



FLOW OF FUNDS REPORT

TUYID Q3-2022



FLOW OF FUNDS REPORT: TUIYID Q3-2022

September 2022

Dear Readers,

We are happy to present the Flow of Funds Report for the third quarter of 2022. Our report offers a detailed insight into the institutional ownership by investment type and regions as well as top buyers and sellers in the Turkish market. We also provide key investor hubs for roadshows and trust the report will be an important asset in IR planning and investor targeting.

Despite concerns over rising inflation rates, Turkey continued its strong performance from Q2 22, ending Q3 22 up 124.5% over the year. The BIST continued to pull away from its peers over the quarter, as profits for Turkish listed companies continue to increase. Europe came in as the best performer after Turkey (-27.6%) and the Poland WIG was the worst performer, down -40.7% over the year. The Russian market remains under pressure due to the ongoing conflict with Ukraine.

Net outflows were witnessed for each region, with Russia experiencing the largest outflows and selling in the Turkish market slowed down over the quarter. The selling was largely backed by the **BlackRock Group** and **U.S. Global Investors, Inc. (Asset Management)**.

The BlackRock Group reduced their exposure to the market with their UK entity (BlackRock Advisors (U.K.), LTD) contributing to outflows for London which remains the top invested city. Istanbul jumped to the 2nd largest city based on value invested (previously 3rd).

In terms of number of investors per city, London went up by 7 and continues to lead the ranking with 69 investors, followed by New York (29) and Boston (12).

Active investors were bearish across all sectors (except for Healthcare and Utilities) within the Turkish Market. Passive investors favored the Utilities sector over the quarter (+\$29.0M) and overall, the Basic Materials sector was hit the hardest (-\$316.7M). Overall net outflows were driven by Passive investors (-\$317.7M). Active investors followed the same trend, reducing exposure by more than half of that (-\$104.7M).

The orientation remains skewed towards Passive investors, with 66% of Turkish funds being held by Passive investors with **The Vanguard Group, Inc.** and **Charles Schwab Investment Management, Inc.** being among the top buyers in the market. Index investors continued to rank as the largest investors in the Turkish market by investment style (\$3300.8M). Deep Value/Value investors were the biggest detractors for the quarter (-\$54.8M) and **Robeco Institutional Asset Management BV** drove outflows by Value investors (-\$25.9M).

This report is prepared quarterly by S&P Global, in cooperation with TÜYİD, using S&P Global's database. We look forward to any feedback you may have.

S&P Global
Director, Shareholder Intelligence EMEA
Frederik Frank

TÜYİD Turkish IR Society
Chairperson
Aslı Selçuk

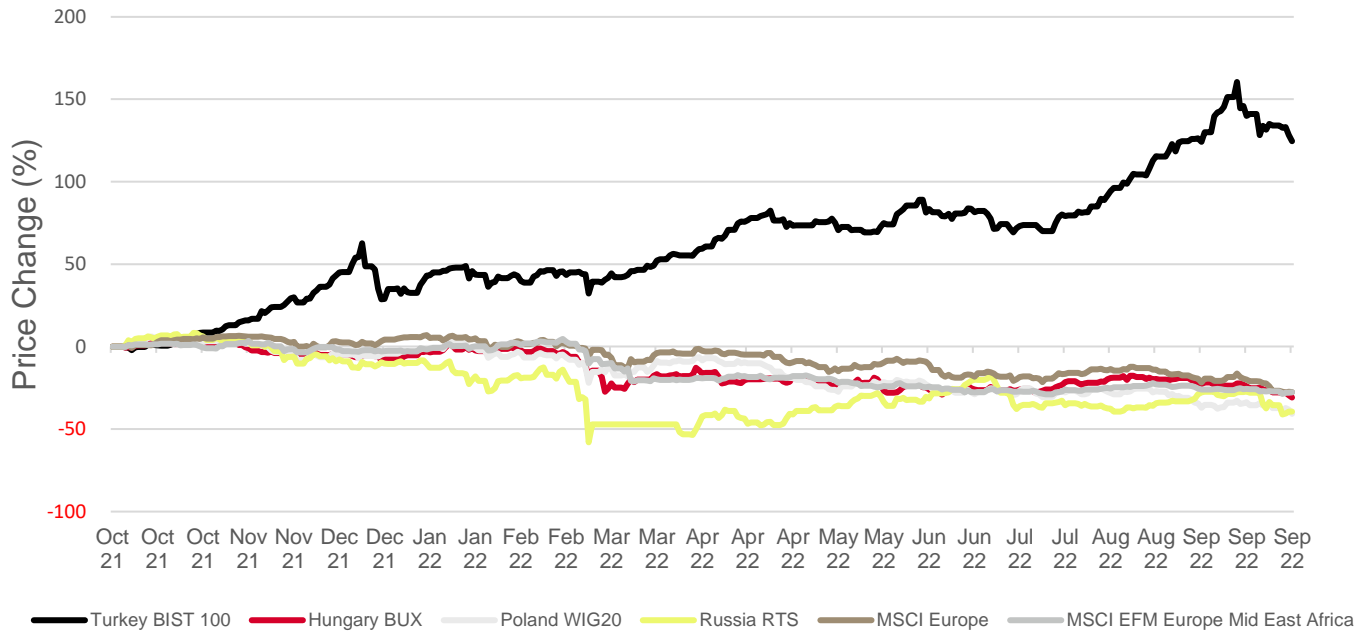
Acknowledgements: We express our gratitude to the S&P Global Issuer Solutions team and the TÜYİD Turkish IR Society.

