JAY
SOLUTIONS

Helsingin yliopisto

31.12.2022

Monthly report

University of Helsinki -
Investment assets

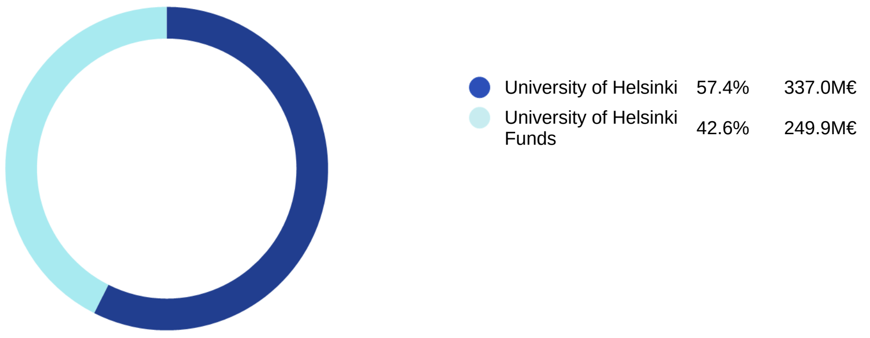
Allocation

University of Helsinki - Investment assets
Created: 07.02.2023

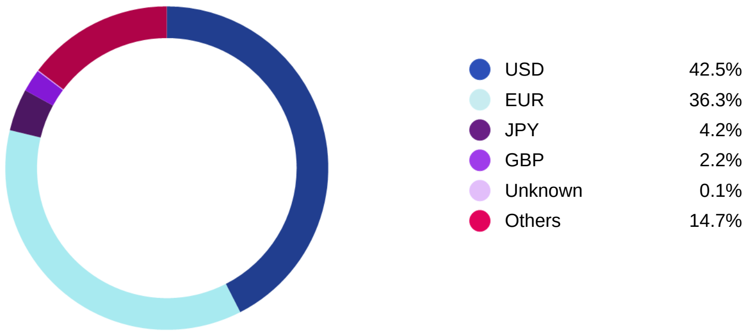
Date: 01.01.2022 - 31.12.2022
Currency: EUR

Listed Equities	**M-value (EUR)**	**% of class**	**% of portfolio**	**Periodic return**
Funds	387 584 785	94.5%	66.0%	-16.18%
Direct shares	22 567 023	5.5%	3.8%	-50.50%
	410 151 808		**69.9%**	
Fixed Income				
Government bonds	87 623 839	62.7%	14.9%	-10.66%
Corp. bonds IG (long, > 2 years)	23 711 408	17.0%	4.0%	-21.36%
Corp. bonds IG (short, < 2 years)	28 443 297	20.3%	4.8%	-8.76%
	139 778 544		**23.8%**	
Other				
Spinout companies	22 357 250	69.7%	3.8%	7.28%
Startup companies	59 959	0.2%	0.0%	0.00%
Non-listed funds	4 122 431	12.9%	0.7%	13.27%
Impact investments	2 000 000	6.2%	0.3%	3.65%
Other non-listed investmets	3 514 832	11.0%	0.6%	5.77%
	32 054 472		**5.5%**	
Cash				
Cash	4 909 647			
	4 909 647		**0.8%**	
Investments total	**586 894 471**			**-15.7%**

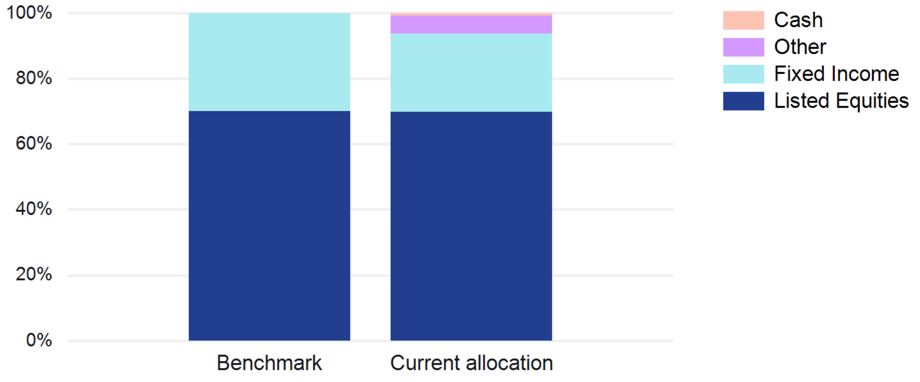
Portfolio distribution



Currency distribution - J-Ray*



Current allocation



Allocation comparison

University of Helsinki - Investment assets
Created: 07.02.2023

Date: 01.01.2022 - 31.12.2022
Currency: EUR

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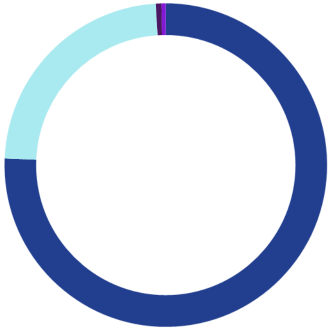
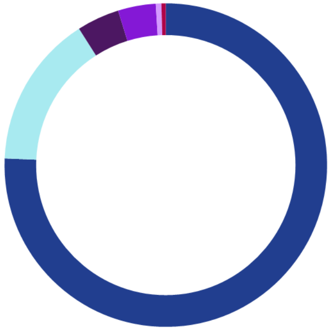
University of Helsinki

Asset allocation



●	Listed Equities	75.7%	255.0 M€
●	Fixed Income	23.3%	78.7 M€
●	Cash	0.6%	1.9 M€
●	Other	0.4%	1.5 M€

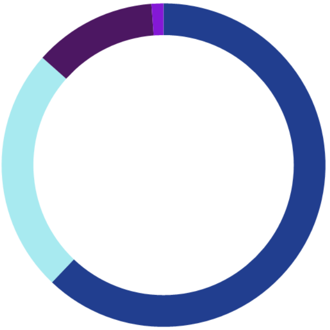
Detailed asset allocation



●	Funds	75.7%	255.0 M€
●	Government bonds	15.3%	51.6 M€
●	Corp. bonds IG (short, < 2 years)	4.3%	14.4 M€
●	Corp. bonds IG (long, > 2 years)	3.8%	12.8 M€
●	Cash	0.6%	1.9 M€
●	Non-listed funds	0.4%	1.5 M€

University of Helsinki Funds

Asset allocation



●	Listed Equities	62.1%	155.2 M€
●	Fixed Income	24.5%	61.1 M€
●	Other	12.2%	30.6 M€
●	Cash	1.2%	3.0 M€

Detailed asset allocation

●	Funds	53.1%	132.6 M€
●	Government bonds	14.4%	36.1 M€
●	Direct shares	9.0%	22.6 M€
●	Spinout companies	8.9%	22.4 M€
●	Corp. bonds IG (short, < 2 years)	5.6%	14.1 M€
●	Corp. bonds IG (long, > 2 years)	4.4%	11.0 M€
●	Other non-listed investmets	1.4%	3.5 M€
●	Cash	1.2%	3.0 M€
●	Non-listed funds	1.1%	2.7 M€
●	Impact investments	0.8%	2.0 M€
	Startup companies	0.0%	0.1 M€

