

FLOW OF FUNDS REPORT

TUYID Q3-2019

December, 2019

Dear Readers,

We are happy to present the Flow of Funds Report for the third 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.

Following year-on-year GDP growth and three quarters of bullish inflows Turkey saw net institutional investment outflows in the third quarter of 2019. Similar bearish sentiment can be seen in Russia, Poland and Hungary. While North America remains the largest invested region in Turkey, Russia and Hungary it accounted for from all issuer countries (Turkey, Russia, Poland and Hungary) over the review period.

Value style investors remain most invested in Turkey despite leading outflows over the report period. Growth investors were responsible for the second largest outflows by investment style. Grantham Mayo Van Otterloo drove the largest value style outflows while Invesco Advisers drove the outflows for growth investment, both US based investors. It should be noted that Invesco recently concluded the takeover of prominent frontier/emerging markets investor OppenheimerFunds, Inc which likely factored into outflows following the realignment of the combined group's portfolios.

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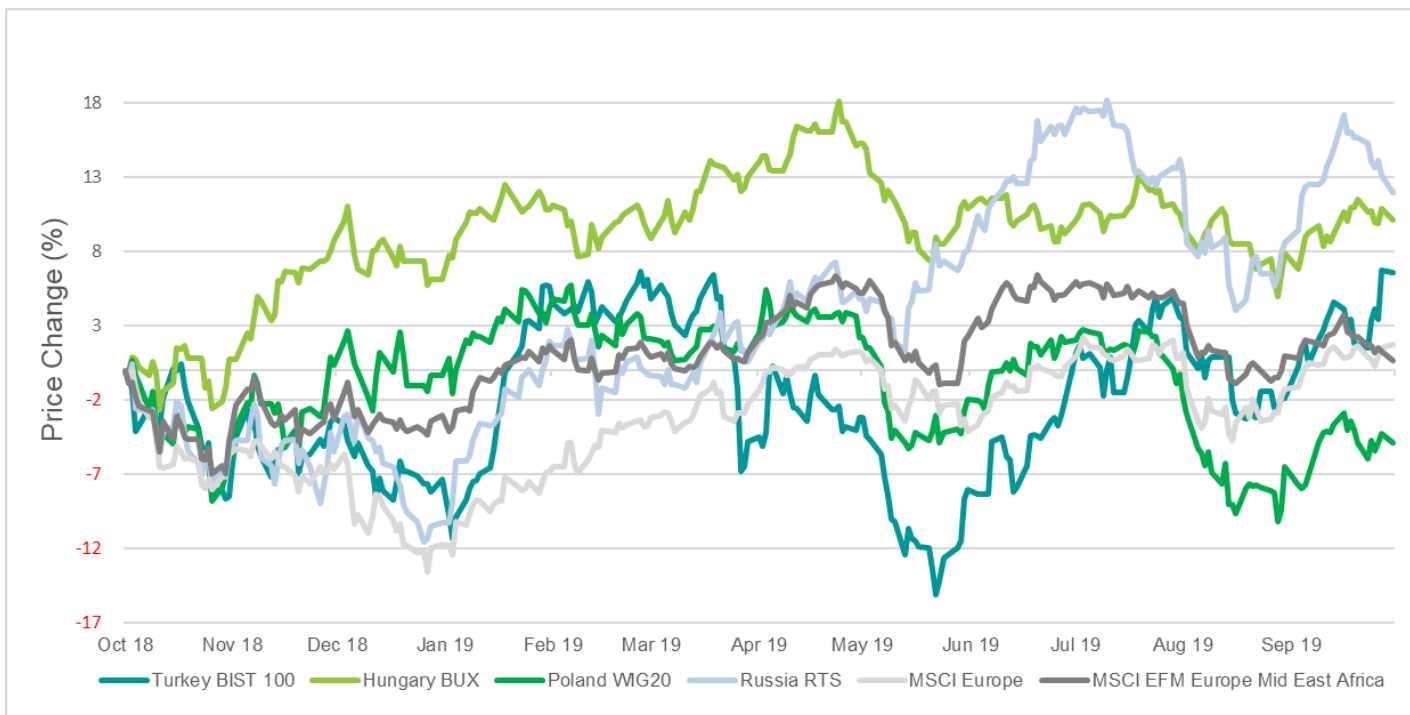
TÜYİD Turkish IR Society
Chair person/ Ford Otosan
Head of Investor Relations
Aslı Selçuk