Disclaimer: The evaluations and the information in the Report, where you can find significant statistics about the stock exchange, are prepared based on S&P Global's database. Investment information, comment and advices are not in the enclosure of investment consultancy and do not comprise information for buying and selling decisions in the capital markets. The data and the information in the Report cannot be guaranteed to be correct; the content can be changed without announcing. All the data are taken from the sources thought to be reliable. The data used in this report is sourced from publicly disclosed portfolios/information and due to the reporting periods, there may be discrepancies (data sources used in this report include, but are not limited to, FactSet, Morningstar, SEC filings (13Fs etc.) and news sources). S&P Global and TÜYİD cannot be taken responsible for the problems that might emerge out of using these sources.

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Price performance:

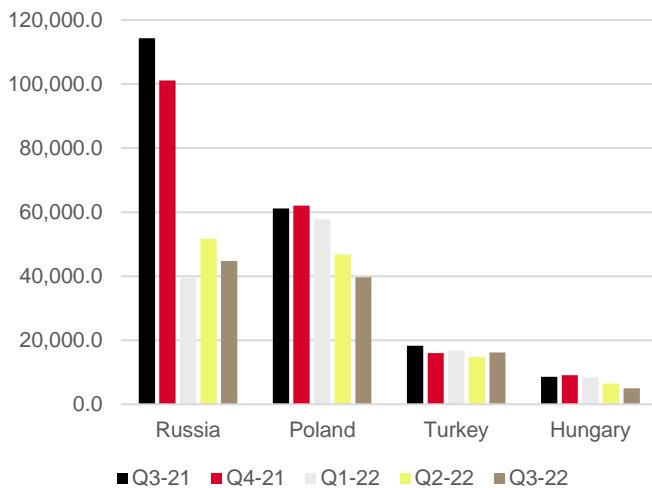
Despite concerns over rising inflation rates, Turkey continued its strong performance from Q2 22, ending Q3 22 up 124.5% over the year. The BIST continued to pull away from its peers over the quarter, as profits for Turkish listed companies continue to increase. Europe came in as the best performer after Turkey (-27.6%) and the Poland WIG was the worst performer, down -40.7% over the year. The Russian market remains under pressure due to the ongoing conflict with Ukraine.



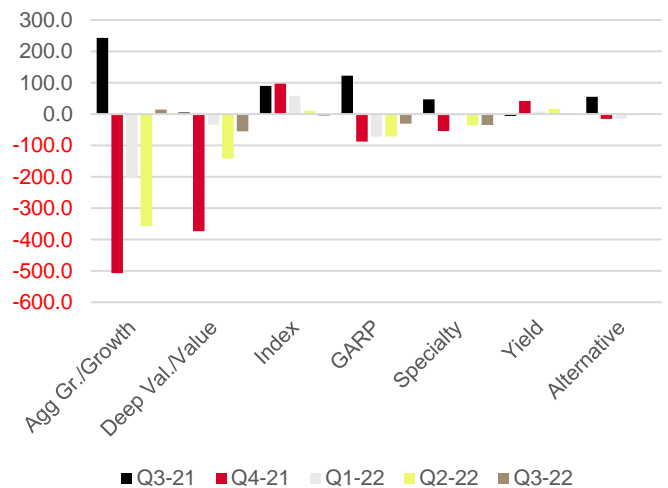
Inflows and Outflows:

Net outflows were witnessed for each region, with Russia experiencing the largest outflows and selling in the Turkish market slowed down over the quarter. The selling was largely backed by the **BlackRock Group** and **U.S. Global Investors, Inc. (Asset Management)**.

Institutional Investment in Region (\$M)



Institutional Investment by Style (\$M Chg)

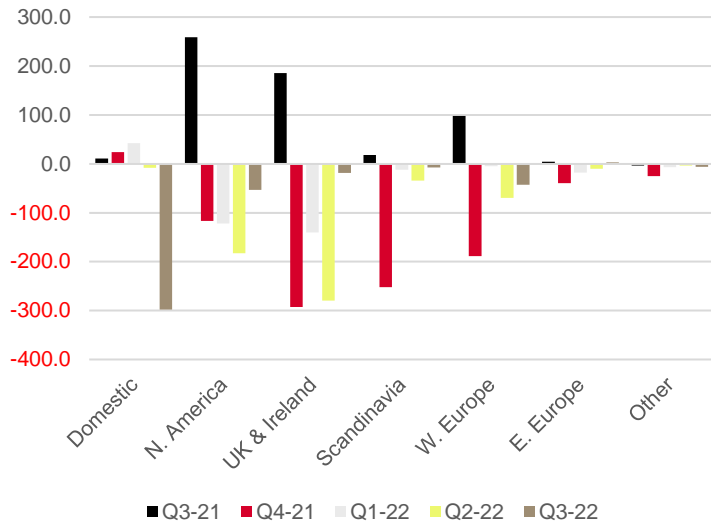


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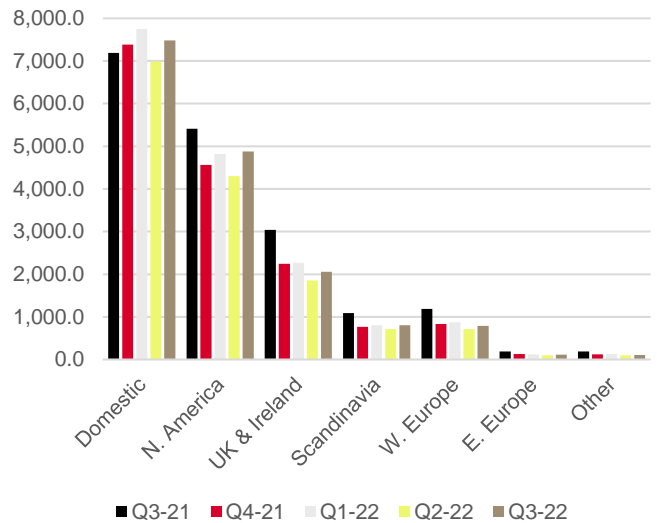
Investment by Investor Region:

The net outflows (-\$428.2M) in the Turkish market are broken down by geographic regions below and were driven by the Domestic market (-\$298.1M), who detracted in the previous quarter. Eastern Europe was once again the only region to modestly contribute to inflows (+\$0.3M), driven mainly by Polish investor **Franklin Templeton Investments Poland Sp. z o.o.** Despite outflows, Domestic investors remain the largest holders in the Turkish market (\$7483.0M).

