

FLOW OF FUNDS REPORT

TUYID Q2-2019

September, 2019

Dear Readers,

We are happy to present the Flow of Funds Report for the second quarter of 2019. 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.

Turkey saw modest net inflows over the quarter continuing the recent trend of increasing institutional inflows. In contrast, Russia, Poland and Hungary all saw varying degrees of outflows over the same period, suggesting a relative improvement in sentiment toward Turkish equities. North America remained the largest holding region while the key European investment centres hold the majority of the balance.

Value remains the dominant investment style while growth, with the highest level of net inflows during the period, comes a close second. Net inflows were driven by BlackRock in the U.K. while U.S. inflows were led by New York based TIAA -CREF Investment Management. Index investors were net buyers, albeit relatively small, over the review period but remain a key investor in the Turkish equity market accounting for 23% or \$3.8B of identified ownership.

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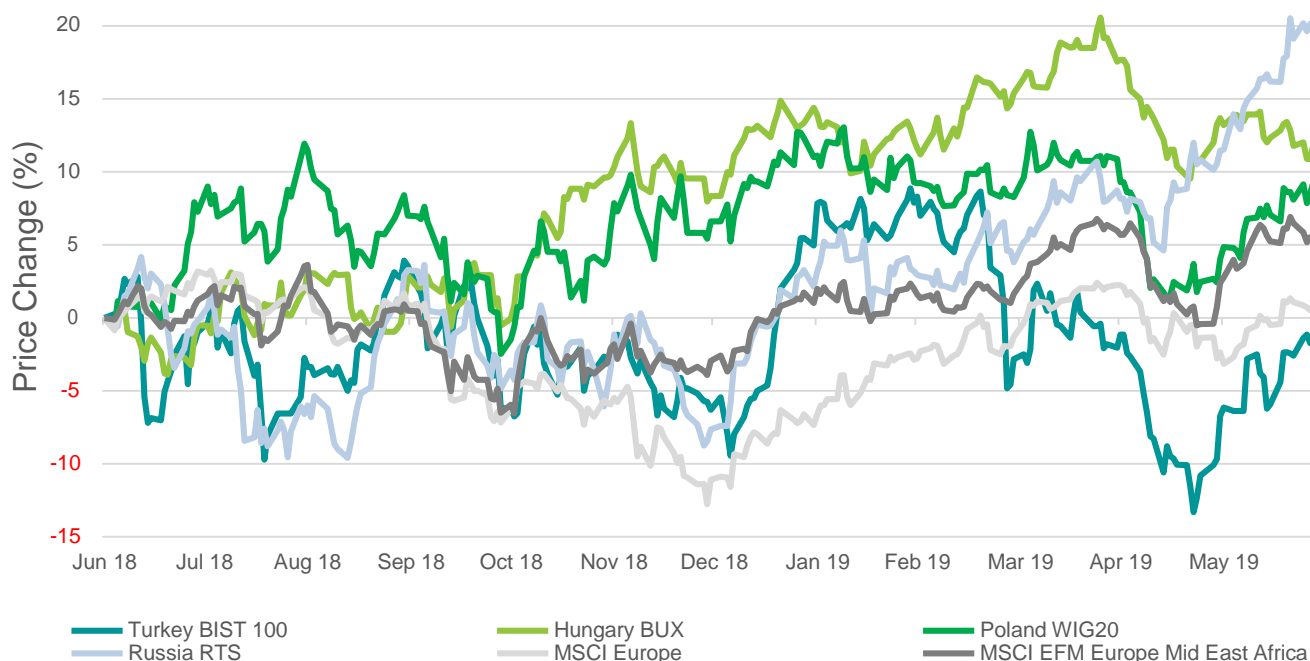
TÜYİD Turkish IR Society
Chair person/ Ford Otosan
Head of Investor Relations
Aslı Selçuk

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

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Price performance:

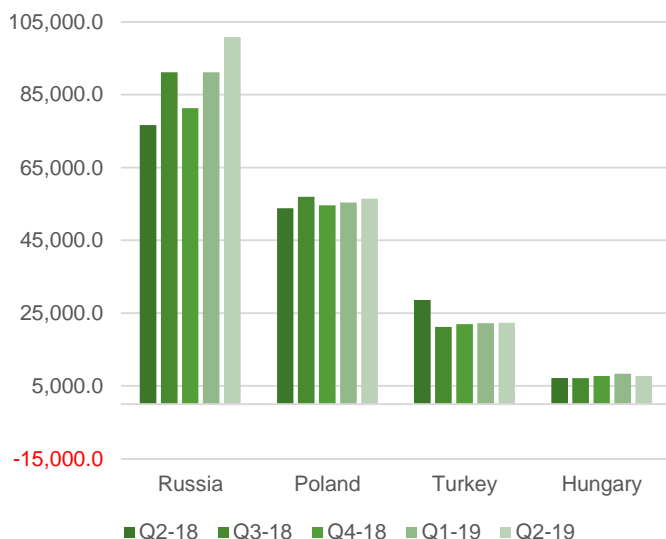
For the 12-month period ending Q2-2019 the Turkey BIST 100 index was broadly flat +0.5% trailing its regional peers. Trade tensions have been a key driver of global sentiment contributing to the flight for safety and increased demand for safe haven assets.