Summary of returns

University of Helsinki - Investment assets
Created: 07.02.2023

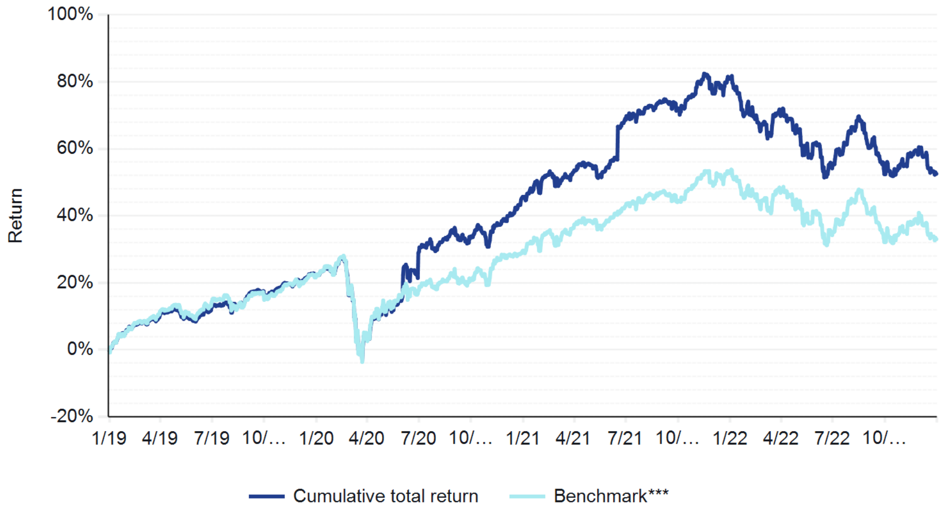
Date: 01.01.2012 - 31.12.2022
Currency: EUR

JAY SOLUTIONS

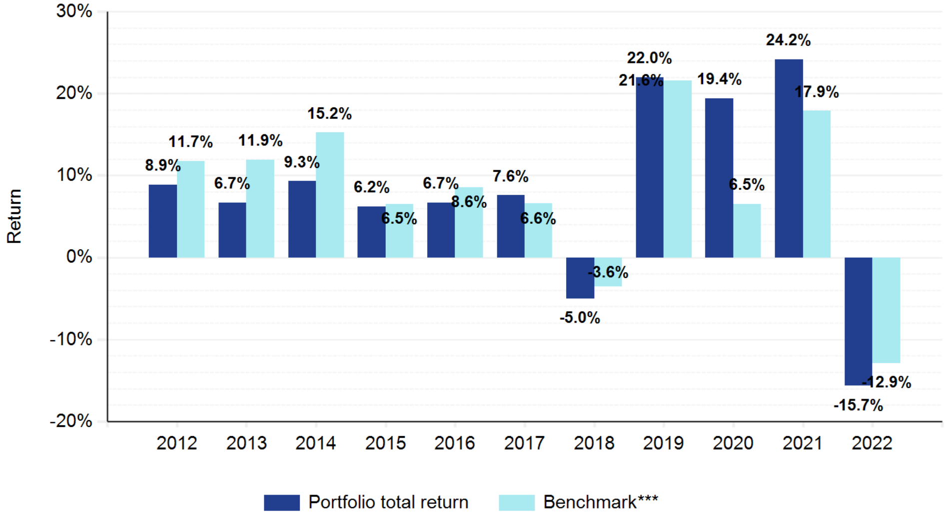
Returns	1 m	YTD	2021	2020	Since 2019
Total	-4.95%	-15.67%	24.17%	19.43%	52.55%
Listed investments	-5.30%	-17.30%	17.41%	8.82%	
Total benchmark	-5.57%	-12.90%	17.90%	6.54%	33.05%
Listed Equities	**-6.45%**	**-18.88%**	**24.40%**	**11.29%**	
Funds	-6.88%	-16.18%	28.76%	7.30%	
Direct shares	1.17%	-50.50%	-10.78%	59.24%	
Index for listed equities*	-7.32%	-13.01%	27.54%	**6.65%**	
Fixed Income	**-1.74%**	**-12.37%**	**-3.12%**	**0.79%**	
Index for listed bonds**	-1.43%	-13.66%	-2.29%	**4.65%**	
Other	**-0.20%**	**7.75%**	**147.09%**	**831.13%**	

Cumulative return

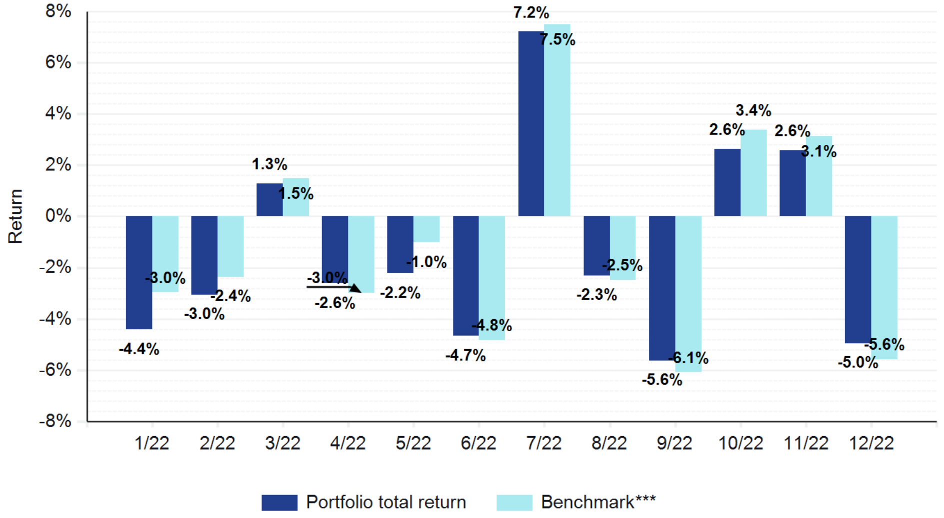
52.6%



Annual returns



Monthly returns past 12 months



*** Index Composition: MSCI ACWI Net Total Return EUR Index: Weight 70%, **Bloomberg Barclays Global Aggregate Float Adjusted TR Index Hedged EUR: Weight 30%

2012-2019 returns calculated by OP, excluding non-listed investments. Non-listed investments calculated by JAY Solutions since 2019. Portfolio total return by JAY Solutions since 1.1.2020.

Largest contributors to portfolio returns

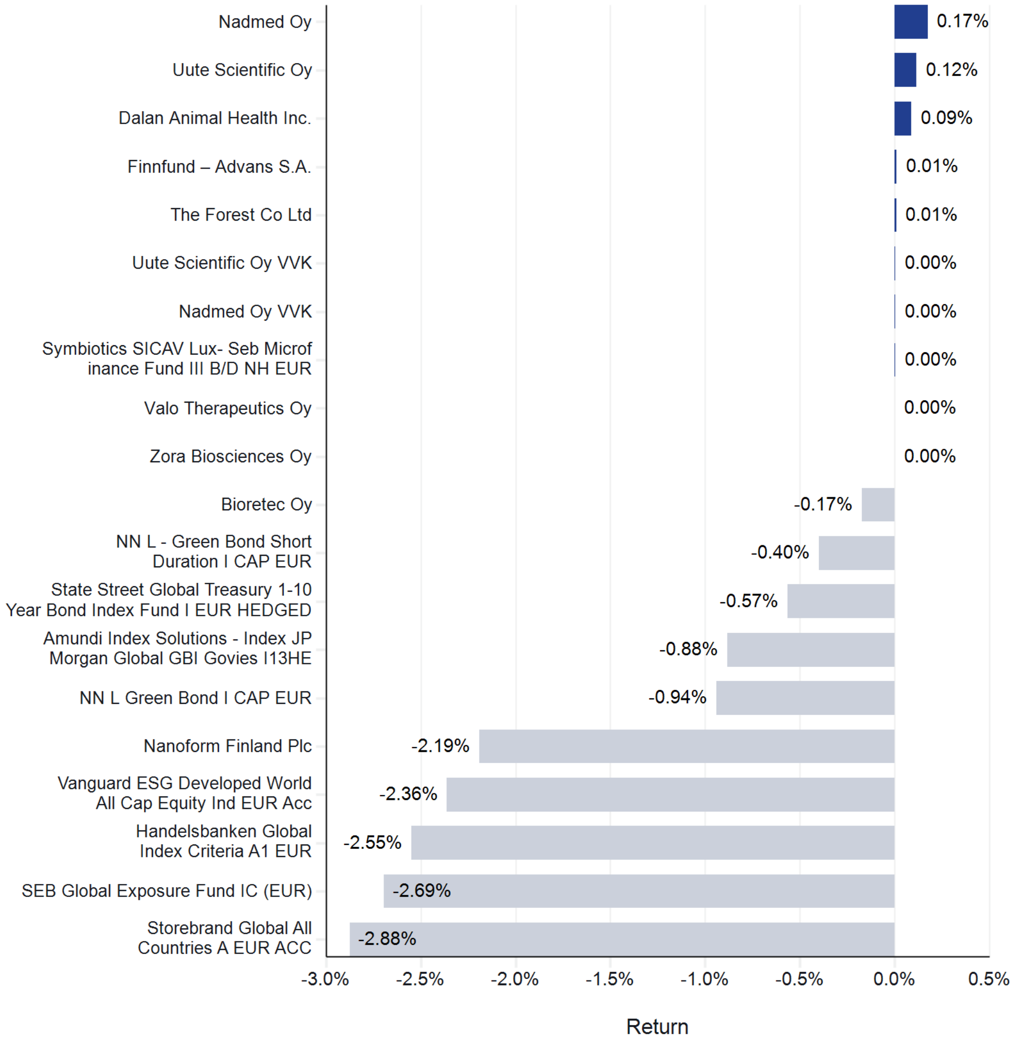
10 largest positive return contributors YTD