Institutional Investment by Region (\$M Chg)



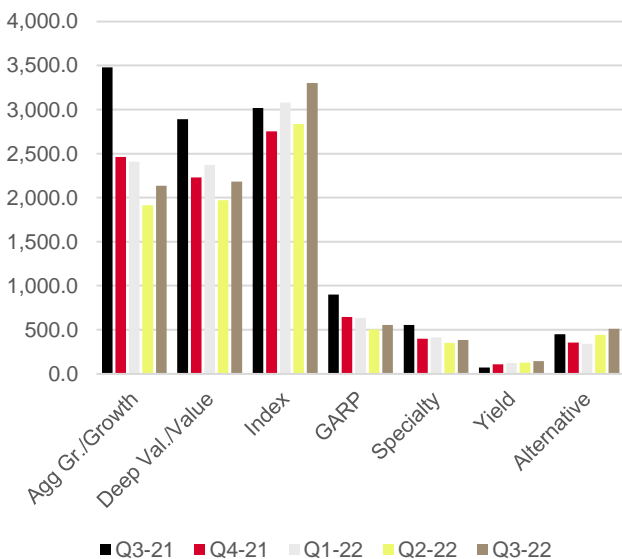
Institutional Investment by Region (\$M)



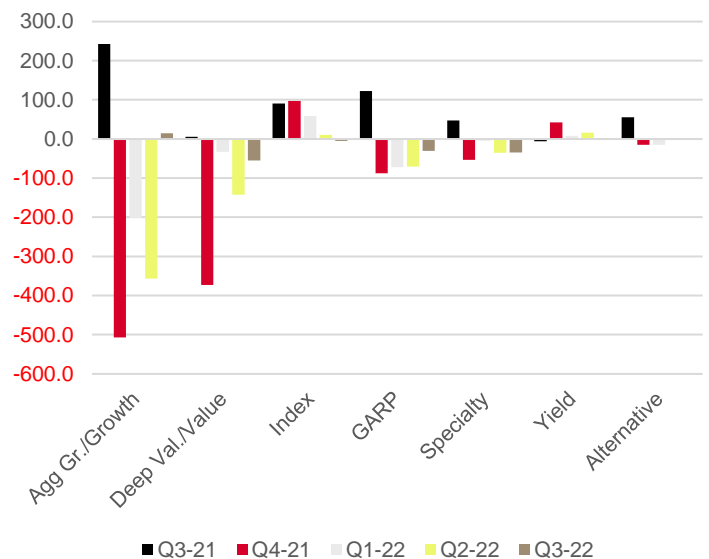
Investment by Style:

Aggressive Growth/Growth, Alternative and, once again, Yield investors all contributed to inflows, with all other investment styles detracting. Index investors continue to be the largest investor in the Turkish market (\$3300.8M), followed by Deep Value/Value (\$2182.6M). Deep Value/Value investors were the biggest detractors for the quarter (-\$54.8M) and **Robeco Institutional Asset Management BV** drove outflows by Value investors (-\$25.9M).

Institutional Investment by Style (\$M)



Institutional Investment by Style (\$M Chg)



FLOW OF FUNDS REPORT: TUYID Q3-2022

Top Active Holders, Buyers & Sellers

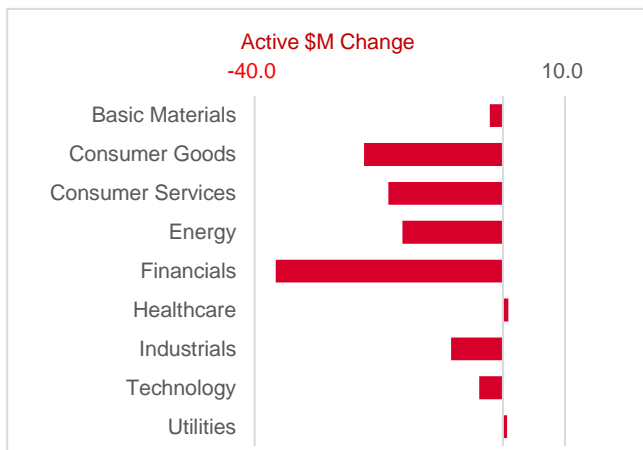
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Norges Bank Investment Management (Norway)	Norway	Value	Low	849,385.5	552.2	0.0	0.1	0.0
Helikon Investments, LTD (United Kingdom)	United Kingdom	Alternative	Low	979.9	346.4	0.0	35.4	0.0
California Public Employees Retirement System	United States	Growth	Low	110,701.6	169.7	0.0	0.2	0.0
Schroder Investment Management, LTD	United Kingdom	GARP	Low	131,974.1	146.9	-14.7	0.1	-9.1
APG Asset Management N.V.	Netherlands	Specialty	Low	121,404.2	138.6	0.0	0.1	0.0
Mellon Investments Corporation	United States	Yield	Low	208,973.8	135.8	2.2	0.1	1.7
Capital Research Global Investors (U.S.)	United States	GARP	Low	426,806.1	130.3	-9.6	0.0	-6.8
RBC Global Asset Management (UK), LTD	United Kingdom	Growth	Medium	40,832.4	124.1	-3.9	0.3	-3.0
Silchester International Investors, LLP	United Kingdom	Value	Low	17,304.1	118.8	0.0	0.7	0.0
BlackRock Investment Management (U.K.), LTD	United Kingdom	Growth	Low	646,675.2	82.9	10.6	0.0	14.6
					1,945.8	-15.3		