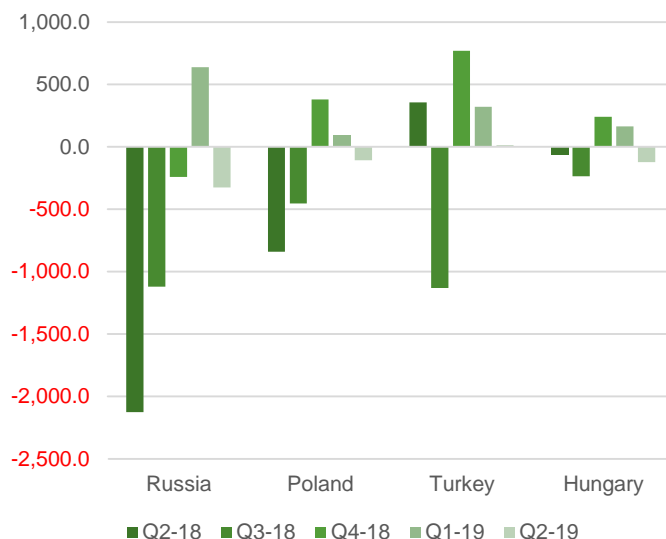
Inflows and Outflows:

Turkey extended a trend of net inflows to 3 quarters which is in contrast to its regional peers who despite increasing asset values saw investors withdrawing capital. The trend suggests improving investor sentiment towards and a re-rating of Turkish equities.

Institutional Investment in Region (\$M)



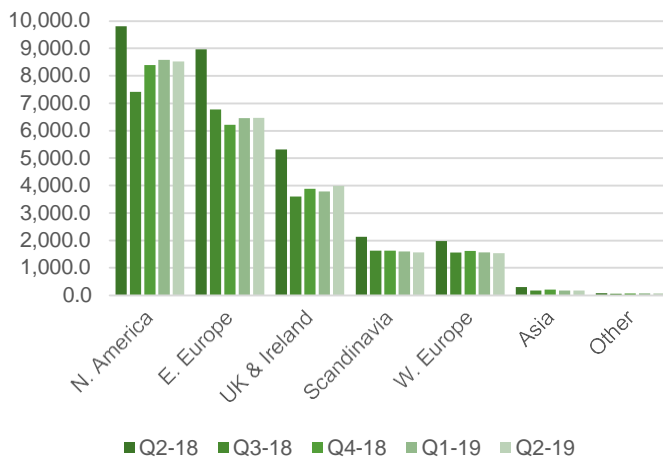
Institutional Investment in Region (\$M Chg)



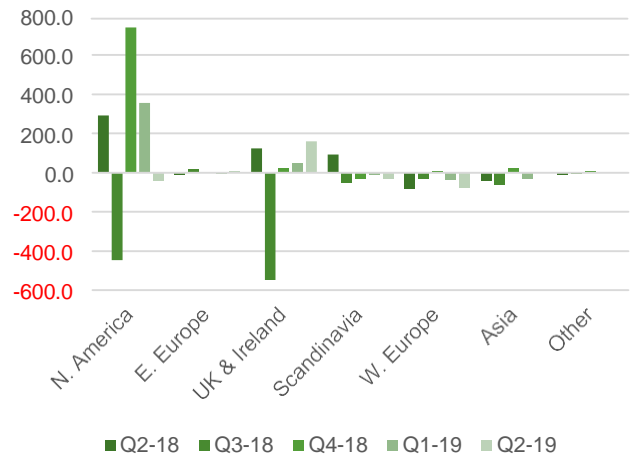
Investment by Investor Region:

North America remains the region with largest holding at 37%. Eastern Europe follows closely behind holding 30% while the UK & Ireland holds 17%. Scandinavia and Western Europe each hold circa 7% with the negligible balance being shared between Asia and Other.