Security	YTD	1 m	3 m	1 year	% of portfolio
Nadmed Oy	0.17 %	0.17 %	0.21 %		0.11 %
Uute Scientific Oy	0.12 %	0.12 %	0.00 %	0.12 %	0.16 %
Dalan Animal Health Inc.	0.09 %	0.09 %	-0.03 %	0.09 %	0.29 %
Finnfund - Advans S.A.	0.01 %	0.01 %	0.00 %	0.01 %	0.34 %
The Forest Co Ltd	0.01 %	0.01 %	-0.02 %	0.01 %	0.25 %
Uute Scientific Oy VVK	0.00 %	0.00 %	0.00 %		
Nadmed Oy VVK	0.00 %	0.00 %	0.00 %		
Symbiotics SICAV Lux- Seb Microfinance Fund III B/D NH EUR	0.00 %	0.00 %	0.00 %	0.00 %	
Zora Biosciences Oy	0.00 %	0.00 %	0.00 %	0.00 %	0.01 %
Valo Therapeutics Oy	0.00 %	0.00 %	0.00 %	0.00 %	0.72 %

10 largest negative return contributors YTD

Security	YTD	1 m	3 m	1 year	% of portfolio
Storebrand Global All Countries A EUR ACC	-2.88 %	-2.88 %	0.30 %	-2.88 %	17.42 %
SEB Global Exposure Fund IC (EUR)	-2.69 %	-2.69 %	-0.05 %	-2.69 %	15.90 %
Handelsbanken Global Index Criteria A1 EUR	-2.55 %	-2.55 %	0.02 %	-2.55 %	17.00 %
Vanguard ESG Developed World All Cap Equity Ind EUR Acc	-2.36 %	-2.36 %	-0.09 %	-2.36 %	15.72 %
Nanoform Finland Plc	-2.19 %	-2.19 %	0.04 %	-2.19 %	2.40 %
NN L Green Bond I CAP EUR	-0.94 %	-0.94 %	-0.03 %	-0.94 %	4.04 %
Amundi Index Solutions - Index JP Morgan Global GBI Govies I13HE	-0.88 %	-0.88 %	-0.07 %	-0.88 %	6.90 %
State Street Global Treasury 1-10 Year Bond Index Fund I EUR HEDGED	-0.57 %	-0.57 %	0.00 %	-0.57 %	8.03 %
NN L - Green Bond Short Duration I CAP EUR	-0.40 %	-0.40 %	0.05 %	-0.40 %	4.85 %
Bioretec Oy	-0.17 %	-0.17 %	-0.05 %	-0.17 %	0.22 %

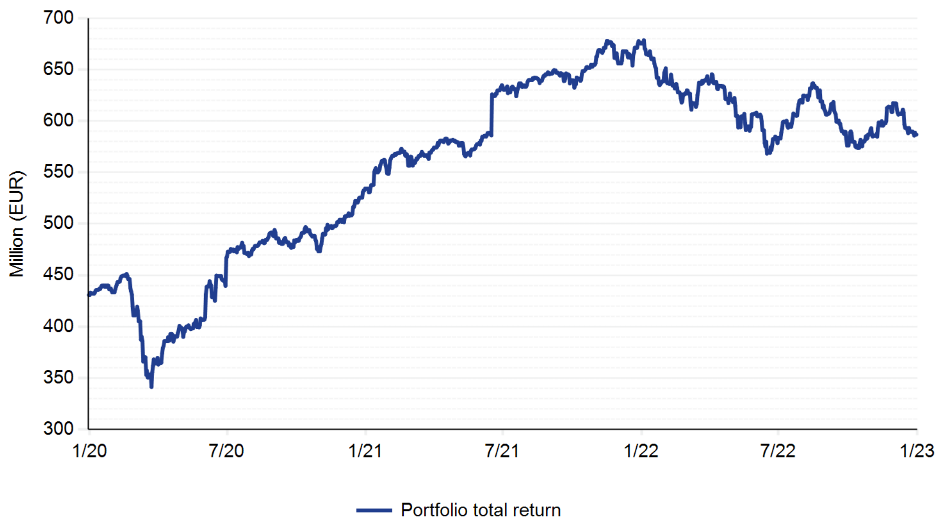
Largest return contributors YTD



The return contributions of all instruments do not necessariry add up to the portfolio total returns (shown on the portfolio return report), because for example costs or currency account movements are not shown on this report, but can affect portfolio total returns. The period-return is calculated for the whole period, other returns are calculated only for periods during which the instrument has been in the portfolio. This report does not contain private equity funds.

Development of portfolio value

Development of portfolio value

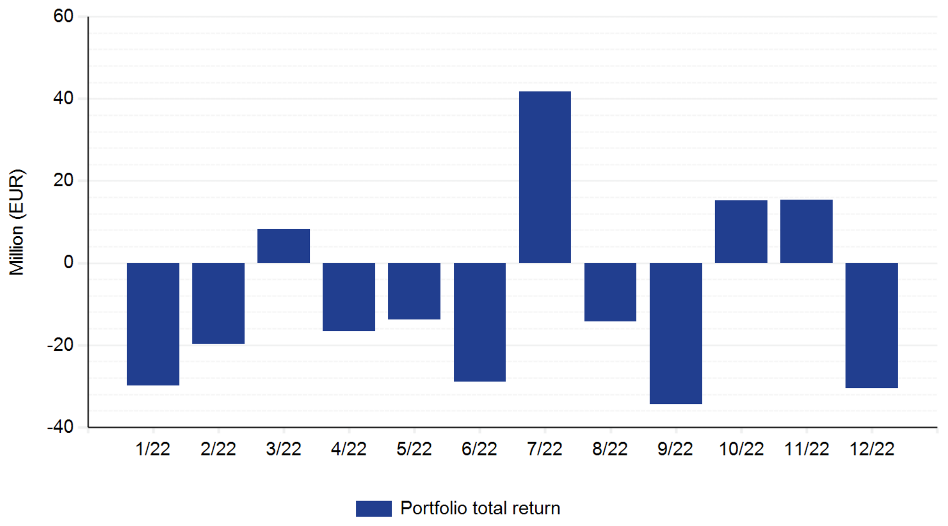


Change of market value	31.12.2019	YTD
Starting balance	**430 736 888**	**675 494 487**
Withdrawals, deposits and other transactions into/out from portfolio	40 959 141	19 133 146
Portfolio periodic return	115 198 442	- 107 733 162
Period ending balance	**586 894 471**	**586 894 471**

