

FLOW OF FUNDS REPORT

TUYID Q2-2020

September, 2020

Dear Readers,

We are happy to present the Flow of Funds Report for the second quarter of 2020. Our report offers detailed insight of 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 road shows and trust the Report will be an important asset in IR planning and investor targeting.

The BIST 100 index outperformed the Poland WIG20, MSCI Europe, Hungarian BUX, MSCI EFM EMEA, and the Russian RTS on a year-to-year basis and recovered significantly after the decline experienced in March 2020. All other indices mentioned in this report, despite also recovering somewhat from their respective March declines, experienced negative year-to-year returns.

Turkey once again accounts for a net outflow in Q2-20 after the outflow experienced in the previous quarter. It is also noteworthy that the level of outflows for Turkey decreased in Q2-20 compared to Q1-20. Russian equities saw the largest net outflow, with Poland and Hungary also experiencing net outflows. North America continues to be the largest investor region in Turkey despite being net sellers in Q2-2020.

There have been notable outflows within certain sectors for both active and passive investors. In terms of active investors, the Financials and Technology sectors experienced the largest outflows, despite the Technology sector remaining relatively flat in Q1-20. The utilities and healthcare sectors experienced the smallest outflows among active investors. In terms on passive investors, the Energy, Basic Materials, and Financials sectors experienced the largest outflows in Q2-2020. Also noteworthy is that, among passive investors, the Technology, Utilities, Industrials, and Healthcare sectors all experienced marginal inflows. The orientation has once again shifted towards passive investors and is now split 55% passive vs 45% active. This is as a result of active investors continuing to experience outflows, while passive investors have experienced inflows in Q2-20. The selling activity among active investors was driven primarily by Invesco Advisors, Inc. and Lazard Asset Management, LLC (U.S.).

The most invested cities remain London and New York, in that order. Notably, Atlanta has dropped down the list from third in Q1-20 to fifth in Q2-20. This outflow was driven mainly by Invesco Advisors, Inc, who are now the fifth largest active holder, down from being the top active holder in Q1-20. Norges Bank Investment Management are now the top active holder. Oslo and Amsterdam have therefore overtaken Atlanta and are now the third and fourth most invested cities, respectively.

This Report is prepared quarterly by IHS Markit, in cooperation with TÜYİD, using IHS Markit's database. We look forward to any feedback you may have.

IHS Markit
Director, Shareholder Identification EMEA
Frederik Frank

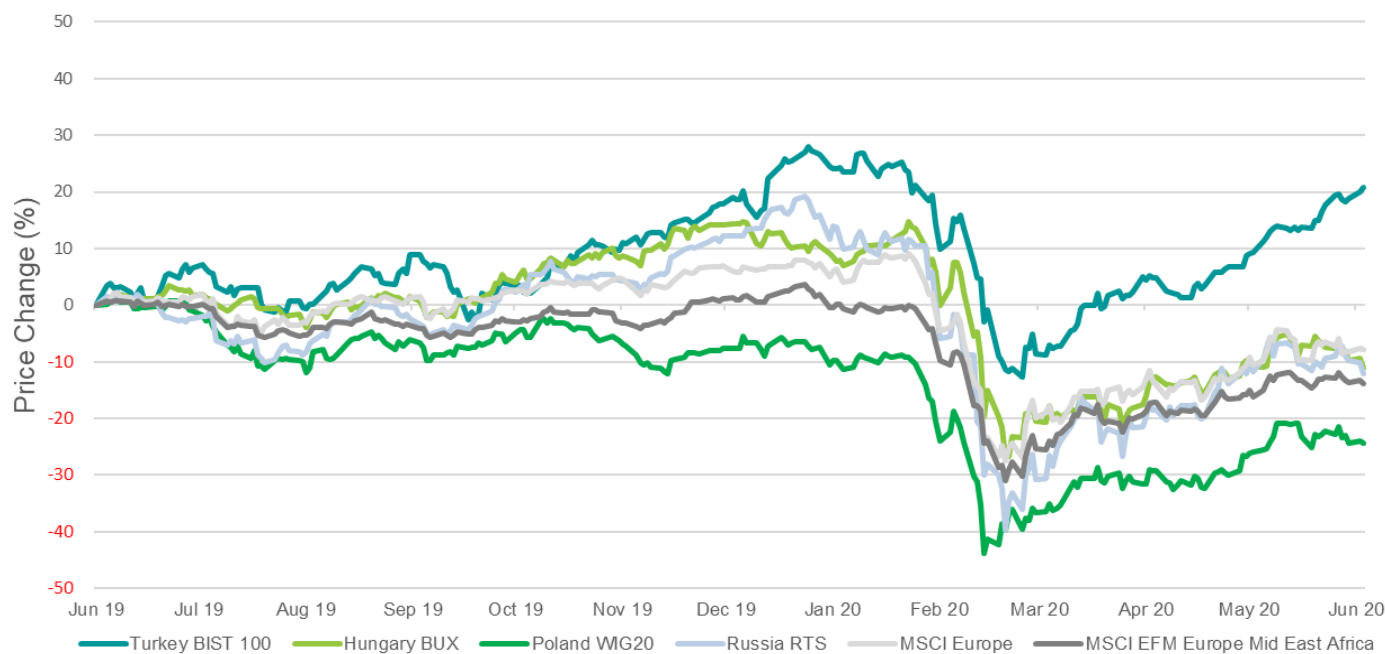
TÜYİD Turkish IR Society
Chair person/ Ford Otosan
Head of Investor Relations
Aslı Selçuk

Acknowledgements: We express our gratitude to Max Heera from IHS Markit Global Markets Intelligence and TÜYİD member İşıl Bük for their contributions.