Institutional Investment by Region (\$M)



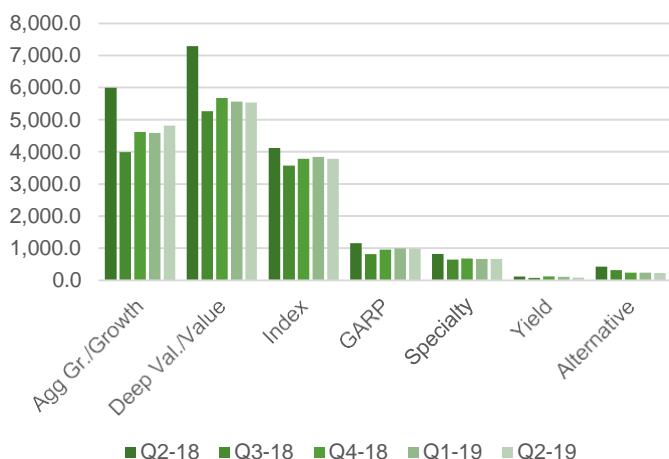
Institutional Investment by Region (\$M Chg)



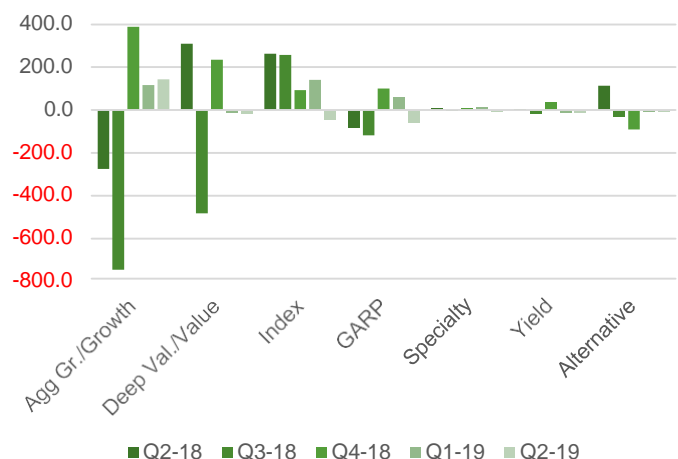
Investment by Style:

Growth is the only style category which saw inflows during the quarter while Index and GARP investors were among the sellers with net outflows for the period. Of the two biggest Active sellers, Seattle based Parametric Portfolio Associates and Schroder Investment management in London, Parametric disposed of 39% of their previous position while Schroder just 11%. The former is likely reflective of changing investment opinion while the later shows operational portfolio construction trading. Value remains the largest institutional ownership style and while naturally its saw the most trading it netted out to leave aggregate holding unchanged.

Institutional Investment by Style (\$M)



Institutional Investment by Style (\$M Chg)



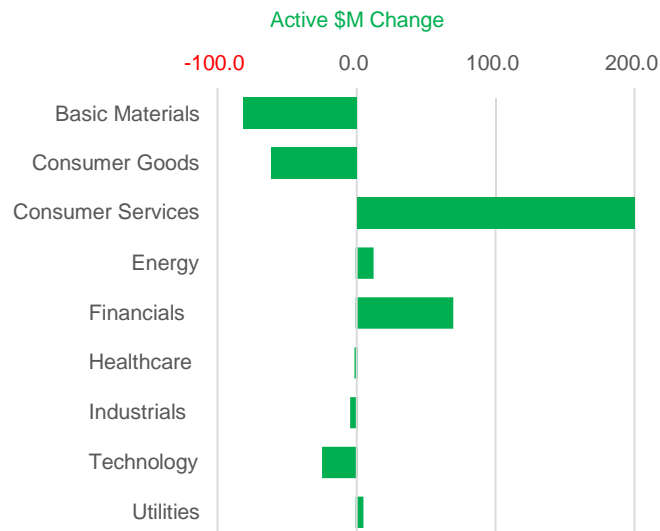
Top Active Holders, Buyers & Sellers

TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Invesco Advisers, Inc.	United States	Grow th	Low	300,081.0	833.1	10.1	0.3	1.2
Norges Bank Investment Management (Norw ay)	Norw ay	Value	Low	677,043.5	682.3	0.0	0.1	0.0
Genesis Investment Management, LLP	United Kingdom	Grow th	Low	16,415.0	574.5	-19.2	3.5	-3.2
Lazard Asset Management, LLC (U.S.)	United States	Value	Medium	95,374.7	565.0	-12.7	0.6	-2.2
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	30,196.1	559.2	63.5	1.9	12.8
APG Asset Management N.V.	Netherlands	Specialty	Low	165,708.7	508.7	0.0	0.3	0.0
Capital World Investors (U.S.)	United States	Value	Medium	674,019.3	312.6	-7.2	0.0	-2.3
BlackRock Investment Management (U.K.), LTD	United Kingdom	Grow th	Low	448,856.7	273.9	56.5	0.1	26.0
Schroder Investment Management, LTD	United Kingdom	GARP	Medium	109,099.5	268.7	-35.1	0.2	-11.6
Silchester International Investors, LLP	United Kingdom	Value	Low	20,159.1	240.2	0.0	1.2	0.0
				4,818.3	55.9			