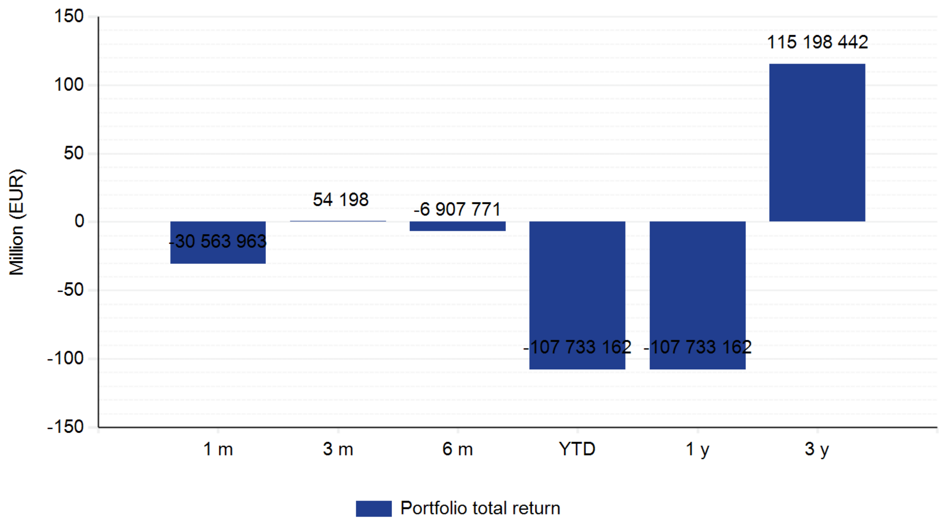
Portfolio value X-Ray

Securities valuation differences after fees	110 717 491	- 109 379 767
Securities paid proceeds after taxes	4 676 402	1 646 605
Accounts periodic returns	50 509	10 222
Charged fees and taxes from accounts	- 245 960	- 10 222
Portfolio periodic return	**115 198 442**	**- 107 733 162**
Securities fees and taxes during period	- 47 332	- 6

Monthly returns past 12 months



Periodic returns past 12 months



Equity report

University of Helsinki - Investment assets
Created: 07.02.2023

Date: 31.12.2022
Currency: EUR

							From portfolio information *			From security information *						
Security	**Purchase month**	**Cur**	**Units**	**P-value (EUR)**	**M-value (EUR)**	**Change (EUR)**	**1 m profit**	**YTD profit**	**Total profit**	**YTD +/- %**	**TE****	**Vol****	**Beta****	**IR**	**% of class**	**% of portfolio**
Funds																
Handelsbanken Global Index Criteria A1 EUR	03/19	EUR	2 837 402.6	76 140 540	99 763 075	23 622 535	-4.7%	-15.5%	17.5%	-2.7%	0.7%	17.7%	0.9	-3.48%	24.3%	17.0%
SEB Global Exposure Fund IC (EUR)	08/20	EUR	685 378.27	84 460 178	93 325 218	8 865 040	-7.7%	-17.1%	17.2%	-4.3%	1.9%	18.8%	1.0	-2.04%	22.8%	15.9%
Storebrand Global All Countries A EUR ACC	05/20	EUR	690 516.33	83 553 023	102 228 595	18 675 572	-7.1%	-15.0%	27.5%	-2.2%	1.6%	17.4%	1.0	-1.17%	24.9%	17.4%
Vanguard ESG Developed World All Cap Equity Ind EUR Acc	10/20	EUR	328 299.66	94 102 293	92 267 897	-1 834 396	-8.0%	-17.7%	13.1%	-4.9%	3.0%	20.0%	1.0	-1.68%	22.5%	15.7%
					387 584 785										**94.5%**	**66.0%**
Direct shares																
Asuntosalkku Oyj	06/22	EUR	40 952	4 299 960	4 422 816	122 856	-5.8%	-25.8%	-25.8%	-19.3%					1.1%	0.8%
Bioretec Oy	09/21	EUR	917 966	4 331 483	1 289 742	-3 041 741	-1.1%	-48.0%	-53.2%	-34.9%	28.7%	61.8%	0.6	-1.20%	0.3%	0.2%
Herantis Pharma Oyj	12/09	EUR	572 678	3 352 284	944 919	-2 407 366	-3.2%	-30.0%	-69.3%	-18.2%	45.7%	72.4%	0.3	-0.39%	0.2%	0.2%
Nanoform Finland Plc	06/20	EUR	4 397 719	300 761	14 072 701	13 771 940	5.3%	-51.4%	-10.6%	-38.4%	40.0%	50.0%	0.0	-0.95%	3.4%	2.4%
Opthea Ltd	03/12	AUD	3 150 340	1 291 639	1 836 845	545 206	-6.3%	-29.7%	63.1%	-16.3%	53.7%	52.9%	0.9	-0.36%	0.4%	0.3%
					22 567 023										**5.5%**	**3.8%**
Total					**410 151 808**										**100.0%**	**69.9%**

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* Analytics are calculated from the securities' time series. Returns are calculated as total returns and include all events during the period.
** Tracking error and beta are calculated against the MSCI World Net Total Return EUR index using 12 month rolling weekly observations (Tracking error using monthly data). The metrics are only shown if the security has 12 months of data.

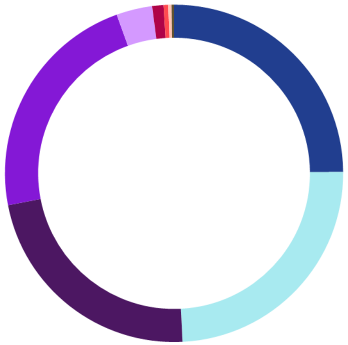
Equity statement

University of Helsinki - Investment assets
Created: 07.02.2023

Date: 31.12.2022
Currency: EUR

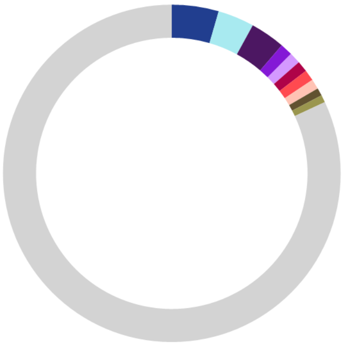
JAY SOLUTIONS

Allocation: Top 10



	Portfolio distribution
● Storebrand Global All Countries A EUR ACC	24.9%
● Handelsbanken Global Index Criteria A1 EUR	24.3%
● SEB Global Exposure Fund IC (EUR)	22.8%
● Vanguard ESG Developed World All Cap Equity Ind EUR Acc	22.5%
● Nanoform Finland Plc	3.4%
● Asuntosalkku Oyj	1.1%
● Opthea Ltd	0.4%
● Bioretec Oy	0.3%
● Herantis Pharma Oyj	0.2%