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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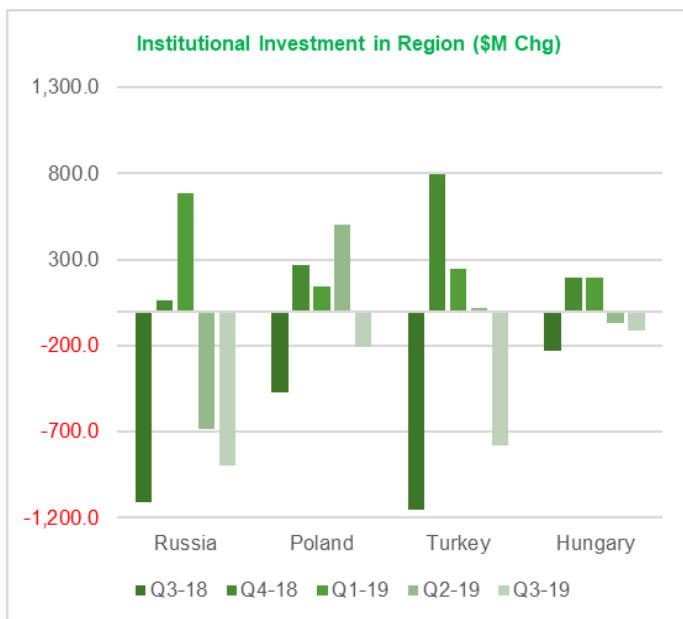
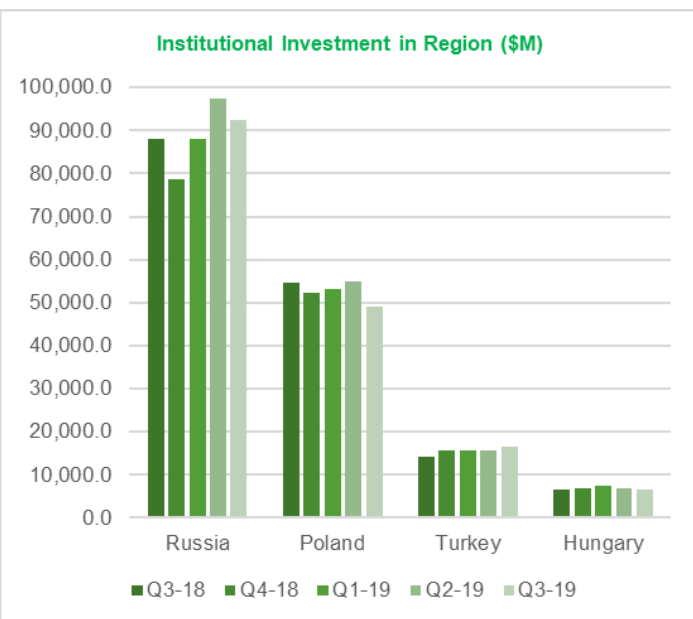
Price performance:

Despite continuing global trade tension, the BIST 100 index was up +6.6% year-on-year outperforming the Poland WIG20, MSCI Europe and MSCI EFM EMEA. However, the strongest performing indices over the last 12 months were the Hungarian BUX and the Russia RTS returning 10.1% and 12.0% respectively.



Inflows and Outflows:

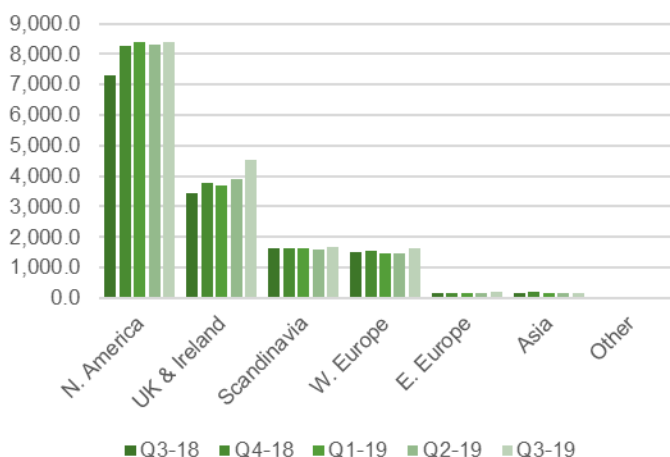
The quarter was characterised by investors withdrawing capital across all four regions while Turkish asset values increased. Turkey and Russia saw the largest withdrawals due to Invesco Advisers, Grantham Mayo Van Otterloo and BlackRock Fund Advisors profit taking/de-risking across both regions.