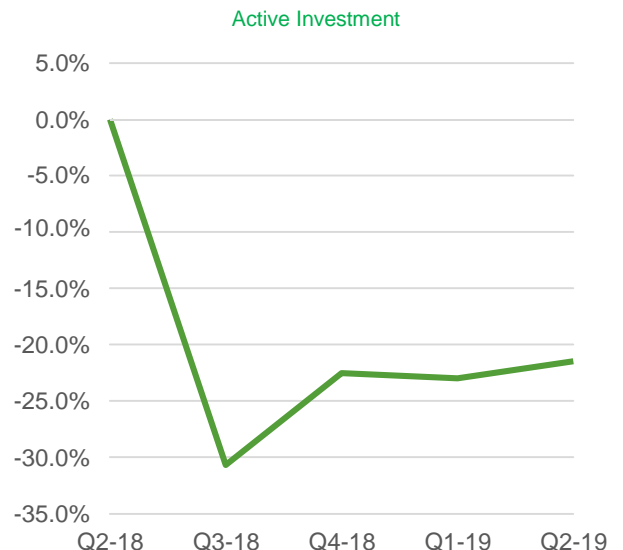
TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	30,196.1	559.2	63.5	1.9	12.8
BlackRock Investment Management (U.K.), LTD	United Kingdom	Grow th	Low	448,856.7	273.9	56.5	0.1	26.0
TIAA-CREF Investment Management, LLC	United States	Grow th	Low	314,771.1	139.6	36.8	0.0	35.7
Hermes Investment Management, LTD	United Kingdom	GARP	Low	18,082.9	70.7	35.1	0.4	98.7
SKAGEN AS	Norw ay	Value	Medium	6,114.2	69.1	34.8	1.1	101.2
Investec Asset Management, LTD (U.K.)	United Kingdom	Grow th	Medium	50,342.8	98.0	27.9	0.2	39.8
Wellington Management Company, LLP	United States	Value	Low	514,033.6	57.8	25.4	0.0	78.3
Scout Investments, Inc.	United States	Grow th	High	5,708.0	41.6	21.6	0.7	108.0
Fidelity International Limited - FIL Investment Services (United Kingdom	Grow th	Medium	96,298.6	36.2	16.2	0.0	80.4
Capital International Investors	United States	Grow th	High	254,227.5	32.6	13.5	0.0	70.5
				1,378.7	331.2			

TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
RAM Active Investments S.A.	Sw itzerland	Value	High	3,198.4	10.2	-73.1	0.3	-87.8
SEB Investment Management AB	Sw eden	Value	Medium	35,964.7	113.4	-39.5	0.3	-25.8
Schroder Investment Management, LTD	United Kingdom	GARP	Medium	109,099.5	268.7	-35.1	0.2	-11.6
Robeco Institutional Asset Management BV	Netherlands	Value	Medium	53,450.3	159.2	-19.5	0.3	-10.9
Genesis Investment Management, LLP	United Kingdom	Grow th	Low	16,415.0	574.5	-19.2	3.5	-3.2
J.P. Morgan Asset Management (UK), LTD	United Kingdom	Grow th	Medium	103,513.7	95.6	-18.7	0.1	-16.4
East Capital Asset Management AB	Sw eden	GARP	Medium	1,368.3	33.9	-15.5	2.5	-31.4
Sw edbank Robur Fonder AB	Sw eden	Grow th	Low	80,504.0	77.2	-13.0	0.1	-14.4
Lazard Asset Management, LLC (U.S.)	United States	Value	Medium	95,374.7	565.0	-12.7	0.6	-2.2
Mellon Investments Corporation	United States	Yield	Low	179,054.3	80.3	-12.3	0.0	-13.3
<i>Includes Investors with EUM greater than \$100M; Excludes Passive/Index Investors</i>				1,978.0	-258.7			