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Price performance:

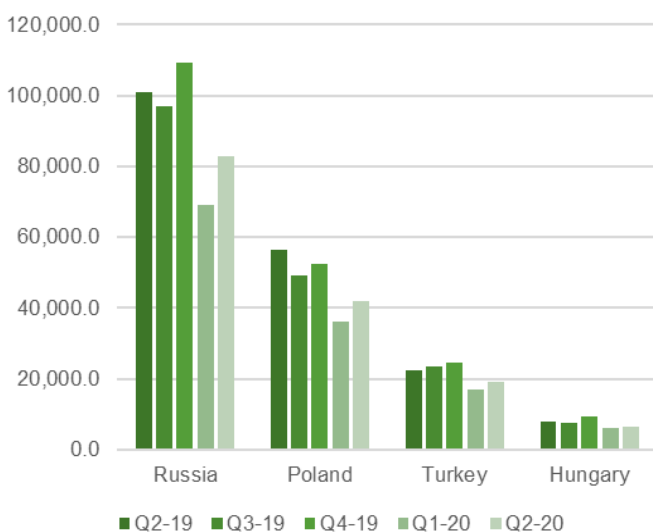
The BIST 100 index returned 20.77% year-on-year, once again outperforming the Poland WIG20, MSCI Europe, Hungarian BUX, MSCI EFM EMEA, and the Russian RTS. Notably, the BIST 100 experienced a strong recovery after the initial sharp declines in March 2020 caused by the global coronavirus pandemic. This is in-line with the trends observed across most financial markets as well as the other indices mentioned above. All indices mentioned in this report, with the exception of the BIST 100, experienced negative year-to-year returns, as can be seen below.



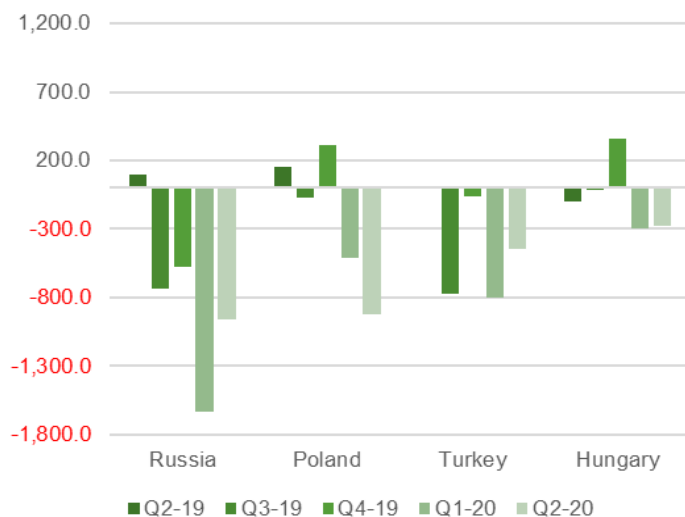
Inflows and Outflows:

In Q2-20 all major regions saw net outflows. Turkish outflows were driven primarily by Invesco Advisers, Inc. and Lazard Asset Management, LLC (U.S.) while Russian inflows were driven mainly by The Vanguard Group, Inc. and BlackRock Fund Advisors.

Institutional Investment in Region (\$M)