Equity allocation - J-Ray*: Top 10

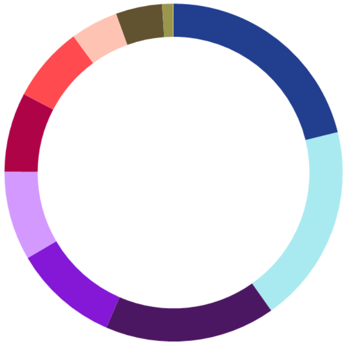


	Portfolio distribution	Index distribution **	Difference
● Apple Inc	4.6%	4.5%	0.1%
● Microsoft Corp	3.6%	3.3%	0.3%
● Nanoform Finland Plc	3.4%	0.0%	3.4%
● Alphabet Inc Class A	1.2%	1.1%	0.1%
● Alphabet Inc Class C	1.1%	1.1%	0.0%
● Amazon.com Inc	1.1%	2.0%	-1.0%
● Asuntosalkku Oyj	1.1%	0.0%	1.1%
● UnitedHealth Group Inc	1.0%	0.9%	0.0%
● Unilever PLC	0.8%	0.2%	0.6%
● Tesla Inc	0.7%	1.0%	-0.3%
● Muut	84.6%		

Country-allocation - J-Ray*

	Portfolio distribution	Index distribution **	Difference
● United states	59.9%	62.3%	-2.4%
● Japan	5.9%	5.2%	0.7%
● Finland	5.3%	0.2%	5.1%
● Canada	3.1%	3.2%	-0.1%
● United kingdom	3.0%	3.9%	-0.8%
● Switzerland	2.7%	2.8%	-0.1%
● China	2.1%	2.7%	-0.5%
● Australia	2.1%	1.9%	0.2%
● Unknown	0.0%	0.0%	0.0%
● Others	15.8%	17.8%	-2.0%

Sector allocation - J-Ray*



	Portfolio distribution	Index distribution **	Difference
● Technology	21.1%	19.3%	1.8%
● Healthcare	19.0%	13.3%	5.7%
● Financial Services	16.3%	16.0%	0.3%
● Consumer Cyclical	10.0%	10.5%	-0.5%
● Industrials	8.5%	9.9%	-1.4%
● Communication Services	7.6%	6.9%	0.7%
● Consumer Defensive	7.2%	7.7%	-0.5%
● Basic Materials	4.5%	4.5%	0.1%
● Real Estate	4.4%	2.7%	1.7%
● Sector Utilities	1.0%	3.0%	-2.0%
● Energy	0.0%	5.8%	-5.8%

* Distributions are based on true underlying holdings. ** Benchmark: MSCI World ACWI Net Total Return EUR, allocation: iShares MSCI ACWI ETF

Fixed income report

University of Helsinki - Investment assets
Created: 07.02.2023

Date: 31.12.2022
Currency: EUR

								From portfolio information *			From security information *						
Security	**Purchase month**	**Cur**	**Units**	**P-value (EUR)**	**M-value (EUR)**	**Change (EUR)**	**Dur**	**1 m profit**	**YTD profit**	**Total profit**	**YTD +/- %**	**TE****	**Vol****	**Beta****	**IR**	**% of class**	**% of portfolio**
Government bonds																	
Amundi Index Solutions - Index JP Morgan Global GBI Govies I13HE	12/20	EUR	48 548	47 581 996	40 491 162	-7 090 834	7.0	-2.0%	-14.0%	-16.4%	-0.4%	3.3%	5.8%	0.9	-0.14%	29.0%	6.9%
State Street Global Treasury 1-10 Year Bond Index Fund I EUR HEDGED	07/21	EUR	5 191 452	51 427 852	47 132 677	-4 295 175	4.3	-0.9%	-7.8%	-8.5%	5.9%	3.5%	3.4%	0.5	1.62%	33.7%	8.0%
					87 623 839											**62.7%**	**14.9%**
Corp. bonds IG (long, > 2 years)																	
NN L Green Bond I CAP EUR	05/20	EUR	5 347	30 372 643	23 711 408	-6 661 235	8.4	-4.2%	-21.4%	-19.9%	-8.0%	5.8%	9.3%	1.5	-1.39%	17.0%	4.0%
					23 711 408											**17.0%**	**4.0%**
Corp. bonds IG (short, < 2 years)																	
NN L - Green Bond Short Duration I CAP EUR	02/21	EUR	61 694	31 620 998	28 443 297	-3 177 701	1.9	-0.5%	-8.8%	-10.3%	4.9%	3.9%	3.4%	0.4	1.21%	20.3%	4.8%
					28 443 297											**20.3%**	**4.8%**
Total					**139 778 544**		**5.3**									**100.0%**	**23.8%**

* Analytics are calculated from the securities' time series. Returns are calculated as total returns and include all events during the period.
** Tracking error, volatility and beta are calculated against the BBGA index using 12 month rolling weekly observations. The metrics are only shown if the security has 12 months of data.

Fixed income report

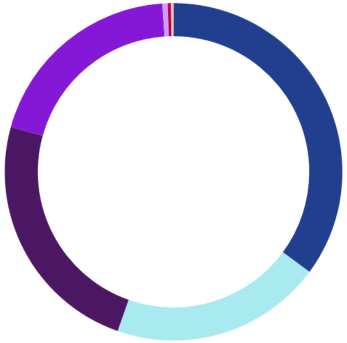
University of Helsinki - Investment assets
Created: 07.02.2023

Date: 31.12.2022
Currency: EUR

Allocation

		Portfolio distribution
●	Government bonds	62.7%
●	Corp. bonds IG (long, > 2 years)	17.0%
●	Corp. bonds IG (short, < 2 years)	20.3%

Rating (S&P) - J-Ray*



		Portfolio distribution	Index distribution **	Difference
●	AAA	22.0%	48.4%	-26.5%
●	AA	12.7%	13.7%	-1.0%
●	A	15.0%	20.3%	-5.4%
●	BBB	12.3%	16.0%	-3.7%
●	BB	0.3%	0.0%	0.3%
●	Not Rated	0.2%	0.9%	-0.7%
●	Unknown	0.2%	0.0%	0.2%

Maturity - J-Ray*

		Portfolio distribution	Index distribution **	Difference
●	0-1	33.7%	30.7%	3.0%
●	1-2	25.3%	21.6%	3.7%
●	2-3	10.0%	21.9%	-11.9%
●	3-5	10.3%	20.2%	-9.8%
●	5-7	5.4%	3.7%	1.7%
●	7-10	3.7%	1.0%	2.7%
●	10+	9.8%	0.0%	9.8%

Country-allocation - J-Ray*

		Portfolio distribution	Index distribution **	Difference
●	United states	27.1%	48.9%	-21.8%
●	Japan	13.6%	8.6%	5.1%
●	France	10.4%	5.6%	4.7%
●	Italy	6.3%	3.5%	2.7%
●	Spain	5.3%	2.6%	2.7%
●	United kingdom	4.4%	3.6%	0.8%
●	Germany	4.0%	8.0%	-4.0%
●	Netherlands	3.9%	1.5%	2.4%
●	China	3.0%	0.7%	2.4%
●	Belgium	2.3%	1.1%	1.2%
●	Unknown	0.8%	0.0%	0.8%
●	Others	18.8%	15.8%	3.0%

* Distributions are based on true underlying holdings. ** Benchmark: Bloomberg Barclays Global Aggregate Float Adjusted TR Index Hedged EUR, allocation: Vanguard Total World Bond ETF