Sector Inflows/Outflows



% Change in Active Investment vs 5 Previous Quarters



Top Passive Holders, Buyers & Sellers

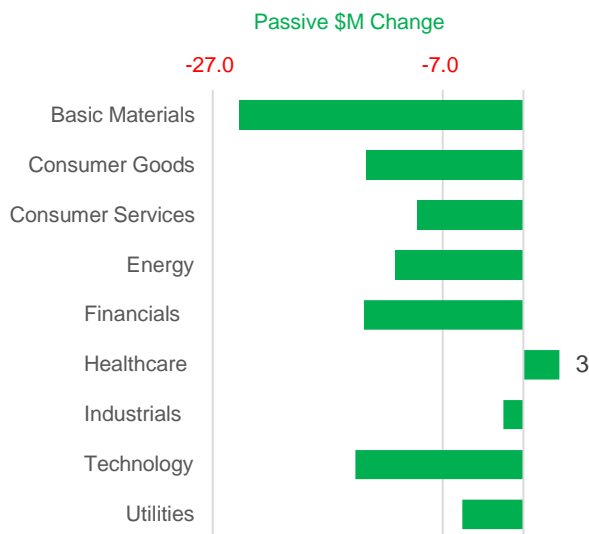
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	3,293,625.4	1,453.4	11.4	0.0	0.8
BlackRock Fund Advisors	United States	Index	Low	2,092,213.5	943.7	-80.0	0.0	-7.8
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	131,184.3	349.0	11.9	0.3	3.5
Arrow street Capital, L.P.	United States	Deep Value	Very High	53,794.5	274.0	0.3	0.5	0.1
Acadian Asset Management, LLC	United States	Deep Value	Medium	37,738.3	267.6	25.6	0.7	10.6
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	321,624.5	184.8	-11.3	0.1	-5.7
California Public Employees Retirement System	United States	Index	Low	88,866.9	171.5	0.0	0.2	0.0
Stewart Investors (U.K.)	United Kingdom	Growth	Low	5,091.8	139.2	0.0	2.7	0.0
Charles Schwab Investment Management, Inc.	United States	Index	Low	206,675.8	94.5	4.2	0.0	4.6
State Street Global Advisors (SSgA)	United States	Index	Low	1,400,851.8	94.3	-18.3	0.0	-16.2
				3,972.1		-56.2		

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Research Affiliates, LLC	United States	Index	Low	4,766.7	84.4	27.0	1.8	46.9
Acadian Asset Management, LLC	United States	Deep Value	Medium	37,738.3	267.6	25.6	0.7	10.6
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	131,184.3	349.0	11.9	0.3	3.5
The Vanguard Group, Inc.	United States	Index	Low	3,293,625.4	1,453.4	11.4	0.0	0.8
Cambria Investment Management, L.P.	United States	Index	Medium	846.3	13.6	7.1	1.6	110.5
Northern Trust Investments, Inc.	United States	Index	Low	399,669.3	53.5	6.1	0.0	12.9
Northern Trust Global Investments, LTD	United Kingdom	Index	Low	71,189.6	28.1	5.0	0.0	21.5
Charles Schwab Investment Management, Inc.	United States	Index	Low	206,675.8	94.5	4.2	0.0	4.6
BlackRock Asset Management Canada, LTD	Canada	Index	Low	47,063.5	4.6	2.9	0.0	166.4
Seven Investment Management, LLP	United Kingdom	Index	High	1,484.7	3.7	2.6	0.3	239.4
				2,352.5		103.7		

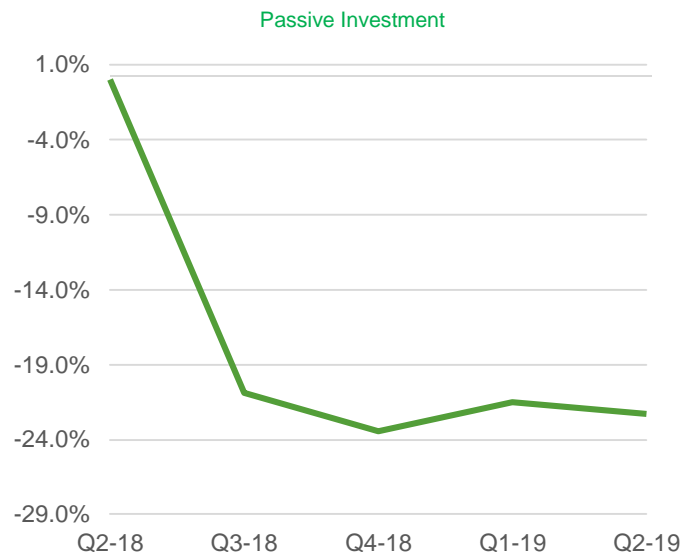
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
BlackRock Fund Advisors	United States	Index	Low	2,092,213.5	943.7	-80.0	0.0	-7.8
Parametric Portfolio Associates, LLC	United States	GARP	Low	126,644.9	92.0	-59.4	0.1	-39.2
State Street Global Advisors (SSgA)	United States	Index	Low	1,400,851.8	94.3	-18.3	0.0	-16.2
First Trust Advisors, L.P.	United States	Index	Medium	57,383.4	44.6	-13.5	0.1	-23.2
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	321,624.5	184.8	-11.3	0.1	-5.7
Numeric Investors, LLC	United States	Alternative	Very High	18,873.3	24.3	-8.2	0.1	-25.1
Global X Management Company, LLC	United States	Index	Medium	10,255.6	6.2	-6.7	0.1	-51.9
Legal & General Investment Management, LTD	United Kingdom	Index	Low	288,363.5	36.4	-4.5	0.0	-11.1
State Street Global Advisors, LTD	United Kingdom	Index	Low	97,515.2	40.8	-3.9	0.0	-8.7
TOBAM	France	Specialty	Medium	5,395.9	52.7	-3.1	1.0	-5.5
				1,519.8		-208.8		