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Origin Asset Management, LLP	United Kingdom	Value	Medium	2,518.3	13.4	13.4	0.5	Buy-in
Goldman Sachs Asset Management International	United Kingdom	Growth	Medium	22,519.7	30.1	12.0	0.1	66.4
BlackRock Investment Management (U.K.), LTD	United Kingdom	Growth	Low	646,675.2	82.9	10.6	0.0	14.6
Swedbank Robur Fonder AB	Sweden	Growth	Low	84,807.6	34.6	6.6	0.0	23.7
Brandes Investment Partners, L.P.	United States	Deep Value	Low	7,834.4	18.9	6.3	0.2	50.6
Thrivent Asset Management, LLC	United States	Growth	Medium	39,692.8	8.1	5.0	0.0	163.4
Columbia Threadneedle Management, LTD	United Kingdom	Value	Medium	21,025.3	17.3	3.8	0.1	28.4
Allianz Global Investors U.S., LLC	United States	Growth	Medium	60,725.3	17.3	3.8	0.0	27.7
Allianz Global Investors GmbH	Germany	Growth	Low	65,652.5	12.1	3.1	0.0	33.6
Danske Bank Asset Management (Denmark)	Denmark	Growth	Low	16,579.2	15.1	2.6	0.1	21.0
					249.8	67.3		

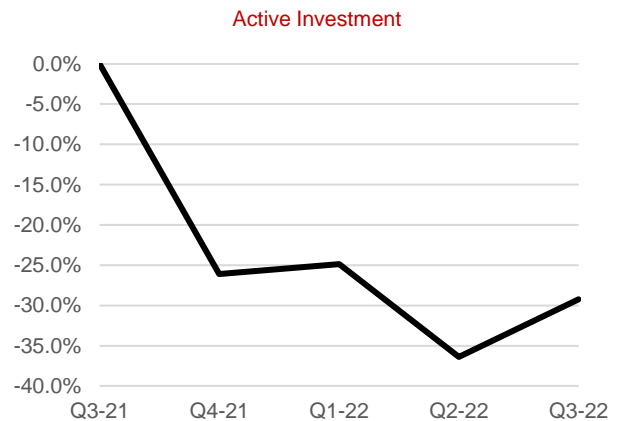
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
U.S. Global Investors, Inc. (Asset Management)	United States	Specialty	Medium	2,701.1	43.6	-34.5	1.6	-44.2
Robeco Institutional Asset Management BV	Netherlands	Value	Medium	47,602.2	68.4	-25.9	0.1	-27.5
Nordea Investment Management AB (Denmark)	Denmark	Value	Low	85,271.3	40.5	-18.3	0.0	-31.1
J.P. Morgan Asset Management (UK), LTD	United Kingdom	Growth	Low	101,549.7	0.1	-17.8	0.0	-99.5
AEGON Asset Management N.V. (Netherlands)	Netherlands	Deep Value	Medium	6,803.3	0.8	-16.2	0.0	-95.3
Schroder Investment Management, LTD	United Kingdom	GARP	Low	131,974.1	146.9	-14.7	0.1	-9.1
Capital Research Global Investors (U.S.)	United States	GARP	Low	426,806.1	130.3	-9.6	0.0	-6.8
Fidelity Management & Research Company, LLC	United States	Growth	Low	1,074,628.3	72.5	-6.7	0.0	-8.5
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	26,613.8	59.8	-6.6	0.2	-9.9
AllianceBernstein, L.P. (U.S.)	United States	Value	Low	238,681.4	17.1	-5.9	0.0	-25.6
					580.0	-156.2		

Includes Investors with EUM greater than \$100M; Excludes Passive/Index Investors

Sector Inflows/Outflows



% Change in Active Investment vs 5 Previous Quarters



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Top Passive Holders, Buyers & Sellers

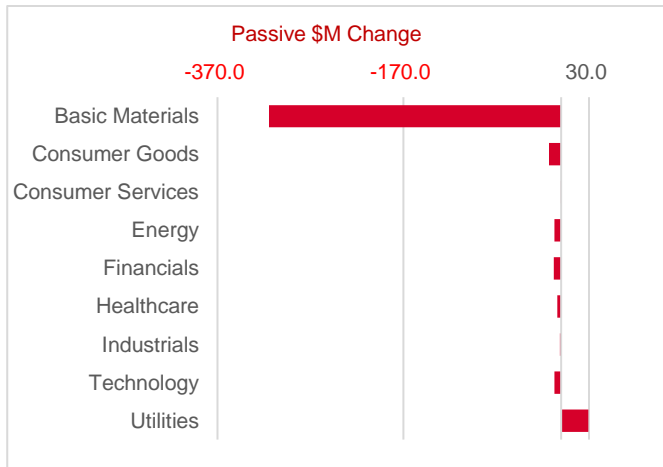
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	4,171,289.0	1,401.5	29.8	0.0	2.2
BlackRock Fund Advisors	United States	Index	Low	2,547,475.1	767.9	-37.1	0.0	-4.6
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	168,215.1	244.3	-24.3	0.1	-9.0
Charles Schwab Investment Management, Inc.	United States	Index	Low	345,759.5	152.0	17.4	0.0	12.9
Acadian Asset Management, LLC	United States	Deep Value	Medium	29,702.2	96.1	-0.4	0.3	-0.5
Geode Capital Management, LLC	United States	Index	Low	782,777.2	95.1	5.7	0.0	6.3
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	322,164.6	86.7	4.8	0.0	5.9
State Street Global Advisors (SSgA)	United States	Index	Low	1,742,775.5	78.7	-10.3	0.0	-11.6
Van Eck Associates Corporation	United States	Index	Medium	43,785.0	74.9	-6.4	0.2	-7.8
Arrowstreet Capital, L.P.	United States	Deep Value	High	75,447.0	68.3	4.7	0.1	7.4
					3,065.7	-16.0		