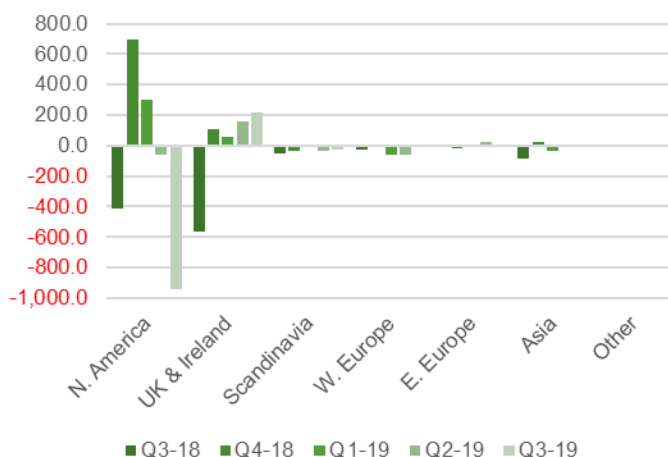
Investment by Investor Region:

North America remains the most invested and has been the main driver behind the quarter's outflow. Invesco Advisers, Grantham Mayo Van Otterloo and BlackRock Fund Advisors are the key drivers of outflows in Turkey and other issuer regions.

Institutional Investment by Region (\$M)



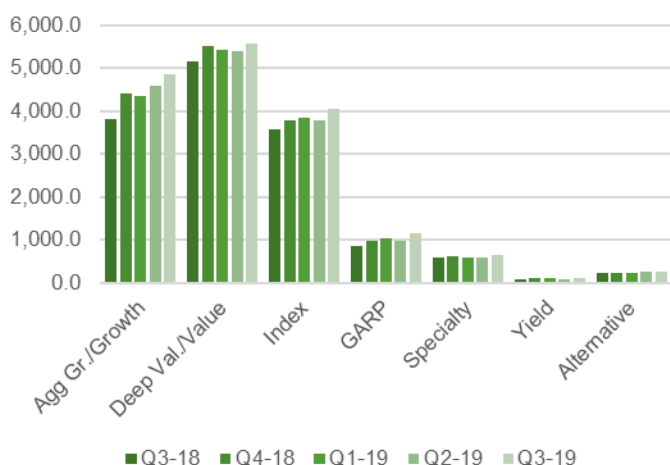
Institutional Investment by Region (\$M Chg)



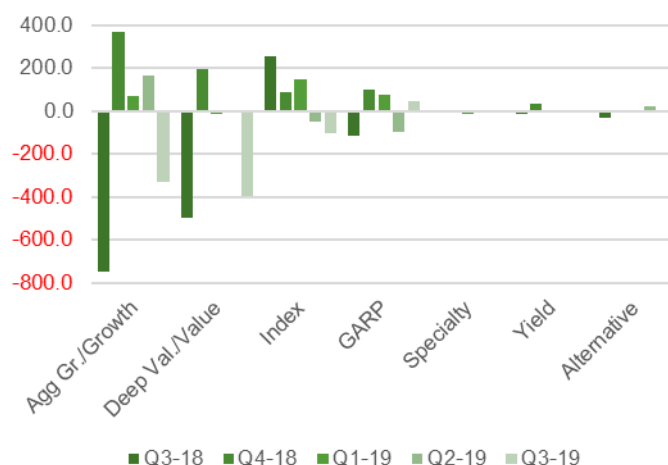
Investment by Style:

The top holding investment styles saw outflows in the period led by value, growth and index investors, composed of Invesco Advisers, TIAA-CREF Investment Management, Grantham Mayo Van Otterloo & Co., SEB Investment Management and BlackRock Fund Advisors.