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

Sector Inflows/Outflows



% Change in Passive Investment vs 5 Previous Quarters



Road show:

London and New York remain the largest institutional investment centres with Boston and Atlanta making up a second tier. Activity during the period saw London allocate additional capital to the Turkish market through firms like BlackRock, Hermes and Investec Asset Management. Selling activity was led by Stockholm where SEB Investment Management AB withdrew the most capital from the market.

Most Invested

Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,782,915.2	2,980.7	126.9	67
United States (New York)	2,247,632.9	1,215.3	-4.2	39
United States (Boston)	2,421,687.8	873.8	67.6	13
United States (Atlanta)	313,550.5	836.8	10.0	3
Norway (Oslo)	712,528.9	692.7	1.0	4
Netherlands (Amsterdam)	169,977.6	510.1	0.9	4
United States (Los Angeles)	1,164,029.3	453.0	-21.4	6
Sweden (Stockholm)	246,259.7	331.3	-71.8	12
Canada (Toronto)	496,709.2	248.8	0.4	11
Denmark (Copenhagen)	83,303.8	205.8	-2.4	6
United Kingdom (Edinburgh)	290,602.9	196.9	11.7	4
Turkey (Istanbul)	202.8	194.7	14.9	8
Netherlands (Rotterdam)	53,450.3	159.2	-19.5	1
Germany (Frankfurt)	297,597.0	150.5	7.0	6
United States (San Francisco)	619,570.0	130.2	8.7	5
Austria (Vienna)	11,247.0	116.0	19.1	5
Switzerland (Zürich)	262,140.0	101.5	-6.1	10
Sweden (Gothenburg)	15,204.5	98.6	4.5	1
Canada (Victoria)	31,877.4	95.0	0.0	1
United States (San Diego)	86,104.9	87.4	-9.2	4
<i>Excludes Passive/Index Investors</i>		9,678.1	138.1	210

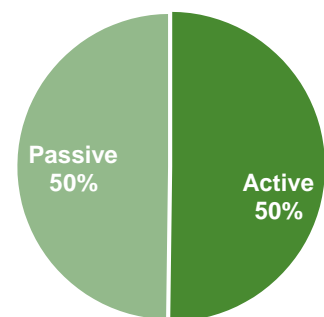
Most Investors

Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,782,915.2	2,980.7	126.9	67
United States (New York)	2,247,632.9	1,215.3	-4.2	39
Poland (Warsaw)	18,215.7	58.4	0.0	14
United States (Boston)	2,421,687.8	873.8	67.6	13
Japan (Tokyo)	795,065.7	76.1	-0.1	13
Sweden (Stockholm)	246,259.7	331.3	-71.8	12
France (Paris)	260,178.2	73.2	-5.8	12
United States (Chicago)	306,926.6	33.4	-2.0	12
Canada (Toronto)	496,709.2	248.8	0.4	11
Switzerland (Zürich)	262,140.0	101.5	-6.1	10
South Korea (Seoul)	32,746.3	5.2	0.0	10
Turkey (Istanbul)	202.8	194.7	14.9	8
Switzerland (Geneva)	94,506.1	63.2	-71.9	8
Singapore (Singapore)	77,077.1	48.8	-0.2	8
Ireland (Dublin)	42,839.4	35.6	2.4	7
Finland (Helsinki)	16,347.7	31.0	2.8	7
United States (Los Angeles)	1,164,029.3	453.0	-21.4	6
Denmark (Copenhagen)	83,303.8	205.8	-2.4	6
Germany (Frankfurt)	297,597.0	150.5	7.0	6
United States (San Francisco)	619,570.0	130.2	8.7	5
<i>Excludes Passive/Index Investors</i>		7,310.6	44.8	274