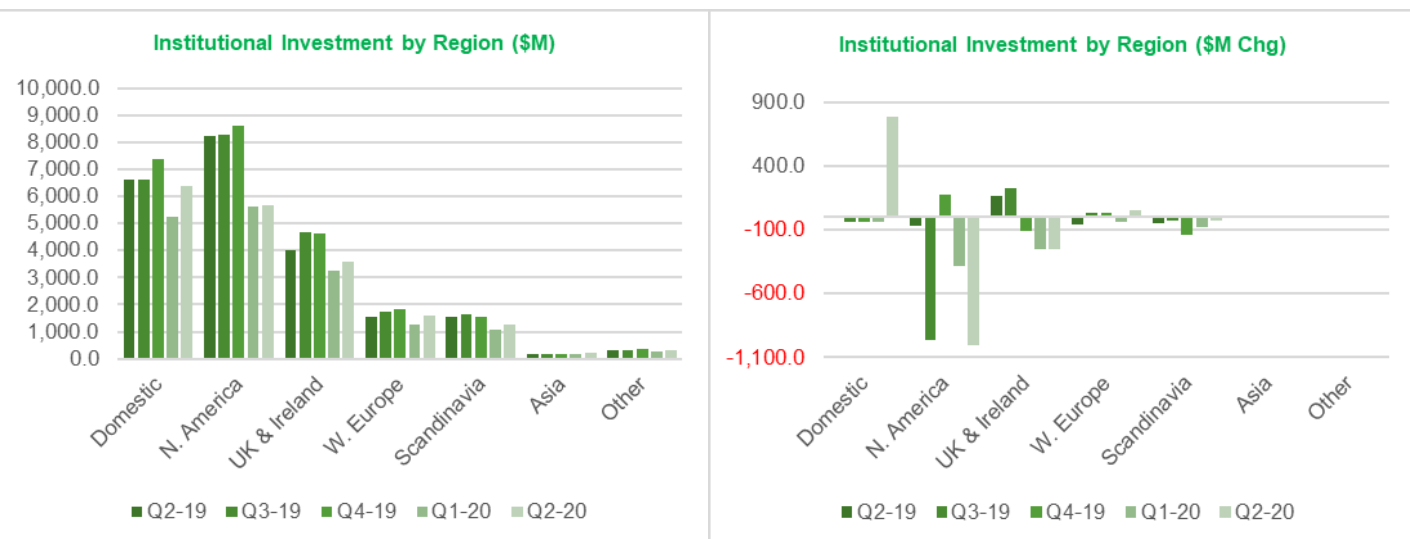


Institutional Investment in Region (\$M Chg)



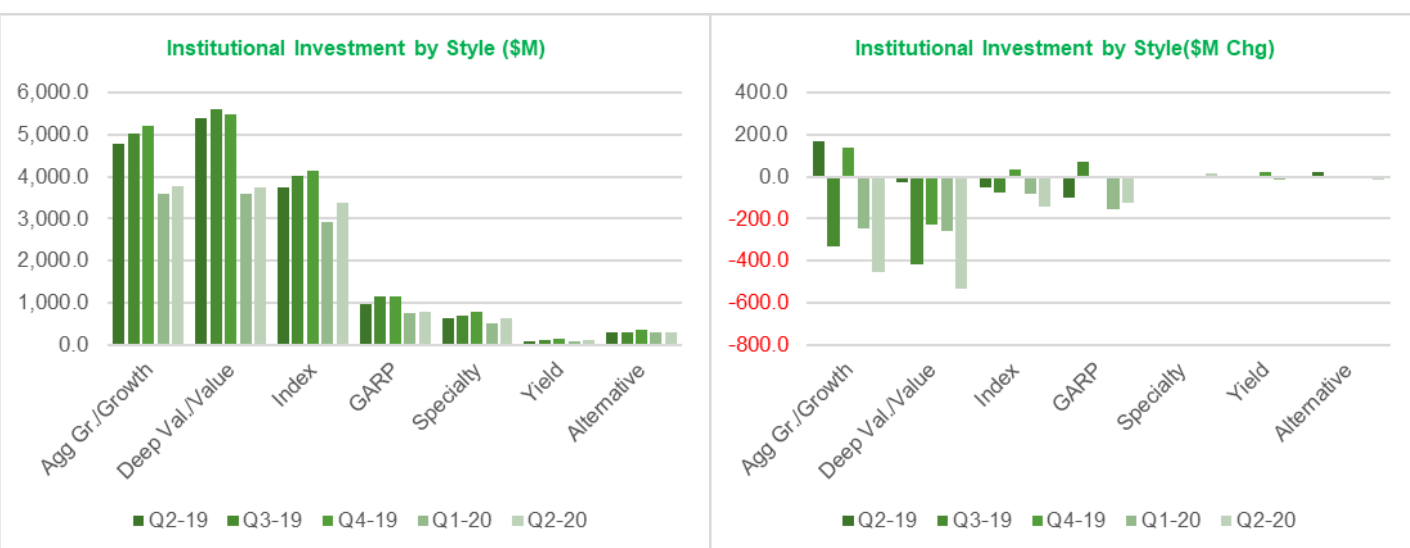
Investment by Investor Region:

The domestic region saw an increase in institutional investment after the decline in Q1-20. Additionally, Genesis Investment Management, LLP were the main drivers of the net outflow experienced in the UK & Ireland while Robeco Institutional Asset Management BV drove the inflows in the Western European region.



Investment by Style:

Aggressive growth / Growth investors continue to be the largest investors by style in Q2-20, followed by Value/Deep Value and Index investors.