Institutional Investment by Style (\$M)



Institutional Investment by Style (\$M Chg)



Top Active Holders, Buyers & Sellers

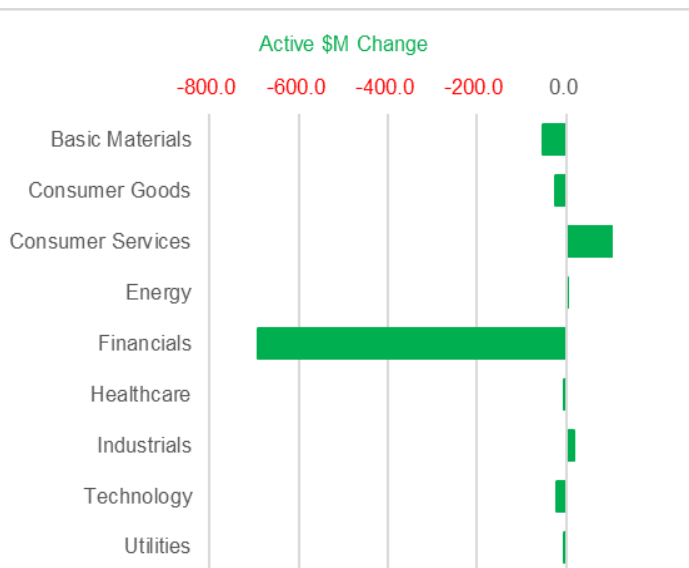
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Norges Bank Investment Management (Norw ay)	Norw ay	Value	Low	678,943.7	762.6	0.0	0.1	0.0
Lazard Asset Management, LLC (U.S.)	United States	Value	Medium	94,865.5	685.9	14.2	0.7	2.1
Genesis Investment Management, LLP	United Kingdom	Grow th	Low	15,870.7	648.2	-2.4	4.1	-0.4
Invesco Advisers, Inc.	United States	Grow th	Low	288,432.6	562.1	-468.8	0.2	-45.5
APG Asset Management N.V.	Netherlands	Specialty	Low	163,664.1	523.4	0.0	0.3	0.0
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	28,905.3	379.8	-239.8	1.3	-38.7
Schroder Investment Management, LTD	United Kingdom	GARP	Medium	111,148.1	362.1	47.0	0.3	14.9
BlackRock Investment Management (U.K.), LTD	United Kingdom	Grow th	Low	460,996.3	332.0	15.1	0.1	4.8
Capital World Investors (U.S.)	United States	Value	Low	666,956.1	330.8	-28.8	0.0	-8.0
Silchester International Investors, LLP	United Kingdom	Value	Low	21,161.7	240.2	0.0	1.1	0.0
					4,827.2	-663.4		

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
J.P. Morgan Asset Management (UK), LTD	United Kingdom	Grow th	Medium	100,768.9	194.6	106.7	0.2	121.5
Schroder Investment Management, LTD	United Kingdom	GARP	Medium	111,148.1	362.1	47.0	0.3	14.9
Caixabank Asset Management, S.G.I.I.C., S.A.	Spain	Grow th	High	13,949.3	31.4	31.4	0.2	Buy-in
Hermes Investment Management, LTD	United Kingdom	GARP	Low	17,818.1	115.2	26.0	0.6	29.1
Investec Asset Management, LTD (U.K.)	United Kingdom	Grow th	Medium	50,337.0	118.6	21.2	0.2	21.8
Candriam Belgium S.A.	Belgium	Grow th	Medium	20,430.2	27.3	19.5	0.1	249.5
BlackRock Investment Management (U.K.), LTD	United Kingdom	Grow th	Low	460,996.3	332.0	15.1	0.1	4.8
Lazard Asset Management, LLC (U.S.)	United States	Value	Medium	94,865.5	685.9	14.2	0.7	2.1
Sw edbank Robur Fonder AB	Sw eden	Grow th	Low	81,725.1	93.2	10.7	0.1	13.0
Pictet Asset Management, LTD	United Kingdom	Grow th	Medium	7,180.9	78.3	10.7	1.1	15.8
					2,038.8	302.6		

