96%), due to a lack of other domestic

investment opportunities. Among OECD countries, the Czech Republic was the country where pension assets were invested the most in bonds (79%), as some types of pension funds (called transformed pension funds) invest in fixed-income instruments to be able to meet the annual non-negative nominal return guarantee they offer.



Besides investment losses on bonds, further losses came from widespread declines in equity valuations. Some of the major stock markets globally fell, with prices down by 19% for S&P500, by 9% for Nikkei 225 and by 12% for DAX at end-2022 compared to end-2021 for example. The three countries with the lowest rates of return in 2022 – i.e. Latvia, Lithuania and Poland – are also those where most pension assets were invested in equities: 44% in Latvia, 71% in Lithuania and 88% in Poland.² Pension assets in Latvia and Lithuania have a relatively large international exposure and are therefore affected by developments in financial markets abroad. In Poland, the low return of open pension funds in 2022 partly reflects the 17% fall in the index including all companies listed on the main domestic market (WIG).

² The high allocation to equities in Poland is due to the prohibition for open pension funds to invest in government securities. In Lithuania, the default investment strategies of the second pension pillar are life-cycle funds with a high proportion of assets in equities for younger savers up to the end of their 40s.

METHODOLOGICAL NOTES

General: Data are collected from pension supervisory authorities or other bodies within the framework of the OECD Global Pension Statistics (GPS) project. This exercise covers all asset-backed pension arrangements where assets are accumulated to back future benefit payments, except reserves of public (pay-as-you-go) pension arrangements. Asset-backed pension plans may be financed through different vehicles (such as pension funds, pension insurance contracts, bank or investment company managed funds), publicly or privately administered, mandatory or voluntary, occupational or personal, defined benefit (DB) or defined contribution (DC), for public or private-sector workers. Employers' book reserves are also in the scope. The classification of pension plans and the related definitions are available in *Private Pensions: OECD Classification and Glossary*, accessible at www.oecd.org/daf/pensions. Data are preliminary and may be revised in the 2023 edition of the full report *Pension Markets in Focus* (forthcoming).

Data for 2022 refer to the end of 2022, except for: Australia and Uganda where data refer to the end of June 2022; Canada, the United Kingdom and the United States (individual retirement accounts) where data refer to end Q3-2022.

Unless stated otherwise, data cover all asset-backed pension arrangements in all vehicles, excluding reserves of public pension arrangements, in all jurisdictions except: Australia (all schemes but Exempt Public Sector Superannuation Schemes that do not report data to the Australian Prudential Regulation Authority); Austria (pension funds and some pension insurance contracts only); Belgium (pension funds only); Canada (employer-sponsored registered pension plans only); Chile (plans managed by AFPs only); Finland (pension funds only); France (pension funds only); Germany (Pensionskassen and Pensionsfonds only); Greece (occupational pension funds only); Hungary (all but IORP); Iceland (all but foreign providers of pension insurance contracts); Ireland (occupational pension schemes and personal retirement savings accounts only); Israel (pension funds only); Japan (pension funds only); Korea (occupational retirement pension plans only); Luxembourg (pension funds under the supervision of the CAA and CSSF only); Mexico (plans in AFOREs only); Netherlands (pension funds and premium pension institutions); Norway (pension funds only); Poland (pension funds only); Portugal (all but collective pension insurance contracts and retirement saving schemes managed by investment companies); Sweden (all but individual pension insurance); Switzerland (pension funds only); Türkiye (personal plans only); United Kingdom (pension funds only) among OECD countries; and Armenia (mandatory pension funds only); India (National Pension System and the Atal Pension Yojana scheme only); Indonesia (employer pension funds and financial institution pension funds only); Suriname (pension funds only); Zambia (private occupation pension schemes only) and Zimbabwe (standalone and self-administered pension funds, and insured funds only) among other jurisdictions.