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	4,171,289.0	1,401.5	29.8	0.0	2.2
Charles Schwab Investment Management, Inc.	United States	Index	Low	345,759.5	152.0	17.4	0.0	12.9
State Street Global Advisors, LTD	United Kingdom	Index	Low	103,943.4	48.8	13.2	0.0	37.3
Legal & General Investment Management, LTD	United Kingdom	Index	Low	357,293.3	44.3	8.3	0.0	22.9
Geode Capital Management, LLC	United States	Index	Low	782,777.2	95.1	5.7	0.0	6.3
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	322,164.6	86.7	4.8	0.0	5.9
Arrowstreet Capital, L.P.	United States	Deep Value	High	75,447.0	68.3	4.7	0.1	7.4
Vanguard Global Advisers, LLC	United States	Index	Low	22,048.1	17.8	4.5	0.1	33.7
Northern Trust Global Investments, LTD	United Kingdom	Index	Low	68,697.1	27.6	1.4	0.0	5.2
Invesco Capital Management, LLC	United States	Index	Low	295,262.1	37.9	1.3	0.0	3.5
					1,980.1	91.0		

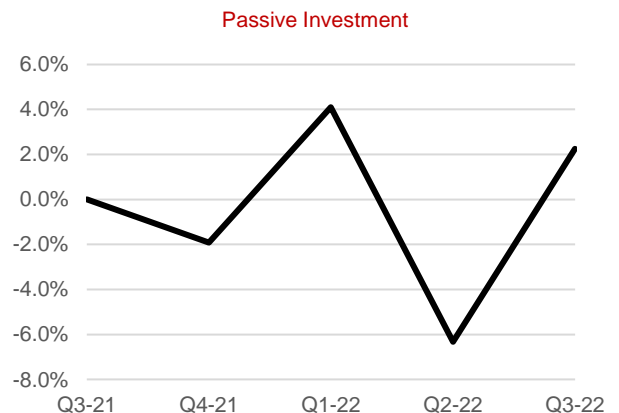
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
BlackRock Fund Advisors	United States	Index	Low	2,547,475.1	767.9	-37.1	0.0	-4.6
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State Street Global Advisors (SSgA)	United States	Index	Low	1,742,775.5	78.7	-10.3	0.0	-11.6
Northern Trust Investments, Inc.	United States	Index	Low	444,934.2	12.6	-8.2	0.0	-39.5
Van Eck Associates Corporation	United States	Index	Medium	43,785.0	74.9	-6.4	0.2	-7.8
Parametric Portfolio Associates, LLC	United States	GARP	Low	168,248.3	50.2	-6.1	0.0	-10.8
DWS Investments UK, LTD	United Kingdom	Index	Medium	73,833.2	16.1	-2.2	0.0	-11.9
PGIM Quantitative Solutions, LLC	United States	Index	Medium	51,260.1	17.7	-1.8	0.0	-9.0
Global X Management Company, LLC	United States	Index	Medium	35,903.5	14.6	-1.1	0.0	-7.3
UBS Asset Management (U.K.), LTD	United Kingdom	Index	Low	116,623.8	20.6	-0.6	0.0	-2.7
					1,297.7	-97.9		

Includes Investors with EUM greater than \$100M; Excludes Active Investors

Sector Inflows/Outflows



% Change in Passive Investment vs 5 Previous Quarters



FLOW OF FUNDS REPORT: TUYID Q3-2022

Road show:

London remains the top invested city, despite outflows amounting to (-\$12.5M) which were mainly attributable to the selling activity of the **BlackRock Group**. Istanbul jumps to the 2nd largest city based on value invested (previously 3rd).

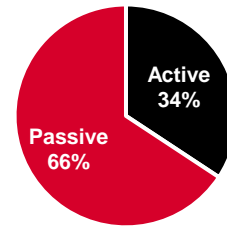
In terms of number of investors per city, London went up by 7 and continues to lead the ranking with 69 investors, followed by New York (29) and Boston (12).