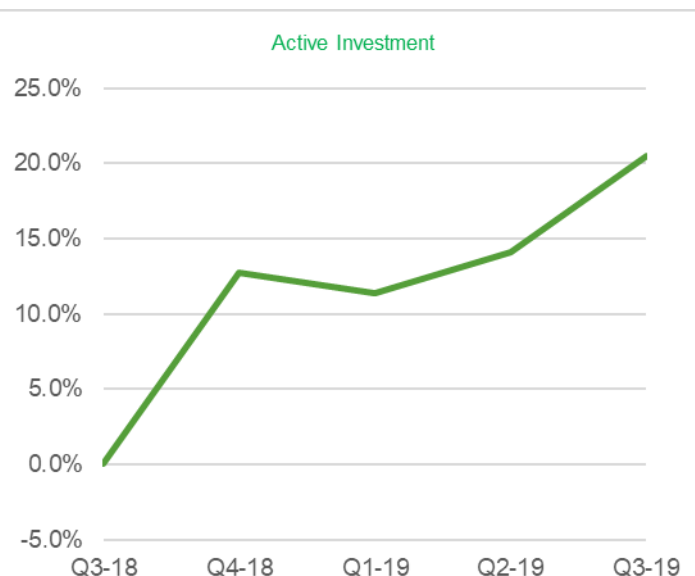
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Invesco Advisers, Inc.	United States	Grow th	Low	288,432.6	562.1	-468.8	0.2	-45.5
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	28,905.3	379.8	-239.8	1.3	-38.7
TIAA-CREF Investment Management, LLC	United States	Grow th	Low	311,150.2	118.5	-39.1	0.0	-24.8
SEB Investment Management AB	Sw eden	Value	Medium	36,523.6	70.5	-36.1	0.2	-33.9
AllianceBernstein, L.P. (U.S.)	United States	Value	Low	188,708.1	102.3	-32.1	0.1	-23.9
Scout Investments, Inc.	United States	Grow th	Very High	5,483.4	14.2	-31.2	0.3	-68.6
Capital World Investors (U.S.)	United States	Value	Low	666,956.1	330.8	-28.8	0.0	-8.0
Causew ay Capital Management, LLC	United States	Value	Medium	27,571.2	63.7	-26.0	0.2	-29.0
Wellington Management Company, LLP	United States	Value	Low	509,944.7	52.3	-16.2	0.0	-23.6
DWS Investment GmbH	Germany	Value	Medium	107,924.0	60.0	-14.9	0.1	-19.9
					1,754.2	-933.0		

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

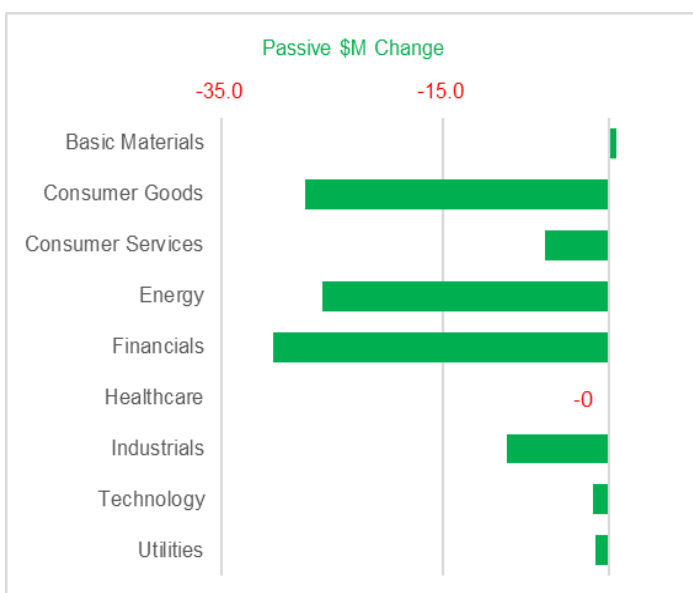
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	3,347,713.5	1,583.5	-9.6	0.0	-0.6
BlackRock Fund Advisors	United States	Index	Low	2,159,795.2	957.5	-81.5	0.0	-7.8
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	138,907.9	397.5	12.8	0.3	3.3
Acadian Asset Management, LLC	United States	Deep Value	Medium	39,981.3	310.5	23.4	0.8	8.1
Arrow street Capital, L.P.	United States	Deep Value	Very High	51,172.3	247.3	-8.3	0.5	-3.3
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	321,100.3	199.8	-6.1	0.1	-3.0
California Public Employees Retirement System	United States	Index	Low	105,512.4	171.5	0.0	0.2	0.0
Stewart Investors (U.K.)	United Kingdom	Growth	Low	4,707.8	155.4	0.0	3.3	0.0
Charles Schwab Investment Management, Inc.	United States	Index	Low	215,268.5	102.6	-2.6	0.0	-2.5
Research Affiliates, LLC	United States	Index	Low	4,826.4	94.3	0.0	2.0	0.0
				4,219.9	-72.0			

TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Acadian Asset Management, LLC	United States	Deep Value	Medium	39,981.3	310.5	23.4	0.8	8.1
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	138,907.9	397.5	12.8	0.3	3.3
TOBAM	France	Specialty	Medium	5,049.1	61.6	5.9	1.2	10.6
Geode Capital Management, LLC	United States	Index	Low	490,574.4	67.6	5.1	0.0	8.1
Global X Management Company, LLC	United States	Index	Medium	10,706.2	10.0	4.0	0.1	67.1
AQR Capital Management, LLC	United States	Alternative	Medium	98,726.9	20.3	2.1	0.0	11.4
DWS Investments (U.K.), LTD	United Kingdom	Index	Very High	50,262.7	13.4	1.4	0.0	11.9
Vident Investment Advisory, LLC	United States	Index	Medium	3,354.3	66.5	1.4	2.0	2.1
Sjunde AP-Fonden (AP 7)	Sweden	Index	Low	57,539.4	56.9	1.1	0.1	2.0
Northern Trust Global Investments, LTD	United Kingdom	Index	Low	76,957.1	36.7	1.0	0.0	2.8
				1,040.9	58.2			

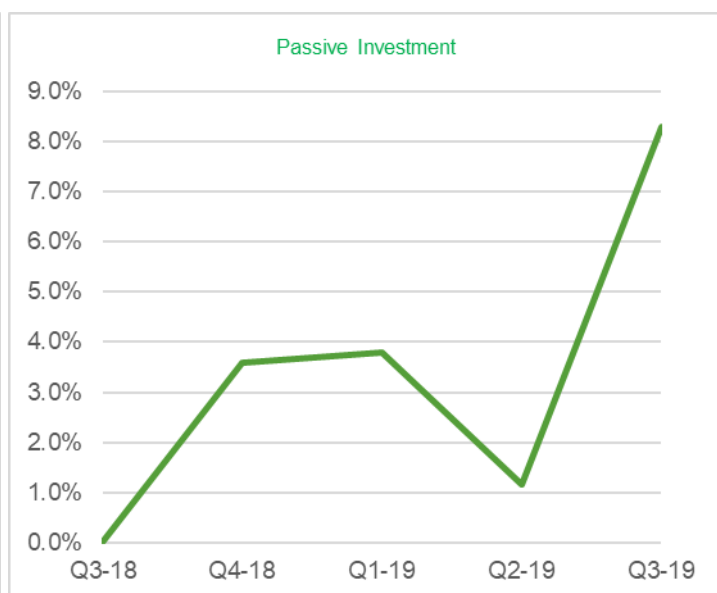
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
BlackRock Fund Advisors	United States	Index	Low	2,159,795.2	957.5	-81.5	0.0	-7.8
State Street Global Advisors (SSgA)	United States	Index	Low	1,411,172.5	92.0	-11.0	0.0	-10.7
The Vanguard Group, Inc.	United States	Index	Low	3,347,713.5	1,583.5	-9.6	0.0	-0.6
Arrow street Capital, L.P.	United States	Deep Value	Very High	51,172.3	247.3	-8.3	0.5	-3.3
Parametric Portfolio Associates, LLC	United States	GARP	Low	128,923.1	82.4	-8.1	0.1	-9.0
Northern Trust Investments, Inc.	United States	Index	Low	392,653.2	50.0	-7.2	0.0	-12.6
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	321,100.3	199.8	-6.1	0.1	-3.0
Numeric Investors, LLC	United States	Alternative	High	18,573.4	21.2	-5.4	0.1	-20.3
First Trust Advisors, L.P.	United States	Index	Medium	57,728.7	42.1	-4.4	0.1	-9.4
Quantitative Management Associates, LLC	United States	Index	Medium	64,937.7	26.5	-4.2	0.0	-13.6
				3,302.2	-145.8			

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 continue to be the most invested cities and cities lead by Genesis Investment Management and Lazard Asset Management, LLC (U.S.) – the two most prominent holders of Turkish equity. While Norges is solely responsible for Oslo's ranking as the third most invested city, Boston's allocations are driven by Grantham Mayo Van Otterloo & Co. and Mellon Investments Corporation.