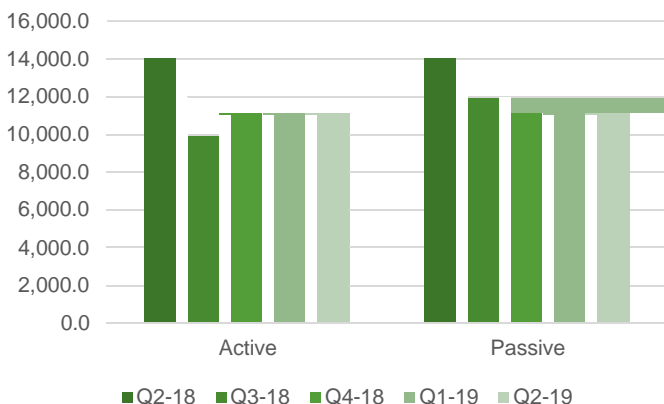
Active vs. Passive investors

The active-to-passive ownership balance saw a minor shift in favour of the active investors and is now more evenly poised with passive and active each holding 50% of the market. Active, American Investor Grantham Mayo Van Otterloo & Co., LLC made the biggest dollar investment in Turkish equities representing a 12% increase on their previous investment.

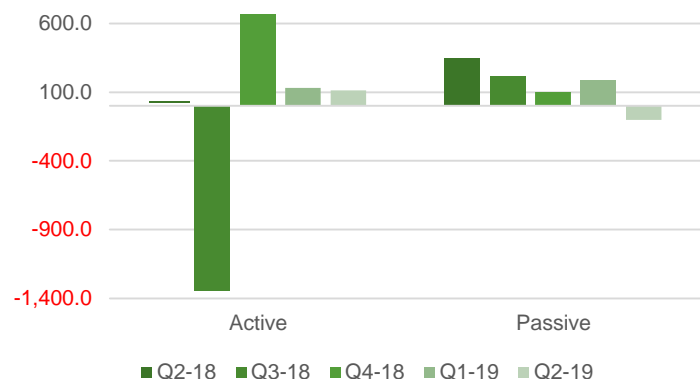
Active vs Passive Split



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
Ashmore Investment Management, LTD	United Kingdom	London	Medium	30,906.1	702.9	6.6	2.3	0.9
TIAA-CREF Investment Management, LLC	United States	New York	Very High	291,142.7	302.0	-30.9	0.1	-9.3
Pictet Asset Management, LTD	United Kingdom	London	High	16,199.9	284.1	-9.7	1.8	-3.3
AllianceBernstein, L.P. (U.S.)	United States	New York	Low	171,199.8	246.3	-33.6	0.1	-12.2
Investec Asset Management, LTD (U.K.)	United Kingdom	London	High	15,162.7	244.5	4.1	1.6	1.1
Fidelity International Limited - FIL Investment Services (U.K.), LTD	United Kingdom	London	Medium	41,222.2	204.0	-24.5	0.5	-10.7
Eurizon Capital SGR S.p.A.	Italy	Milan	Very High	28,166.2	182.1	83.1	0.6	83.9
T. Rowe Price Associates, Inc.	United States	Baltimore	Low	184,941.3	175.3	-19.0	0.1	-9.8
Union Investment Privatfonds GmbH	Germany	Frankfurt	Low	54,293.1	164.8	-12.0	0.3	-6.8
Credit Suisse Asset Management (Schweiz) AG	Switzerland	Zürich	Low	62,869.1	164.8	0.0	0.3	0.0
				2,670.8	-35.9			

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	88,628.9	156.1	156.1	0.2	Buy-in
Eurizon Capital SGR S.p.A.	Italy	Milan	Very High	28,166.2	182.1	83.1	0.6	83.9
Grantham Mayo Van Otterloo & Co., LLC	United States	Boston	Medium	8,759.9	58.0	23.4	0.7	67.5
Robeco Institutional Asset Management BV	Netherlands	Rotterdam	Low	28,927.1	26.7	20.6	0.1	338.2
Candriam Belgium S.A.	Belgium	Brussels	Medium	19,889.3	117.6	15.9	0.6	15.7
Azimut Portfoy Yonetimi A.S.	Turkey	Istanbul	Very High	28.3	15.9	15.9	56.2	Buy-in
AZ Fund Management S.A.	Luxembourg	Luxembourg	Very High	4,860.0	17.7	14.3	0.4	428.2
Fidelity Management & Research Company	United States	Boston	High	69,139.3	64.1	13.0	0.1	25.4
AmFunds Management Bhd	Malaysia	Kuala Lumpur	Low	411.1	37.4	10.0	9.1	36.7
Eurizon SLJ Capital, LTD	United Kingdom	London	Very High	993.1	13.6	9.3	1.4	218.0
				689.1	361.6			