Top Active Holders, Buyers & Sellers

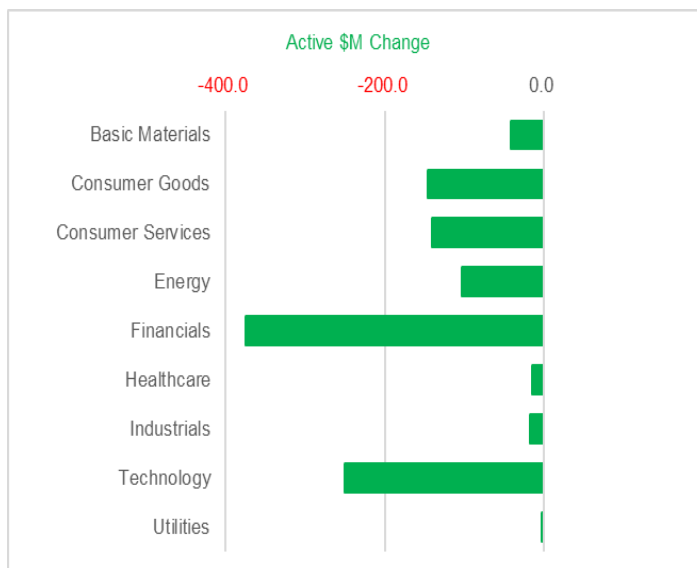
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Norges Bank Investment Management (Norway)	Norway	Value	Low	773,813.3	695.8	0.0	0.1	0.0
Genesis Investment Management, LLP	United Kingdom	Growth	Low	10,063.7	424.2	-52.6	4.2	-11.0
APG Asset Management N.V.	Netherlands	Specialty	Low	157,292.8	410.7	0.0	0.3	0.0
J.P. Morgan Asset Management (UK), LTD	United Kingdom	Growth	Medium	107,739.0	391.3	51.9	0.4	15.3
Invesco Advisers, Inc.	United States	Growth	Low	267,970.3	315.2	-395.9	0.1	-55.7
Schroder Investment Management, LTD	United Kingdom	GARP	Medium	106,502.7	297.5	-39.8	0.3	-11.8
Silchester International Investors, LLP	United Kingdom	Value	Low	18,531.4	260.9	-4.5	1.4	-1.7
Capital World Investors (U.S.)	United States	Value	Low	653,326.1	247.8	-117.7	0.0	-32.2
Comgest S.A.	France	Growth	Low	25,005.3	164.8	1.5	0.7	0.9
Robeco Institutional Asset Management BV	Netherlands	Value	Medium	52,829.5	151.2	22.9	0.3	17.8
					3,359.6	-534.2		

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
J.P. Morgan Asset Management (UK), LTD	United Kingdom	Growth	Medium	107,739.0	391.3	51.9	0.4	15.3
TIAA-CREF Investment Management, LLC	United States	Growth	Low	314,130.2	139.1	41.8	0.0	43.0
Origin Asset Management, LLP	United Kingdom	Value	High	2,422.3	44.1	33.7	1.8	321.8
Robeco Institutional Asset Management BV	Netherlands	Value	Medium	52,829.5	151.2	22.9	0.3	17.8
U.S. Global Investors, Inc. (Asset Management)	United States	Specialty	High	1,627.9	27.9	21.8	1.7	359.5
MFS Investment Management	United States	Value	Low	299,356.5	40.7	17.0	0.0	71.9
Bankinter Gestión de Activos S.G.I.I.C., S.A.	Spain	Deep Value	High	3,252.4	10.9	10.9	0.3	Buy-in
Goldman Sachs Asset Management International	United Kingdom	Growth	High	18,870.1	49.1	10.9	0.3	28.4
DWS Investment GmbH	Germany	Value	Low	109,588.4	60.9	10.2	0.1	20.1
American Century Investment Management, Inc.	United States	Growth	Medium	119,094.4	37.6	7.4	0.0	24.6
					952.9	228.5		

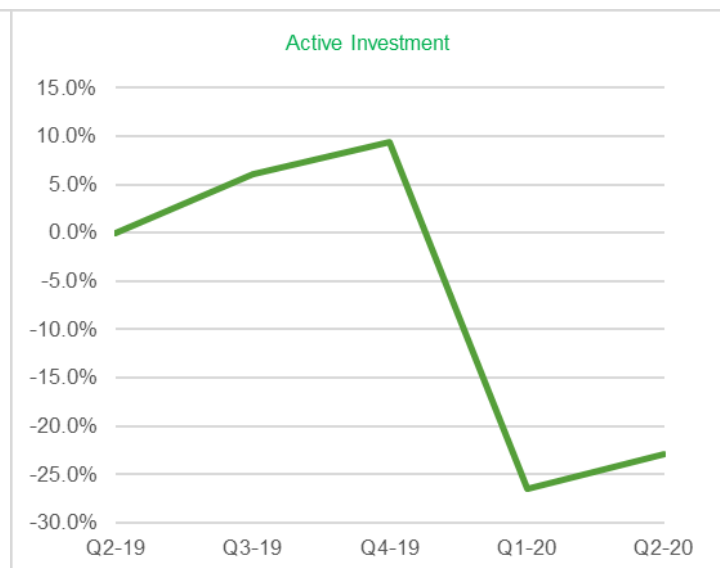
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Invesco Advisers, Inc.	United States	Growth	Low	267,970.3	315.2	-395.9	0.1	-55.7
Lazard Asset Management, LLC (U.S.)	United States	Value	Medium	89,959.5	106.5	-287.4	0.1	-73.0
Capital World Investors (U.S.)	United States	Value	Low	653,326.1	247.8	-117.7	0.0	-32.2
Hermes Investment Management, LTD	United Kingdom	GARP	Low	17,698.5	42.5	-62.2	0.2	-59.4
Genesis Investment Management, LLP	United Kingdom	Growth	Low	10,063.7	424.2	-52.6	4.2	-11.0
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	27,632.0	97.1	-40.3	0.4	-29.3
Schroder Investment Management, LTD	United Kingdom	GARP	Medium	106,502.7	297.5	-39.8	0.3	-11.8
BlackRock Investment Management (U.K.), LTD	United Kingdom	Growth	Low	495,500.8	89.3	-30.1	0.0	-25.2
J O Hambro Capital Management, LTD	United Kingdom	Value	Medium	10,242.1	23.7	-23.0	0.2	-49.3
Dodge & Cox	United States	Value	Low	142,970.7	0.0	-22.4	0.0	-99.8
					1,643.9	-1,071.3		