Most Invested

Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,897,179.6	3,510.7	206.7	68
United States (New York)	2,256,839.3	1,362.3	-32.6	33
Norway (Oslo)	712,937.9	772.9	-1.0	3
United States (Boston)	2,396,005.9	619.5	-261.4	14
United States (Atlanta)	301,855.6	562.1	-471.9	3
Netherlands (Amsterdam)	167,834.7	525.0	0.0	4
United States (Los Angeles)	1,144,829.2	455.2	-54.7	6
Sweden (Stockholm)	249,214.2	316.4	-28.2	11
Canada (Toronto)	510,318.0	268.6	-2.8	11
Denmark (Copenhagen)	85,060.3	232.7	2.0	6
United Kingdom (Edinburgh)	279,704.3	232.1	7.6	4
Netherlands (Rotterdam)	54,320.0	173.5	-4.1	1
Germany (Frankfurt)	293,593.9	168.0	-16.5	6
Switzerland (Zürich)	350,029.0	137.0	-9.3	11
Austria (Vienna)	11,550.5	133.8	1.0	4
United States (San Francisco)	608,866.9	120.6	2.5	4
Sweden (Gothenburg)	14,526.2	106.7	0.0	1
France (Paris)	255,522.1	98.7	-11.8	10
United States (San Diego)	18,247.3	89.3	-0.4	3
Canada (Montreal)	103,424.9	81.6	-0.0	3
Excludes Passive/Index Investors		9,966.7	-674.9	206

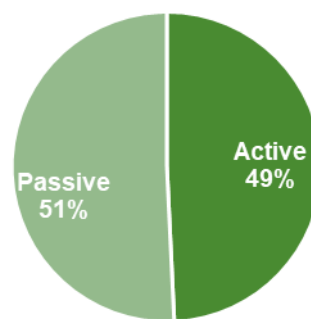
Most Investors

Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,897,179.6	3,510.7	206.7	68
United States (New York)	2,256,839.3	1,362.3	-32.6	33
United States (Boston)	2,396,005.9	619.5	-261.4	14
Japan (Tokyo)	831,222.8	73.4	-5.0	13
Sweden (Stockholm)	249,214.2	316.4	-28.2	11
Canada (Toronto)	510,318.0	268.6	-2.8	11
Switzerland (Zürich)	350,029.0	137.0	-9.3	11
United States (Chicago)	305,039.9	43.2	10.2	11
South Korea (Seoul)	36,404.1	4.2	0.0	11
France (Paris)	255,522.1	98.7	-11.8	10
Poland (Warsaw)	8,907.7	69.9	0.0	10
Singapore (Singapore)	72,117.4	64.2	-0.9	7
Finland (Helsinki)	16,395.9	38.2	-5.9	7
Ireland (Dublin)	46,990.1	37.6	-6.5	7
United States (Los Angeles)	1,144,829.2	455.2	-54.7	6
Denmark (Copenhagen)	85,060.3	232.7	2.0	6
Germany (Frankfurt)	293,593.9	168.0	-16.5	6
Italy (Milan)	28,452.8	78.3	-3.2	5
Luxembourg (Luxembourg)	15,904.0	18.3	-7.3	5
Switzerland (Geneva)	23,499.3	11.5	-0.1	5
Excludes Passive/Index Investors		7,607.8	-227.2	257

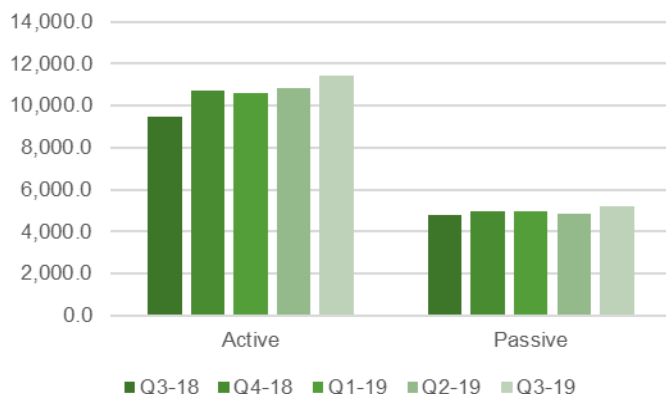
Active vs. Passive investors

The orientation split has remained relatively stable on balance with a slight shift towards passive holders as a result of larger active investor outflows.