TOP SELLERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Neuberger Berman Europe, LTD (Netherlands)	Netherlands	The Hague	High	6,947.3	146.3	-75.0	2.1	-33.9
Lord, Abbett & Co., LLC (Asset Management)	United States	Jersey City	Very High	139,138.1	100.2	-71.6	0.1	-41.7
Millennium Towarzystwo Funduszy Inwestycyjnych S.A.	Poland	Warsaw	Medium	710.4	0.0	-43.2	0.0	-100.0
TCW Investment Management Company, LLC	United States	Los Angeles	High	104,673.9	59.2	-34.0	0.1	-36.5
AllianceBernstein, L.P. (U.S.)	United States	New York	Low	171,199.8	246.3	-33.6	0.1	-12.0
TIAA-CREF Investment Management, LLC	United States	New York	Very High	291,142.7	302.0	-30.9	0.1	-9.3
Invesco Advisers, Inc.	United States	Atlanta	Medium	154,680.8	43.6	-29.2	0.0	-40.1
Epsilon Associates SGR S.p.A.	Italy	Milan	High	17,992.4	17.8	-24.6	0.1	-58.0
Fidelity International Limited - FIL Investment Services (U.K.), LTD	United Kingdom	London	Medium	41,222.2	204.0	-24.5	0.5	-10.7
Amundi Ireland, LTD (London)	United Kingdom	London	Medium	7,095.4	159.8	-23.8	2.3	-12.9
				1,279.3	-390.3			

Corporate Debt – City Analysis

Most Invested					Most Investors				
Country / City	Total FI Assets (\$M)	Value (\$M)	Activity (\$M)	# Firm s	Country / City	Total FI Assets (\$M)	Value (\$M)	Activity (\$M)	# Firm s
United Kingdom (London)	1,046,609.4	2,535.0	-138.4	55	United Kingdom (London)	1,046,609.4	2,535.0	-138.4	55
United States (New York)	1,839,781.7	1,089.1	-137.1	25	United States (New York)	1,839,781.7	1,089.1	-137.1	25
Sw itzerland (Zürich)	233,961.2	421.6	1.5	14	Spain (Madrid)	78,498.8	65.5	-6.8	19
Germany (Frankfurt)	202,374.1	401.9	-19.6	11	Sw itzerland (Zürich)	233,961.2	421.6	1.5	14
Italy (Milan)	140,764.8	330.2	45.5	12	United States (Boston)	1,160,417.6	319.4	11.9	13
United States (Boston)	1,160,417.6	319.4	11.9	13	Italy (Milan)	140,764.8	330.2	45.5	12
Singapore (Singapore)	23,917.9	197.5	-1.8	7	Germany (Frankfurt)	202,374.1	401.9	-19.6	11
United States (Baltimore)	184,941.3	175.3	-19.0	1	Sw itzerland (Lugano)	3,595.0	92.5	-2.7	11
United States (Charlotte)	148,619.6	163.6	-2.0	2	Austria (Vienna)	28,113.9	89.3	-2.2	11
Ireland (Dublin)	40,035.2	159.9	-24.0	4	France (Paris)	191,202.0	135.2	9.1	10
United States (Austin)	88,628.9	156.1	156.1	1	Singapore (Singapore)	23,917.9	197.5	-1.8	7
Netherlands (The Hague)	49,271.8	152.2	-73.9	3	Sw itzerland (Geneva)	30,173.5	81.7	8.6	7
France (Paris)	191,202.0	135.2	9.1	10	Luxembourg (Luxembourg)	23,956.7	59.6	4.9	7
Belgium (Brussels)	20,233.3	117.8	15.9	2	United States (Chicago)	152,615.2	19.6	2.1	7
United States (Atlanta)	250,364.7	116.9	-30.2	2	Spain (Barcelona)	3,834.0	71.7	-11.4	5
United States (Jersey City)	139,138.1	100.2	-71.6	1	Canada (Toronto)	102,474.2	7.4	-0.6	5
United States (Los Angeles)	126,639.2	92.7	-32.8	3	Ireland (Dublin)	40,035.2	159.9	-24.0	4
Sw itzerland (Lugano)	3,595.0	92.5	-2.7	11	Malaysia (Kuala Lumpur)	1,193.2	69.4	13.8	4
Austria (Vienna)	28,113.9	89.3	-2.2	11	Poland (Warsaw)	4,228.8	37.7	-84.8	4
United Kingdom (Edinburgh)	97,532.9	84.4	-6.1	2	Germany (Munich)	6,502.8	19.3	-0.2	4
		6,930.8	-321.4	190			6,203.5	-332.1	235

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 Q3 2018 can be considered a snapshot of the most current positions.