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

Sector Inflows/Outflows



% Change in Active Investment vs 5 Previous Quarters



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	3,465,113.2	1,382.7	-42.5	0.0	-3.0
BlackRock Fund Advisors	United States	Index	Low	2,168,209.3	675.1	-35.9	0.0	-5.1
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	151,892.1	309.4	-31.8	0.2	-9.3
Acadian Asset Management, LLC	United States	Deep Value	Medium	35,649.5	196.5	-4.1	0.6	-2.1
California Public Employees Retirement System	United States	Index	Low	106,424.3	171.6	0.0	0.2	0.0
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	272,094.4	166.6	3.0	0.1	1.8
Research Affiliates, LLC	United States	Index	Low	5,022.7	131.9	0.0	2.6	0.0
Arrowstreet Capital, L.P.	United States	Deep Value	Very High	60,627.3	103.1	-2.3	0.2	-2.2
Charles Schwab Investment Management, Inc.	United States	Index	Low	250,198.8	95.9	5.8	0.0	6.4
Stewart Investors (U.K.)	United Kingdom	Growth	Low	1,960.9	82.4	-3.6	4.2	-4.2
					3,315.3	-111.4		

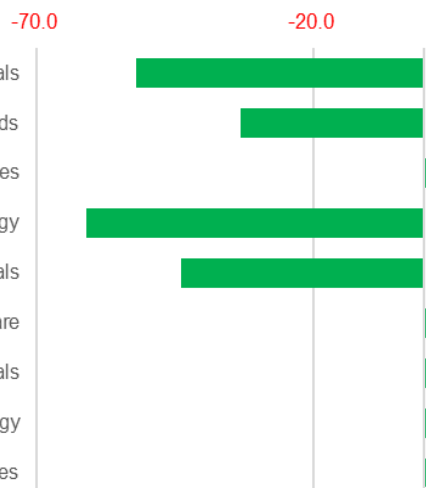
TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Quoniam Asset Management GmbH	Germany	Value	High	5,753.4	21.1	17.2	0.4	448.1
Charles Schwab Investment Management, Inc.	United States	Index	Low	250,198.8	95.9	5.8	0.0	6.4
State Street Global Advisors (SSgA)	United States	Index	Low	1,443,112.0	68.8	4.7	0.0	7.3
Geode Capital Management, LLC	United States	Index	Low	535,316.8	64.9	3.2	0.0	5.2
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	272,094.4	166.6	3.0	0.1	1.8
Quantitative Management Associates, LLC	United States	Index	Medium	52,012.4	21.5	1.4	0.0	7.1
QS Investors, LLC	United States	Growth	Medium	8,204.0	1.8	1.3	0.0	260.8
Vanguard Investments Australia, LTD	Australia	Index	Low	58,683.5	4.8	1.1	0.0	31.6
Aperio Group, LLC	United States	Index	Low	27,256.0	6.8	1.1	0.0	18.6
Jane Street Capital, LLC	United States	Alternative	Very High	25,656.8	1.1	1.0	0.0	595.6
					453.1	39.7		

TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	3,465,113.2	1,382.7	-42.5	0.0	-3.0
BlackRock Fund Advisors	United States	Index	Low	2,168,209.3	675.1	-35.9	0.0	-5.1
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	151,892.1	309.4	-31.8	0.2	-9.3
First Trust Advisors, L.P.	United States	Index	Medium	61,323.9	47.6	-24.0	0.1	-33.5
Vident Investment Advisory, LLC	United States	Index	High	4,466.9	43.3	-11.3	1.0	-20.6
LSV Asset Management	United States	Deep Value	Low	53,833.3	18.8	-7.0	0.0	-27.2
Northern Trust Investments, Inc.	United States	Index	Low	392,258.7	27.1	-6.6	0.0	-19.7
Global X Management Company, LLC	United States	Index	Medium	12,306.4	9.6	-6.4	0.1	-40.0
TOBAM	France	Specialty	Medium	4,047.4	48.4	-5.5	1.2	-10.1
Parametric Portfolio Associates, LLC	United States	GARP	Low	133,457.3	44.3	-5.4	0.0	-10.8
					2,606.2	-176.2		