Most Invested					Most Investors				
Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms	Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,962,872.4	1,521.0	-12.5	69	United Kingdom (London)	1,962,872.4	1,521.0	-12.5	69
Turkey (Istanbul)	621.6	583.4	17.6	10	United States (New York)	2,274,759.8	208.0	2.4	29
Norway (Oslo)	891,055.0	560.2	-0.1	3	United States (Boston)	2,642,504.9	397.9	-19.4	12
United States (Boston)	2,642,504.9	397.9	-19.4	12	Switzerland (Zürich)	428,277.7	70.7	-1.4	11
United States (New York)	2,274,759.8	208.0	2.4	29	Finland (Helsinki)	24,494.3	37.5	-1.3	11
United States (Sacramento)	110,701.6	169.7	0.0	1	South Korea (Seoul)	40,617.8	6.2	0.0	11
Germany (Stuttgart)	4,838.1	165.6	0.0	1	Turkey (Istanbul)	621.6	583.4	17.6	10
United States (Los Angeles)	473,565.1	145.9	-10.1	5	Poland (Warsaw)	13,067.7	55.7	1.8	10
Netherlands (Amsterdam)	124,038.5	139.8	0.0	4	Japan (Tokyo)	788,514.1	29.5	-2.1	10
Sweden (Stockholm)	252,474.8	115.2	7.5	8	Sweden (Stockholm)	252,474.8	115.2	7.5	8
Germany (Frankfurt)	334,837.1	100.4	2.9	7	Singapore (Singapore)	44,498.8	20.5	-3.0	8
Canada (Montreal)	84,641.7	77.2	0.0	3	Germany (Frankfurt)	334,837.1	100.4	2.9	7
Netherlands (Rotterdam)	61,117.4	71.8	-26.9	2	France (Paris)	246,057.3	43.2	-0.1	7
Switzerland (Zürich)	428,277.7	70.7	-1.4	11	United States (Chicago)	170,773.9	7.3	0.0	6
United States (San Antonio)	101,646.4	68.8	-34.1	2	Canada (Toronto)	272,457.4	5.3	-0.1	6
Austria (Vienna)	16,112.1	58.7	-2.6	5	United States (Los Angeles)	473,565.1	145.9	-10.1	5
Poland (Warsaw)	13,067.7	55.7	1.8	10	Austria (Vienna)	16,112.1	58.7	-2.6	5
United States (Madison)	52,510.6	49.6	0.0	1	Denmark (Copenhagen)	107,693.1	49.6	-17.8	5
Denmark (Copenhagen)	107,693.1	49.6	-17.8	5	Ireland (Dublin)	35,631.2	25.1	-1.5	5
United States (Stamford)	957.8	48.7	0.0	2	Switzerland (Geneva)	5,625.2	7.0	0.2	5
Excludes Passive/Index Investors		4,657.9	-92.6	190	Excludes Passive/Index Investors		3,487.9	-39.3	240

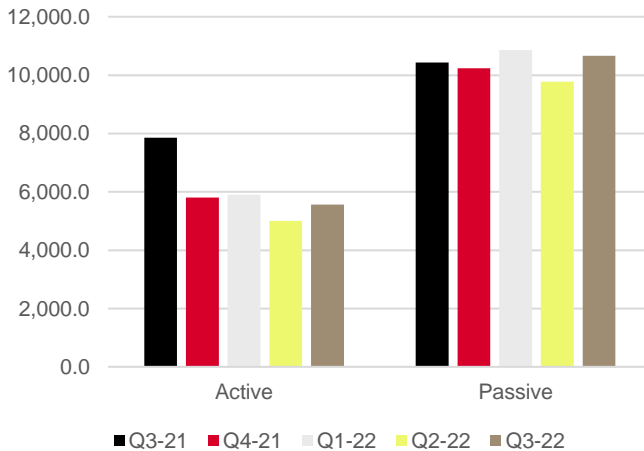
Active vs. Passive investors

Although passive investors detracted by -\$317.7M, orientation remains skewed towards passive ownership (66.0%). Active investors contributed to outflows of -\$104.7M.

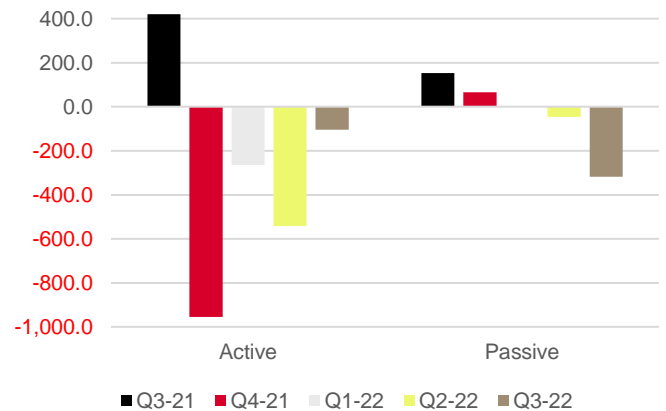
Active vs Passive Split



Active vs Passive (\$M)



Active vs Passive (\$M Chg)



FLOW OF FUNDS REPORT: TUYID Q3-2022

Top Holders, Buyers & Sellers – Corporate Debt

TOP HOLDERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Amundi (U.K.), LTD	United Kingdom	London	Medium	16,856.8	234.1	0.1	1.4	0.0
Goldman Sachs Asset Management International	United Kingdom	London	Very High	70,977.9	202.5	-0.5	0.3	-0.2
TIAA-CREF Investment Management, LLC	United States	New York	Very High	256,051.1	162.5	0.0	0.1	0.0
Pictet Asset Management, LTD	United Kingdom	London	Medium	8,177.7	100.7	0.0	1.2	0.0
Ninety One UK, LTD	United Kingdom	London	High	12,415.1	93.4	0.0	0.8	0.0
Union Investment Privatfonds GmbH	Germany	Frankfurt	Low	41,843.3	72.6	-2.4	0.2	-3.2
Loomis Sayles & Company, L.P.	United States	Boston	Medium	55,610.1	68.5	0.0	0.1	0.1
CIGNA Investments, Inc.	United States	Bloomfield	Low	4,878.0	62.8	7.0	1.3	12.6
AIG Asset Management (U.S.), LLC	United States	New York	Low	176,471.9	61.0	0.0	0.0	0.0
Towarzystwo Funduszy Inwestycyjnych PZU S.A.	Poland	Warsaw	Medium	2,030.4	59.6	-20.7	2.9	-25.7
					1,117.8	-16.4		