Non-listed investments

Security	Cur	Units	Owner-ship %	Purchase month	P-value (EUR)	M-value(EUR)	M-Value updated	Balance sheet value (EUR)	% of class	% of portfolio	Periodic cashflow	Total cashflow	Periodic change *	Periodic return%	Total return%	Commit-ment left
Spinout companies																
Equity																
Airmodus Oy	EUR	801	34.8%	03/2010	950 768	0	06/2020	0	0.0%	0.0%	0	0	0	0.0%	-100.0%	
Aplagon Oy	EUR	60 238	10.8%	08/2010	1 116 665	1 445 712	05/2021	1 116 665	6.5%	0.2%	0	0	0	0.0%	9.1%	
CarbonLink Oy	EUR	25 846	18.8%	06/2021	50 001	375 025	06/2021	50 001	1.7%	0.1%	0	0	0	0.0%	650.0%	
Dalan Animal Health Inc.	USD	1 050 517	12.6%	01/2019	60 350	1 714 974	09/2022	60 350	7.7%	0.3%	0	0	601 942	54.1%	3365.0%	
EdVisto Oy	EUR		0.0%	08/2015	0	0	06/2020	0	0.0%	0.0%	0	0	0	0.0%	-100.0%	Exit
Etsimo Oy	EUR		0.0%	01/2015	0	0	06/2020	0	0.0%	0.0%	0	0	0	0.0%	-100.0%	Exit
Fun Academy Oy	EUR	7 690	5.0%	12/2015	50 000	0		0	0.0%	0.0%	0	0	0	0.0%	0.0%	
GlucoModicum Oy	EUR	31 554	18.3%	03/2018	249 646	9 649 213	11/2021	249 646	43.2%	1.6%	0	0	0	0.0%	18232.1%	
Helsinki International Schools Group Oy	EUR	203 300	10.7%	12/2015	179 402	831 497	03/2021	179 402	3.7%	0.1%	0	0	0	0.0%	363.5%	
Karsa Oy	EUR	1 014 921	9.3%	05/2016	300 175	672 487	11/2022	300 175	3.0%	0.1%	0	0	- 291 514	-30.2%	201.1%	
Megasense Oy	EUR	217 500	25.0%	12/2022		0		0	0.0%	0.0%	0	0	0	0.0%	0.0%	
MOPRIM Oy	EUR	33 297	27.2%	11/2015	63 563	63 563	12/2021	63 563	0.3%	0.0%	0	0	0	0.0%	0.0%	
Nadmed Oy	EUR	27 155	22.1%	01/2022	51 311	646 561	10/2022	51 311	2.9%	0.1%	0	0	595 250	1160.1%	1160.1%	
Rokote Laboratories Finland Oy	EUR	250 000	4.2%	03/2021		250 000	07/2021	0	1.1%	0.0%	0	0	0	0.0%	0.0%	
TeamFluent Oy	EUR	2 600	26.0%	06/2020	650	0	12/2021	0	0.0%	0.0%	0	0	0	0.0%	-100.0%	
The Solubility Company Oy	EUR	27 455	20.4%	02/2018	82 022	1 482 570	12/2020	55 994	6.6%	0.3%	0	0	0	0.0%	2770.0%	
Uute Scientific Oy	EUR	404	10.1%	03/2020	105 864	922 591	07/2022	357	4.1%	0.2%	0	0	595 276	181.9%	175026.6%	
Valo Therapeutics Oy	EUR	39 218	21.1%	06/2016	1 075 627	4 252 408	06/2020	1 075 627	19.0%	0.7%	0	0	0	0.0%	295.3%	
Veil.ai Oy	EUR	26 000	24.0%	06/2020	650	650		650	0.0%	0.0%	0	0	0	0.0%	0.0%	
Loans																
EdVisto Oy VVK	EUR			09/2015	0	0	01/2018	0	0.0%	0.0%	1	1	1	0.0%	0.0%	Exit
Etsimo Oy VVK	EUR			02/2015	0	0		0	0.0%	0.0%	500	500	500	0.0%	0.0%	Exit
Nadmed Oy VVK	EUR		0.0%	02/2022	0	0		0	0.0%	0.0%	0	0	1 311	2.6%	2.6%	Exit
TeamFluent Oy VVK	EUR			08/2020	50 000	0	12/2021	0	0.0%	0.0%	0	0	0	0.0%	-100.0%	
Uute Scientific Oy VVK	EUR			01/2022	0	0		0	0.0%	0.0%	0	0	5 507	5.5%	5.5%	Exit

* Unrealized gain

Valuations (except book values) are updated when new information is available, and hence some discrepancies may arise e.g., while new shares are being registered.

Non-listed investments

Security	Cur	Units	Owner-ship %	Purchase month	P-value (EUR)	M-value(EUR)	M-Value updated	Balance sheet value (EUR)	% of class	% of portfolio	Periodic cashflow	Total cashflow	Periodic change *	Periodic return%	Total return%	Commit-ment left
Veil.ai Oy VVK	EUR			06/2020	50 000	50 000		50 000	0.2%	0.0%	0	0	0	0.0%	0.0%	
					4 436 694	**22 357 250**		**3 253 741**	**100.0%**	**3.8%**	**501**	**501**	**1 508 273**	**7.3%**	**1086.2%**	
Non-listed funds																
Funds																
Asuntosalkku Suomi Oy	EUR		0.0%	09/2015	0	0	06/2022	0	0.0%	0.0%	0	1 283 439	- 31 757	-0.5%	56.7%	Exit
Elinkorkolaitos Hereditas Oy	EUR		1.1%	01/2016		2 656 089	10/2022	704 533	64.4%	0.5%	98 635	609 421	- 105 680	-0.5%	416.2%	
Inveni Life Sciences Fund I Ky	EUR		0.0%	07/2007	0	0	11/2022	0	0.0%	0.0%	766 621	889 975	63 639	-100.0%	-100.0%	Exit
The Forest Co Ltd	USD		0.9%	08/2011	2 805 387	1 466 342	09/2022	1 466 342	35.6%	0.2%	0	415 885	61 079	4.3%	-47.7%	
					6 795 928	**4 122 431**		**2 170 875**	**100.0%**	0.7%	**865 255**	**3 198 720**	**- 12 718**	**13.3%**	**69.1%**	
Other non-listed investmets																
Loans																
Bioretec Oy - Oman pääoman ehtoinen saaminen	EUR			12/2019	0	0	12/2019	0	0.0%	0.0%	165 488	165 488	0	0.0%	0.0%	Exit
Mobidiag Oy - Saaminen	EUR			06/2021	0	0		0	0.0%	0.0%	128 710	128 710	0	0.0%	0.0%	Exit
Equity																
HVR Cardio Oy	EUR	55 810	2.1%	10/2022	453 624	446 480	10/2022	453 624	12.7%	0.1%	0	0	0	-1.6%	-1.6%	
Northern Antibiotics Oy	EUR	560 674	9.7%	02/2018	214 728	40 000	06/2020	40 000	1.1%	0.0%	0	33 528	0	0.0%	19.3%	
Oy 4Pharma Ltd.	EUR	250 000	74.3%	02/2013	1 400 000	2 983 563	06/2021	1 400 000	84.9%	0.5%	0	0	0	0.0%	645.9%	
Panacea Holding Oy	EUR		0.0%	04/2016	0	0	09/2018	0	0.0%	0.0%	17 265	17 265	17 265	0.0%	-80.4%	Exit
Pharmatest Services Oy	EUR	757	2.2%	03/2010	477 400	0	12/2020	0	0.0%	0.0%	0	0	0	0.0%	-100.0%	
Zora Biosciences Oy	EUR	27 993	0.5%	02/2018	342 195	44 789	09/2021	44 789	1.3%	0.0%	0	0	0	0.0%	220.0%	
					2 887 947	**3 514 832**		**1 938 412**	**100.0%**	0.6%	**311 463**	**344 991**	**17 265**	**12.2%**	**-100.0%**	
Impact investments																
Loans																
Finnfund - Advans S.A.	EUR			03/2022	2 000 000	2 000 000		2 000 000	100.0%	0.3%	82 700	82 700	0	3.6%	3.6%	
					2 000 000	**2 000 000**		**2 000 000**	**100.0%**	**0.3%**	**82 700**	**82 700**	**0**	**12.2%**	**-100.0%**	

* Unrealized gain

Asuntosalkku stocks have been treated as sold from the Helsinki University non-listed equity portfolio (Asuntosalkku Suomi Oy) and acquired to the listed equity portfolio (Asuntosalkku Oyj) using the IPO price in order to reflect the returns correctly for both portfolios. The reference on the page to “Exit” for Asuntosalkku is therefore purely technical.