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

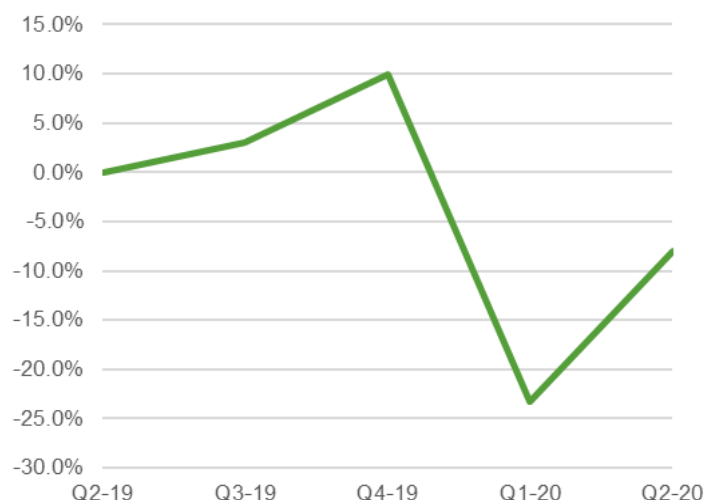
Sector Inflows/Outflows

Passive \$M Change



% Change in Passive Investment vs 5 Previous Quarters

Passive Investment



Road show:

The most invested cities in Turkey remain London and New York with Genesis Investment Management and Capital World Investors (U.S.) being the top investors from each respectively. Hermes Investment Management, LTD and Schroder Investment Management, LTD drove the London outflows while the outflows in New York was driven mainly by Capital World Investors (U.S.) and Lazard Asset Management, LLC (U.S.). Notably, Atlanta has dropped down to two places to fifth, after being the third most invested city in Q1-20. Oslo and Amsterdam have overtaken Atlanta and now occupy the third and fourth spots respectively.

Most Invested

Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,789,303.4	2,831.1	-185.6	70
United States (New York)	2,798,215.9	877.9	-400.2	35
Norway (Oslo)	807,272.2	702.1	-0.9	3
Netherlands (Amsterdam)	160,532.9	411.6	0.2	3
United States (Atlanta)	281,065.2	315.3	-395.9	3
United States (Boston)	2,475,994.7	310.7	-17.4	13
France (Paris)	250,421.7	223.0	7.1	10
Sweden (Stockholm)	263,695.6	210.2	-16.8	11
Turkey (Istanbul)	191.9	191.8	-25.0	7
Netherlands (Rotterdam)	52,829.5	151.2	22.9	1
Germany (Frankfurt)	292,520.5	130.2	11.2	8
United Kingdom (Edinburgh)	335,603.5	119.9	-18.9	5
Denmark (Copenhagen)	87,564.2	113.3	-12.6	6
Switzerland (Zürich)	341,054.8	110.0	-1.9	9
Germany (Stuttgart)	5,572.5	93.9	0.0	1
Austria (Vienna)	11,325.3	91.1	-2.5	5
Singapore (Singapore)	63,691.8	88.1	1.5	10
Italy (Milan)	54,828.4	84.7	1.8	6
Sweden (Gothenburg)	14,031.8	75.3	0.0	1
Canada (Montreal)	89,348.4	74.7	-0.1	3
Excludes Passive/Index Investors		7,206.2	-1,033.1	210

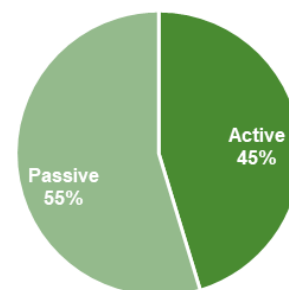
Most Investors

Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,789,303.4	2,831.1	-185.6	70
United States (New York)	2,798,215.9	877.9	-400.2	35
United States (Boston)	2,475,994.7	310.7	-17.4	13
Canada (Toronto)	494,605.2	39.1	-10.3	12
Sweden (Stockholm)	263,695.6	210.2	-16.8	11
Poland (Warsaw)	12,287.4	61.5	-1.2	11
Japan (Tokyo)	889,759.4	56.5	-0.5	11
South Korea (Seoul)	32,223.7	3.7	-0.0	11
France (Paris)	250,421.7	223.0	7.1	10
Singapore (Singapore)	63,691.8	88.1	1.5	10
Switzerland (Zürich)	341,054.8	110.0	-1.9	9
Germany (Frankfurt)	292,520.5	130.2	11.2	8
Finland (Helsinki)	18,760.0	38.0	4.9	8
Switzerland (Geneva)	20,238.9	25.0	3.0	8
United States (Chicago)	232,608.4	17.3	-1.8	8
Turkey (Istanbul)	191.9	191.8	-25.0	7
Ireland (Dublin)	48,565.0	44.7	0.4	7
Denmark (Copenhagen)	87,564.2	113.3	-12.6	6
Italy (Milan)	54,828.4	84.7	1.8	6
Spain (Madrid)	29,828.4	28.1	10.7	6
Excludes Passive/Index Investors		5,485.1	-632.6	267