TOP BUYERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
CIGNA Investments, Inc.	United States	Bloomfield	Low	4,878.0	62.8	7.0	1.3	12.6
EG Capital Advisors (UK), LTD	United Kingdom	London	High	197.9	8.0	3.9	4.0	97.4
Aegon Asset Management (U.K.) PLC	United Kingdom	Edinburgh	Low	11,158.3	3.4	3.4	0.0	Buy-in
Operadora Inbursa de Fondos de Inversión, S.A. de C.V.	Mexico	Mexico City	Medium	152.6	3.0	3.0	2.0	Buy-in
Schroder Investment Management North America, Inc.	United States	Philadelphia	Medium	11,627.2	7.8	2.4	0.1	45.4
Columbia Threadneedle Investments (U.K.)	United Kingdom	London	Low	11,554.4	4.7	2.2	0.0	90.4
INVESCO Asset Management, LTD (U.K.)	United Kingdom	London	Medium	24,169.0	9.5	2.2	0.0	30.7
Morgan Stanley Investment Management Inc.	United States	New York	Very High	153,135.3	3.8	1.8	0.0	93.3
Public Employees Retirement Association of New Mexico	United States	Santa Fe	Low	3,284.0	1.6	1.6	0.0	Buy-in
Columbia Threadneedle Investments (U.S.)	United States	Boston	High	96,295.8	1.5	1.5	0.0	Buy-in
					106.1	29.3		

TOP SELLERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Lord, Abbett & Co., LLC (Asset Management)	United States	Jersey City	High	148,390.3	20.5	-56.8	0.0	-73.4
Towarzystwo Funduszy Inwestycyjnych PZU S.A.	Poland	Warsaw	Medium	2,030.4	59.6	-20.7	2.9	-25.7
T. Rowe Price Associates, Inc.	United States	Baltimore	Low	153,154.8	2.6	-12.5	0.0	-82.7
Fideuram Asset Management (Ireland), DAC	Ireland	Dublin	Medium	14,649.9	14.9	-11.1	0.1	-42.7
Bank Julius Baer & Co. AG	Switzerland	Zürich	Low	4,743.7	39.5	-8.3	0.8	-17.4
J.P. Morgan Investment Management, Inc.	United States	New York	Very High	124,800.2	13.0	-8.1	0.0	-38.6
Formuepleje A/S	Denmark	Aarhus	High	6,798.5	18.3	-7.4	0.3	-28.7
UBS Asset Management (Americas), Inc.	United States	New York	Very High	33,607.9	23.1	-6.5	0.1	-21.9
abrdn Investment Management, LTD	United Kingdom	Aberdeen	High	59,052.6	52.1	-6.1	0.1	-10.6
Aetna, Inc. (Asset Management)	United States	Hartford	Medium	18,166.2	0.0	-6.0	0.0	-100.0
					243.6	-143.5		

Corporate Debt – City Analysis

Most Invested					Most Investors								
Country / City	Total FI Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms	Country / City	Total FI Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms				
United Kingdom (London)	960,155.2	1,090.2	-13.4	41	United Kingdom (London)	960,155.2	1,090.2	-13.4	41				
United States (New York)	1,603,817.2	386.0	-14.5	23	United States (New York)	1,603,817.2	386.0	-14.5	23				
United States (Boston)	1,555,243.3	221.1	-4.8	10	Switzerland (Zürich)	247,474.1	168.0	-19.0	15				
Switzerland (Zürich)	247,474.1	168.0	-19.0	15	France (Paris)	263,997.3	72.4	-1.3	13				
Germany (Frankfurt)	183,741.2	153.6	-6.2	11	Germany (Frankfurt)	183,741.2	153.6	-6.2	11				
Poland (Warsaw)	5,570.9	85.7	-21.9	5	Spain (Madrid)	24,590.1	10.6	-1.1	11				
Italy (Milan)	94,882.0	78.4	-2.0	10	United States (Boston)	1,555,243.3	221.1	-4.8	10				
France (Paris)	263,997.3	72.4	-1.3	13	Italy (Milan)	94,882.0	78.4	-2.0	10				
Singapore (Singapore)	31,171.7	67.8	-0.0	9	Singapore (Singapore)	31,171.7	67.8	-0.0	9				
Denmark (Copenhagen)	64,337.7	65.4	-7.5	5	Austria (Vienna)	22,191.6	29.1	-0.4	8				
United States (Bloomfield)	4,878.0	62.8	7.0	1	Poland (Warsaw)	5,570.9	85.7	-21.9	5				
United States (Charlotte)	274,540.1	55.4	0.0	3	Denmark (Copenhagen)	64,337.7	65.4	-7.5	5				
Spain (Barcelona)	3,348.6	49.6	-0.4	2	Switzerland (Lugano)	3,128.7	25.6	-0.0	5				
United States (Newport Beach)	867,935.5	45.2	0.0	2	Switzerland (Geneva)	13,986.3	24.1	-1.6	5				
United States (San Francisco)	740,337.2	38.9	0.3	4	Luxembourg (Luxembourg)	8,513.1	16.5	-3.4	5				
United States (Atlanta)	146,697.0	38.2	-2.0	2	United States (San Francisco)	740,337.2	38.9	0.3	4				
Italy (Basiglio)	5,436.7	38.1	0.2	1	Germany (Munich)	22,598.8	22.4	0.2	4				
Austria (Vienna)	22,191.6	29.1	-0.4	8	Ireland (Dublin)	25,789.9	19.7	-11.2	4				
United States (Newark)	465,717.1	28.0	1.1	1	Canada (Toronto)	68,520.5	16.0	-1.4	4				
Switzerland (Lugano)	3,128.7	25.6	-0.0	5	United States (Chicago)	31,270.6	15.9	0.0	4				
				2,799.4	-85.0	171					2,607.1	-109.3	196

FLOW OF FUNDS REPORT: TUYID Q3-2022

GLOSSARY

Institutional Investment Styles

Aggressive Growth – Investors in this category invest in companies that have very high revenue, EPS growth rates and multiples relative to the overall market. These companies usually do not pay any dividends and are at the early stages of growth. Aggressive Growth investors exhibit a higher portfolio turnover than other styles of investors.