Valuations (except book values) are updated when new information is available, and hence some discrepancies may arise e.g., while new shares are being registered.

Non-listed investments

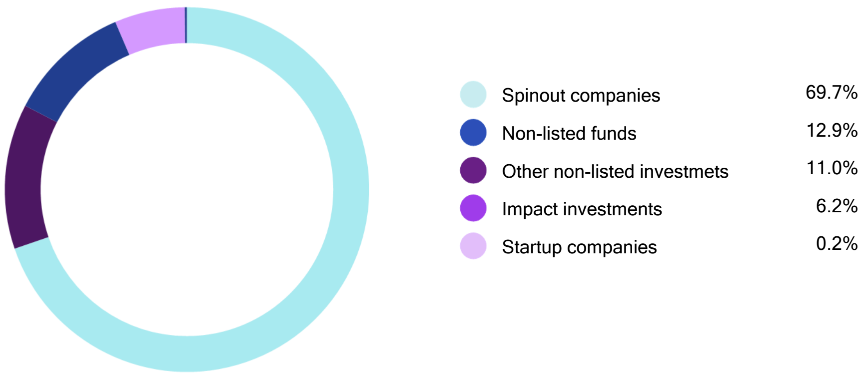
Security	Cur	Units	Owner-ship %	Purchase month	P-value (EUR)	M-value(EUR)	M-Value updated	Balance sheet value (EUR)	% of class	% of portfolio	Periodic cashflow	Total cashflow	Periodic change *	Periodic return%	Total return%	Commit-ment left
Startup companies																
Equity																
Evergreen Viherseinät Oy	EUR	64	5.5%	03/2021	30 000	30 000		30 000	50.0%	0.0%	0	0	0	0.0%	0.0%	
Evexia Oy	EUR	11 096	4.2%	03/2021	29 959	29 959		29 959	50.0%	0.0%	0	0	0	0.0%	0.0%	
					59 959	**59 959**		**59 959**	**100.0%**	**0.0%**	**0**	**0**	**0**	**0.0%**	**0.0%**	
Total					**16 180 528**	**32 054 472**		**9 422 988**		**5.5%**	**1 259 919**	**3 626 911**	**1 512 820**			

* Unrealized gain

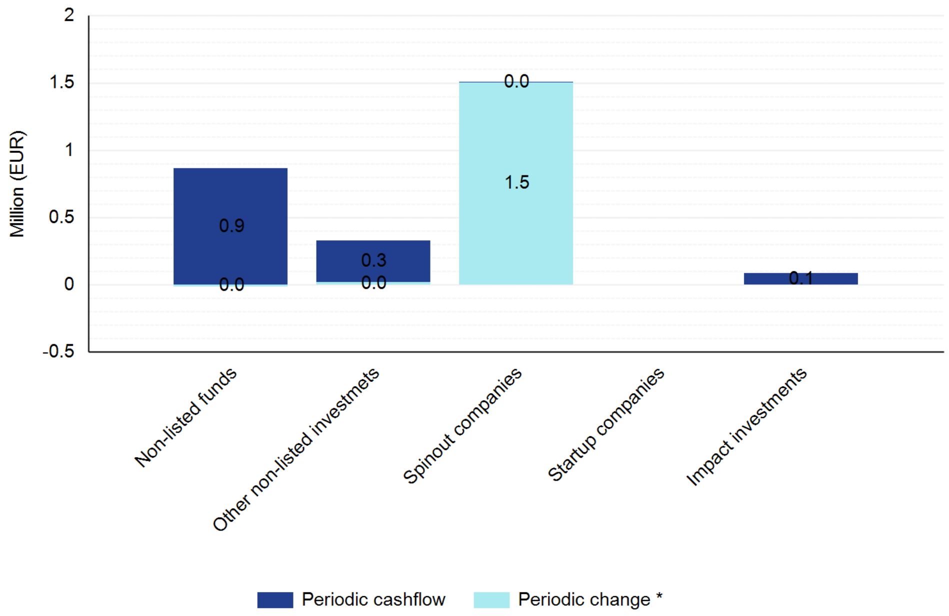
Valuations (except book values) are updated when new information is available, and hence some discrepancies may arise e.g., while new shares are being registered.

Non-listed investments

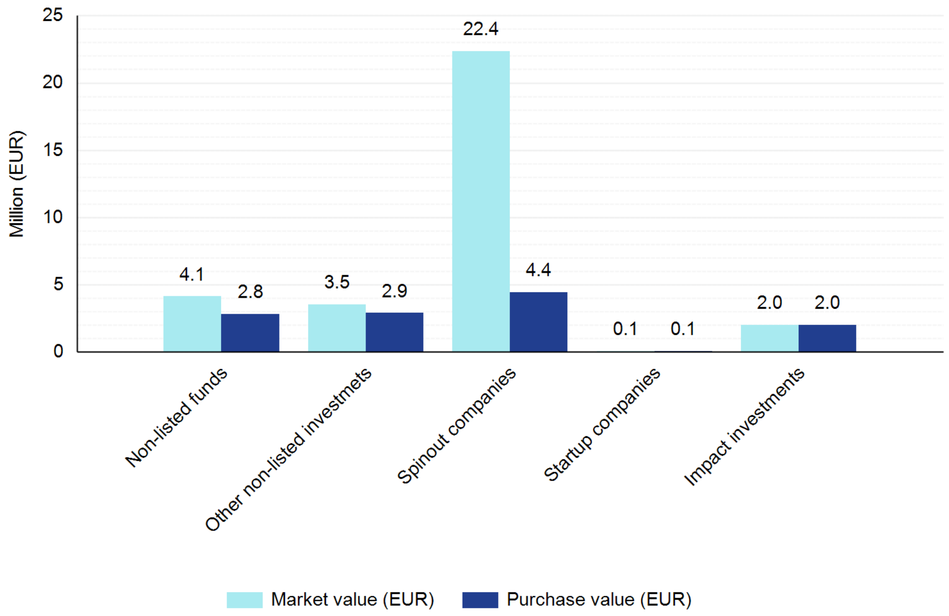
Non-listed investments



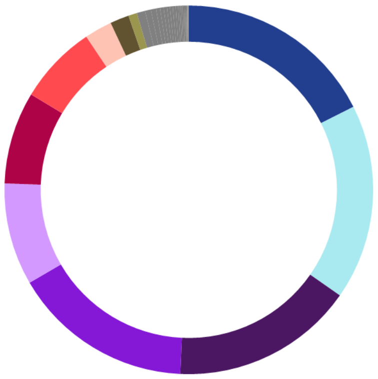
Periodic return: 01.01.2022 - 31.12.2022



Market and purchase value difference



Issuer risk Top 10



	Issuer / Security	Risk (EUR)	% of portfolio
●	Storebrand Fonder AB	102 228 595	17.4%
●	Handelsbanken Fonder AB	99 763 075	17.0%
●	SEB Investment Management AB	93 325 218	15.9%
●	Vanguard Investment Series PLC	92 267 897	15.7%
●	NN Investment Partners	52 154 704	8.9%
●	State Street Global Advisors SICAV	47 132 677	8.0%
●	Amundi Luxembourg SA	40 491 162	6.9%
●	Nanoform Finland Plc	14 072 701	2.4%
●	GlucoModicum Oy	9 649 213	1.6%
●	Asuntosalkku Oyj	4 422 816	0.8%