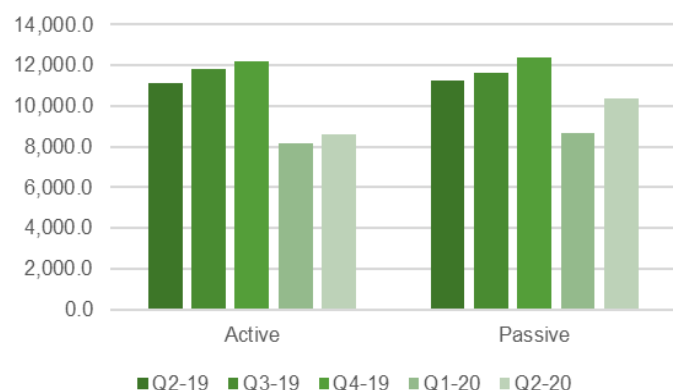
Active vs. Passive investors

Orientation shifted to a 55% Passive vs 45% Active split in Q2-20 as Active investors continued to experience outflows, which were driven primarily by Invesco Advisors, Inc. and Lazard Asset Management, LLC (U.S.).

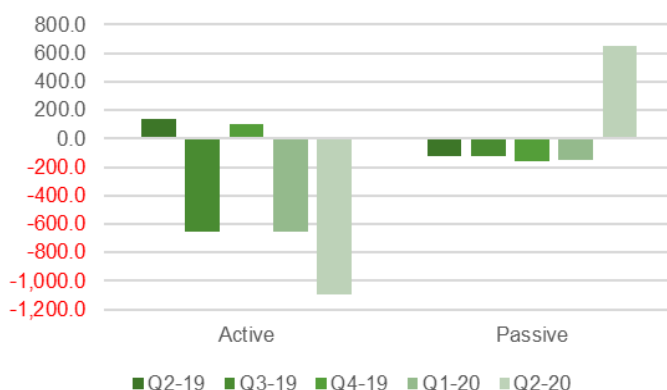
Active vs Passive Split



Active vs Passive (\$M)



Active vs Passive (\$M Chg)



Top Holders, Buyers & Sellers – Corporate Debt

TOP HOLDERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Pictet Asset Management, LTD	United Kingdom	London	Medium	14,545.7	263.3	6.4	1.8	2.5
Goldman Sachs Asset Management International	United Kingdom	London	Very High	159,845.6	259.3	3.5	0.2	1.4
TIAA-CREF Investment Management, LLC	United States	New York	Very High	317,035.0	233.6	5.3	0.1	2.3
Amundi Ireland, LTD (London)	United Kingdom	London	High	14,715.6	199.3	-22.8	1.4	-10.3
Ashmore Investment Management, LTD	United Kingdom	London	High	25,681.2	184.5	17.8	0.7	10.6
Lord, Abbett & Co., LLC (Asset Management)	United States	Jersey City	Very High	138,368.5	173.0	5.3	0.1	3.2
Amundi Asset Management (U.K.)	United Kingdom	London	High	12,487.5	153.5	-24.2	1.2	-13.6
Dimensional Fund Advisors, L.P. (U.S.)	United States	Austin	High	92,720.8	139.7	137.0	0.2	5,082.2
Ninety One UK Limited	United Kingdom	London	High	14,836.5	136.5	4.2	0.9	3.2
AIG Asset Management (U.S.), LLC	United States	New York	Low	181,391.4	119.6	5.0	0.1	4.4
				1,862.3	137.5			
TOP BUYERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Dimensional Fund Advisors, L.P. (U.S.)	United States	Austin	High	92,720.8	139.7	137.0	0.2	5,082.2
Ashmore Investment Management, LTD	United Kingdom	London	High	25,681.2	184.5	17.8	0.7	10.6
Tow arzystwo Funduszy Inwestycyjnych PZU S.A.	Poland	Warsaw	Medium	1,903.7	12.5	12.5	0.7	Buy-in
T. Rowe Price Associates, Inc.	United States	Baltimore	Low	218,974.9	103.8	10.9	0.0	11.8
RHB Islamic International Asset Management Bhd	Malaysia	Kuala Lumpur	Low	58.7	10.9	10.1	18.6	1,182.9
Washington State Investment Board	United States	Olympia	Low	22,364.6	9.1	9.1	0.0	Buy-in
Azimet Portfoy Yonetimi A.S.	Turkey	Istanbul	Very High	73.7	43.1	8.8	58.6	25.7
Edmond de Rothschild Asset Management (France)	France	Paris	Medium	7,121.4	41.1	8.1	0.6	24.7
Loomis Sayles & Company, L.P.	United States	Boston	High	65,821.8	58.4	8.0	0.1	15.9
Macquarie Investment Management	United States	Philadelphia	Medium	48,591.1	45.2	6.8	0.1	17.7
				648.3	229.1			
TOP SELLERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
AllianceBernstein, L.P. (U.S.)	United States	New York	Medium	207,807.0	117.3	-70.1	0.1	-37.4
Trea Capital Partners, S.V., S.A.	Spain	Barcelona	Medium	3,603.6	50.5	-43.4	1.4	-46.2
AcomeA SGR S.p.A.	Italy	Milan	Medium	2,207.7	11.7	-28.5	0.5	-70.9
Schroder Investment Management, LTD	United Kingdom	London	Medium	62,576.4	0.5	-27.7	0.0	-98.4
J.P. Morgan Investment Management, Inc.	United States	New York	Medium	156,577.4	55.0	-24.9	0.0	-31.2
Amundi Asset Management (U.K.)	United Kingdom	London	High	12,487.5	153.5	-24.2	1.2	-13.6
Amundi Ireland, LTD (London)	United Kingdom	London	High	14,715.6	199.3	-22.8	1.4	-10.3
Neuberger Berman Europe, LTD (Netherlands)	Netherlands	The Hague	Medium	6,871.2	73.2	-21.4	1.1	-22.6
Union Investment Privatfonds GmbH	Germany	Frankfurt am Main	Low	56,302.9	99.6	-18.3	0.2	-15.5
Eurizon Capital SGR S.p.A.	Italy	Milan	High	40,210.0	82.8	-18.2	0.2	-18.0
				843.4	-299.5			