Alternative – Primarily used to classify hedge funds that use various strategies that fall outside the traditional investment strategies that can be categorized as the above. A catch-all for lightly regulated investment vehicles that have the ability to "go-anywhere" and invest long or short in any type of security – equity, debt, commodity, options, currency, etc. Hedge funds seek to earn above market returns for their clients while at the same time controlling risk factors. Hedge funds have grown in prominence over the years as their returns net of fees (typically 2% management, 20% incentive) have outperformed mutual fund and pension managers performance. Recently, many hedge funds have gained notoriety as "activists" demanding change (leadership or strategic) at companies in North America, Europe and Asia.

Asset Allocation – Asset allocation managers allocate their investments among stocks, bonds, and cash equivalents, among others. It is primarily dictated by the various needs of clients and used by many smaller firms and banks.

Deep Value – Investors in this category employ an extreme style of value investing where they invest in companies with very low valuations versus their own historic valuation, and in relation to the overall market. Usually the companies or the industries they are in have been out of favour in the marketplace for an extended period of time.

GARP – These institutions seek to add growth stocks to their portfolios, but will not pay a premium price to obtain the securities. Thus, investors of this type are categorized as GARP, or "growth at a reasonable price," investors. Investors utilizing this investment approach will use methodologies and indicators favoured by both growth and value investors, but neither of the aforementioned styles dominates the process.

Growth – These institutions place the greatest emphasis in their selection process on the growth prospects of a company's earnings. Growth investors prefer companies where bottom line growth will average at least 15% annually and are willing to pay above market average multiples for a stock. At the first sign of an earnings slow-down, however, growth investors are often the quickest to sell.

Index – These institutions strive to match the performance of an equity index such as the MSCI EAFE Index or the S&P 500 Index, while at the same time keeping trading costs at a minimum. An institution accomplishes this by holding the stocks that comprise the index in its portfolio at the same proportion as the index. Indexing is a passive style of investing; stocks are bought and sold based upon their inclusion in an index and not on their fundamentals. Please note, index investors are not familiar with the companies in which they have made investments and are therefore considered investor relations immune.

Other – This style is applied to companies that are not investment firms, such as public companies.

Private Equity – This style is applied to firms that are private equity investors and their public equity holdings are the result of pre-IPO holdings.

Specialty – Applied to firms with investment strategies that cannot be categorized due to the specific nature of their focus. Industry or sector specific focus is the most common example of a Specialty investor.

Value – Value-oriented institutions prefer stocks that are trading at undervalued levels relative to some valuation such as a stock's intrinsic value or a company's free cash flow. Value investors tend to have longer-term investment horizons than their growth counterparts as they wait for the convergence of value and price.

Venture Capital – This style is applied to firms that are venture capital investors and their public equity holdings are the result of pre-IPO holdings.

Yield – Yield investors are sensitive to a high dividend yield and invest in companies with yield levels very high compared to the market yield, and have a history of paying and increasing dividends over time.

Orientation

Active – Indicates that the final investment decision making process at an institution is enacted by a portfolio manager or analyst. While computer screening models may be used in the investment process they are not utilized to make the final investment decision.

Passive – This category primarily captures index and quantitative investors. These investors utilize computer models to define an investable universe and make final portfolio decisions. Investor relations officers cannot influence these investment decisions.

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GLOSSARY

Turnover

Portfolio Equity Turnover is the measure of how frequently a portfolio buys or sells securities over a 12 month period. It is calculated as the sum of the dollar values of buys and sells over a given period, divided by the sum of the beginning and ending equity assets over the same period, reported as an annualized percentage.

A portfolio with a turnover rate of 100% replaces its entire portfolio throughout the course of a 12-month period, whereas, a portfolio with a turnover rate of 50% replaces half of its holdings during the same time.

- Low Turnover (0-33.3% per year)
- Medium Turnover (33.3 -66.6% per year)
- High Turnover (66.6-100% per year)
- Very High Turnover (Over 100% per year)

Equity Assets (\$M) – The market value of all current publicly disclosed ownership of equity securities held by an account/institution as identified by IHS Markit, expressed in millions of USD.

Value (\$M) – Total value invested in a company/country/region by an institution

Equation: $(\sum \text{All Shares Held Owned Over Period} \times \text{End-of-Period Security Price})$

Change (\$M) - Measures the actual buying/selling activity of institutions (excluding changes in the price of the underlying security). Throughout the report, Net Buy/Sell Activity may be displayed as a value or on a percent change .

Equation: $[(\sum \text{All Shares Bought Over Period} \times \text{End-of-Period Security Price}) - (\sum \text{All Shares Sold Over Period} \times \text{End-of-Period Security Price})]$

% Portfolio - The % of a Buy side institution's position in a company/country/region based on an institution's total portfolio value (Equity Assets (\$M)).

% Portfolio Change – The % change of the institution in the company/country/region

Equation: $[(\sum \text{Value} (\$M)) / ((\sum \text{Value} (\$M)) - (\sum \text{Change} (\$M)) \times 100)]$

S&P Global's institutional ownership data is based on publicly-disclosed information, collected from such sources as regulatory ownership filings (including SEC forms 13F/D/G), disclosures made by mutual funds / pension funds to their beneficiaries, registration statements, news releases, and other sources. It should be noted that regulatory filings and other ownership sources vary widely country-by-country as to their completeness and timeliness. When an institutional investor's complete ownership is not disclosed by requirement, S&P Global aggregates and sums the publicly-filed portfolio information from the investor to arrive at a disclosed total equity figure. Data for the beginning and end of Q3-2021 can be considered a snapshot of the most current positions.