Table 1: The table shows the amount of assets in all pension arrangements for which 2022 data are already available. Investments are used as a proxy of assets. The column "% change" shows the nominal change of assets in these arrangements in national currency compared to December 2021, except for Australia and Uganda (June 2021). The column "in USD million" is based on exchange rates coming from the IMF International Financial Statistics database. The column "% of GDP" is based on GDP values coming from OECD.Stat and the IMF World Economic Outlook. As data are preliminary, they may not cover the overall asset-backed pension system or the whole set of plans covered in the OECD Global Pension Statistics (GPS) exercise. Therefore, the column "data coverage" provides the proportion of assets that available data represent in the overall asset-backed pension system ("system") or among all plans collected in the OECD GPS exercise ("available plans"), based on 2021 data (2020 for India). (1) The increase in pension fund assets is likely due to a restructuring of the sector with the transfer of assets from pension contracts of insurance companies (data unavailable yet for these contracts) to a new pension fund vehicle subject to a different regulatory regime. (2) The large increase in pension assets comes mostly from a high nominal investment rate of return as well as the nominal increase in pension contributions. (3) The total % change is calculated as the change of total assets in the considered area (in US dollar) between end-2021 and end-2022. The indicator "Total pension assets as a % of GDP" is calculated as the ratio between the sum of all pension assets and the sum of all the GDPs (in US dollar) of the reporting jurisdictions in the area considered. The total data coverage is the ratio of assets in 2021 in plans with available data in 2022 (in USD) over the assets in all plans in 2021 (in USD).

Figure 1: Data have been calculated using a common formula for the average nominal net investment rate of return (ratio between the net investment income at the end of the period and the average level of assets over the period) for all jurisdictions, except for Austria, Estonia, Finland, Ireland, Israel, Italy, Lithuania, Netherlands, Slovenia and the United States among OECD countries and for Armenia, Croatia, Hong Kong (China) and Jamaica where values come from the own calculations of national authorities or from other official sources. Average real net investment rates of return have been calculated using the nominal investment rate of return (as described above) and the variation of the end-of-period consumer price index (extracted from OECD.Stat, the IMF's online database or the IMF's World Economic Outlook published in April 2023) for the same period over which the nominal return is calculated, i.e. between June 2021 and June 2022 for Australia and Uganda, between December 2021 and September 2022 for Canada, and between December 2021 and December 2022 for the other jurisdictions. These results may deviate from the own calculations of national authorities. The investment rate of return is net of tax and investment expenses for Australia. The investment rate of return is calculated only for pension funds in Austria, pension funds and pension insurance contracts in Denmark, the second pension pillar in Estonia, pension funds in Hungary, new pension funds in Israel, contractual pension funds in Italy, pension funds in Portugal, mutual pension funds in Slovenia, pension funds and book reserves in Spain, Mandatory Provident Fund (MPF) schemes in Hong Kong (China), pension funds in Zimbabwe. The returns that the reporting national authority in Jamaica used in its calculation were as at varying months during 2022. The nominal investment rates of return in Türkiye (49.6%) and Zimbabwe (121.8%) are not shown for readability purposes.

Figure 2: The GPS database gathers information on investments in Collective Investment Schemes (CIS) and the look-through of these investments in equities, bills and bonds, cash and deposits and other. Data on asset allocation in the figure include both direct investment in equities, bills and bonds, cash and deposits and indirect investment through CIS when the look-through of CIS investments is available. Otherwise, investments in CIS are shown in a separate category. Negative values have been excluded from the calculations of the asset allocation. Data for Australia do not cover small APRA funds and Single-Member Funds. Data for Denmark refer to pension funds and pension insurance contracts. Data for Estonia refer to the second pension pillar only. Data for Germany are estimates; the breakdown of investments through CIS has not been approved by external auditors yet and is not available for Pensionsfonds. Data for Hungary, Italy, Spain and Namibia refer to pension funds only. Data for Ireland refer to DB plans only. The high value for the "Other" category in Japan is mainly driven by outward investments in securities. Data for Sweden do not cover book reserves nor individual pension insurance. Data for Hong Kong (China) cover MPF schemes and MPF-exempted ORSO registered schemes only.

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