Risk Figures

	Rolling 12m	From 1.1.2019	2021	2022
Portfolio volatility	11.3%	12.8%	9.1%	11.2%
Listed investments volatility	12.1%		7.9%	12.0%
Benchmark volatility *	12.3%	12.2%	7.7%	12.2%
Portfolio tracking error *	4.1%	6.2%	6.3%	4.1%
Listed investments tracking error *	4.1%		3.2%	4.1%
Beta *	0.84	0.92	0.85	0.84
Listed investments Beta *	0.90		0.93	0.90
Portfolio Information ratio	-0.64%	3.09%	0.99%	-0.68%

Weekly data

** Benchmark: MSCI ACWI Net Total Return EUR Index: Weight 70 %, Bloomberg Barclays Global Aggregate Float Adjusted TR Index Hedged EUR: Weight 30 %.*

Portfolio weighted TER	0.09%

Scenario analysis: MSCI Daily Net TR All Country World EUR

Index value change

Change in interest rates	-50 %	-45 %	-40 %	-35 %	-30 %	-25 %	-20 %	-15 %	-10 %	-5 %	0 %	5 %	10 %	15 %	20 %	25 %	30 %	35 %	40 %	45 %	50 %
-2.0 %	-38.7 %	-34.6 %	-30.6 %	-26.5 %	-22.4 %	-18.4 %	-14.3 %	-10.2 %	-6.2 %	-2.1 %	2.0 %	6.0 %	10.1 %	14.1 %	18.2 %	22.3 %	26.3 %	30.4 %	34.5 %	38.5 %	42.6 %
-1.5 %	-39.2 %	-35.1 %	-31.0 %	-27.0 %	-22.9 %	-18.9 %	-14.8 %	-10.7 %	-6.7 %	-2.6 %	1.5 %	5.5 %	9.6 %	13.7 %	17.7 %	21.8 %	25.8 %	29.9 %	34.0 %	38.0 %	42.1 %
-1.0 %	-39.7 %	-35.6 %	-31.5 %	-27.5 %	-23.4 %	-19.3 %	-15.3 %	-11.2 %	-7.2 %	-3.1 %	1.0 %	5.0 %	9.1 %	13.2 %	17.2 %	21.3 %	25.4 %	29.4 %	33.5 %	37.5 %	41.6 %
-0.5 %	-40.1 %	-36.1 %	-32.0 %	-28.0 %	-23.9 %	-19.8 %	-15.8 %	-11.7 %	-7.6 %	-3.6 %	0.5 %	4.6 %	8.6 %	12.7 %	16.7 %	20.8 %	24.9 %	28.9 %	33.0 %	37.1 %	41.1 %
0.0 %	-40.6 %	-36.6 %	-32.5 %	-28.4 %	-24.4 %	-20.3 %	-16.3 %	-12.2 %	-8.1 %	-4.1 %	0.0 %	4.1 %	8.1 %	12.2 %	16.3 %	20.3 %	24.4 %	28.4 %	32.5 %	36.6 %	40.6 %
0.5 %	-41.1 %	-37.1 %	-33.0 %	-28.9 %	-24.9 %	-20.8 %	-16.7 %	-12.7 %	-8.6 %	-4.6 %	-0.5 %	3.6 %	7.6 %	11.7 %	15.8 %	19.8 %	23.9 %	28.0 %	32.0 %	36.1 %	40.1 %
1.0 %	-41.6 %	-37.5 %	-33.5 %	-29.4 %	-25.4 %	-21.3 %	-17.2 %	-13.2 %	-9.1 %	-5.0 %	-1.0 %	3.1 %	7.2 %	11.2 %	15.3 %	19.3 %	23.4 %	27.5 %	31.5 %	35.6 %	39.7 %
1.5 %	-42.1 %	-38.0 %	-34.0 %	-29.9 %	-25.8 %	-21.8 %	-17.7 %	-13.7 %	-9.6 %	-5.5 %	-1.5 %	2.6 %	6.7 %	10.7 %	14.8 %	18.9 %	22.9 %	27.0 %	31.0 %	35.1 %	39.2 %
2.0 %	-42.6 %	-38.5 %	-34.5 %	-30.4 %	-26.3 %	-22.3 %	-18.2 %	-14.1 %	-10.1 %	-6.0 %	-2.0 %	2.1 %	6.2 %	10.2 %	14.3 %	18.4 %	22.4 %	26.5 %	30.6 %	34.6 %	38.7 %

The scenario analysis aims to reflect the portfolio’s sensitivity to equity and fixed income market movements. Each cell in the table represents the expected portfolio development given the respective market movements. The table is a theoretical calculation and the real portfolio development can differ significantly from the given expectations.

Equity investments' ESG risks

University of Helsinki - Investment assets
Created: 07.02.2023

Date: 31.12.2022
ESG coverage (of equity investments) : 89.1%

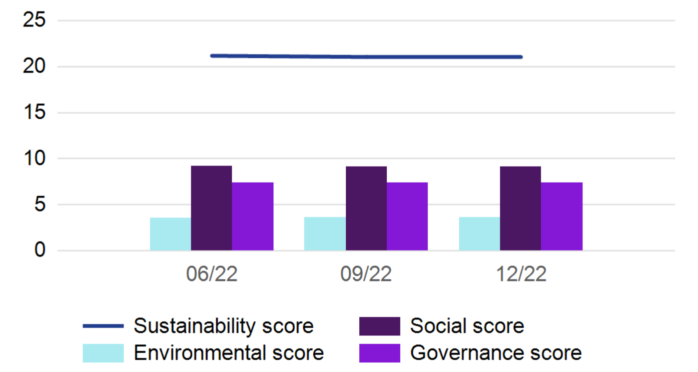
JAY SOLUTIONS

ESG risk Portfolio 21.0	ESG risk Index 21.7
Carbon footprint Portfolio 97.7	Carbon footprint Index 192.6

Total Emissions (metric tons of Co2) / Revenue (Mil USD)

Funds and ETFs with highest ESG-risk scores	ESG risk	% of equity portfolios' ESG risk	% of equity portfolio	EUR (millions)	ESG risk distribution
SEB Global Exposure Fund IC (EUR)	20.8	20.49%	15.9%	93.3	2 48 42 9
Storebrand Global All Countries A EUR ACC	20.6	22.31%	17.4%	102.2	2 48 42 7 1
Vanguard ESG Developed World All Cap Equity Ind EUR Acc	20.5	20.03%	15.7%	92.3	2 49 40 1 8
Handelsbanken Global Index Criteria A1 EUR	20.5	21.65%	17.0%	99.8	2 49 42 1 7

Trend of ESG risk



Investments with highest ESG risk, funds' top-30 equities	ESG risk	% of equity portfolios' ESG risk	% of equity portfolio	EUR (millions)
Meta Platforms Inc	34.5	0.6%	0.4%	1.6
Amazon.com Inc	30.3	1.6%	1.1%	4.5
Tesla Motors Inc	28.7	1.0%	0.7%	2.8
Nestle SA	27.4	0.6%	0.5%	1.9
Bank of America Corp	26.8	0.5%	0.4%	1.5

Investments with lowest ESG risk, funds' top-30 equities	ESG risk	% of equity portfolios' ESG risk	% of equity portfolio	EUR (millions)
Accenture PLC	9.6	0.1%	0.2%	1.1
ASML Holding NV	10.9	0.2%	0.3%	1.7
Cisco Systems Inc	12.4	0.2%	0.3%	1.5
The Home Depot Inc	12.5	0.3%	0.4%	2.4
Adobe INC	12.9	0.2%	0.3%	1.5

		▼			
Negligible	Low	Medium	High	Severe	Unkown
0-10	10-20	20-30	30-40	+40	-

The Sustainalytics ESG framework aims to identify and address those financial risks that are not handled in a satisfactory way. The portfolio's ESG risk is calculated as a weighted average of the portfolio's investments ESG risks. The common range for portfolio ESG risk is between 15 and 30.

Index: MSCI Daily Net TR All Country World EUR

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