Corporate Debt – City Analysis

Most Invested

	Total FI Assets	Value	Activity	#
Country / City	(\$M)	(\$M)	(\$M)	Firms
United Kingdom (London)	1,197,415.1	1,852.9	-66.8	48
United States (New York)	2,996,446.3	769.8	-96.8	25
Switzerland (Zürich)	231,394.4	299.2	-3.5	14
United States (Boston)	994,448.3	255.6	9.5	11
France (Paris)	254,160.4	190.8	7.9	12
Italy (Milan)	149,901.0	184.2	-46.8	12
United States (Jersey City)	138,368.5	173.0	5.3	1
Singapore (Singapore)	23,345.1	147.9	0.0	6
United States (Austin)	92,720.8	139.7	137.0	1
Germany (Frankfurt)	73,472.9	128.2	2.6	9
United States (Charlotte)	167,789.3	119.5	7.2	2
United States (Atlanta)	300,994.0	118.5	-1.9	3
United States (Baltimore)	218,974.9	103.8	10.9	1
United Kingdom (Edinburgh)	91,662.9	96.3	-1.5	3
United States (New port Beach)	898,776.0	80.5	0.0	2
Denmark (Copenhagen)	46,297.2	80.3	4.0	2
Netherlands (The Hague)	23,194.2	74.4	-21.2	2
Switzerland (Geneva)	29,643.2	73.6	2.1	7
Ireland (Dublin)	31,995.5	72.0	-16.5	6
Switzerland (Lugano)	4,110.9	71.4	0.3	10
		5,031.5	-68.0	177

Most Investors

	Total FI Assets	Value	Activity	#
Country / City	(\$M)	(\$M)	(\$M)	Firms
United Kingdom (London)	1,197,415.1	1,852.9	-66.8	48
United States (New York)	2,996,446.3	769.8	-96.8	25
Switzerland (Zürich)	231,394.4	299.2	-3.5	14
France (Paris)	254,160.4	190.8	7.9	12
Italy (Milan)	149,901.0	184.2	-46.8	12
United States (Boston)	994,448.3	255.6	9.5	11
Spain (Madrid)	31,588.2	7.7	-3.5	11
Switzerland (Lugano)	4,110.9	71.4	0.3	10
Germany (Frankfurt)	73,472.9	128.2	2.6	9
Austria (Vienna)	23,928.8	36.5	1.6	8
Switzerland (Geneva)	29,643.2	73.6	2.1	7
Singapore (Singapore)	23,345.1	147.9	0.0	6
Ireland (Dublin)	31,995.5	72.0	-16.5	6
United States (Chicago)	168,006.1	19.3	-0.5	6
Poland (Warsaw)	9,884.2	68.7	7.0	5
Malaysia (Kuala Lumpur)	2,252.2	44.2	8.7	5
Luxembourg (Luxembourg)	13,179.4	42.9	-2.3	5
Spain (Barcelona)	4,411.7	54.0	-42.3	4
Germany (Munich)	24,559.9	18.3	-0.5	4
United States (Atlanta)	300,994.0	118.5	-1.9	3
		4,455.7	-241.5	211

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.



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

IHS Markit'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, IHS Markit 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 Q4 2019 can be considered a snapshot of the most current positions.