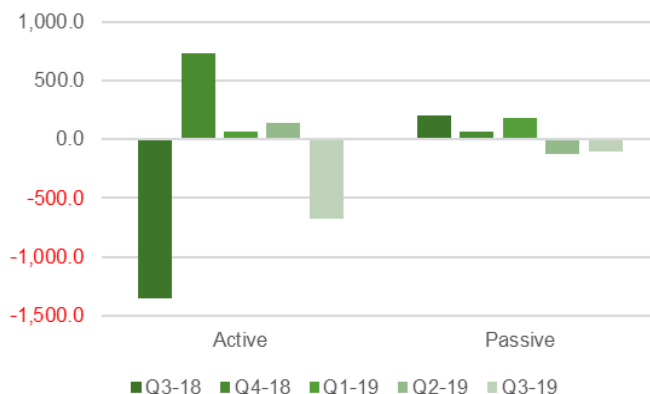
Active vs Passive Split



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
Ashore Investment Management, LTD	United Kingdom	London	Medium	30,952.6	447.1	-295.3	1.4	-39.8
Invesco Advisers, Inc.	United States	Atlanta	Medium	159,061.8	397.4	331.1	0.2	499.6
Pictet Asset Management, LTD	United Kingdom	London	High	14,998.2	309.8	28.3	2.1	10.0
TIAA-CREF Investment Management, LLC	United States	New York	Very High	293,006.9	274.6	-27.4	0.1	-9.1
Amundi Ireland, LTD (London)	United Kingdom	London	High	15,194.7	245.9	17.7	1.6	7.7
Investec Asset Management, LTD (U.K.)	United Kingdom	London	High	15,736.1	211.6	-7.0	1.3	-3.2
Neuberger Berman Europe, LTD (Netherlands)	Netherlands	The Hague	High	8,572.6	190.5	33.6	2.2	21.4
Fidelity International Limited - FIL Investment Services (U.K.), LTD	United Kingdom	London	High	42,903.1	188.7	-15.5	0.4	-7.6
Amundi Asset Management S.A.	France	Paris	High	129,683.7	185.0	169.8	0.1	1,117.3
AllianceBernstein, L.P. (U.S.)	United States	New York	Medium	187,619.7	182.6	-66.9	0.1	-26.8
				2,633.1	168.3			

TOP BUYERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Invesco Advisers, Inc.	United States	Atlanta	Medium	159,061.8	397.4	331.1	0.2	499.6
Amundi Asset Management S.A.	France	Paris	High	129,683.7	185.0	169.8	0.1	1,117.3
Fidelity Management & Research Company	United States	Boston	Very High	68,403.6	122.3	56.0	0.2	84.4
Neuberger Berman Europe, LTD (Netherlands)	Netherlands	The Hague	High	8,572.6	190.5	33.6	2.2	21.4
Pictet Asset Management, LTD	United Kingdom	London	High	14,998.2	309.8	28.3	2.1	10.0
Grantham Mayo Van Otterloo & Co., LLC	United States	Boston	Medium	9,289.5	76.0	18.0	0.8	31.0
Amundi Ireland, LTD (London)	United Kingdom	London	High	15,194.7	245.9	17.7	1.6	7.7
Azimut Portfoy Yonetimi A.S.	Turkey	Istanbul	Very High	50.8	15.9	15.9	31.3	Buy-in
Jupiter Asset Management, LTD (U.K.)	United Kingdom	London	Low	15,753.2	22.9	14.4	0.1	169.8
AZ Fund Management S.A.	Luxembourg	Luxembourg	Very High	5,561.0	17.7	14.3	0.3	428.2
				1,583.3	699.1			

TOP SELLERS	Country	City	Turnover	FI Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Ashore Investment Management, LTD	United Kingdom	London	Medium	30,952.6	447.1	-295.3	1.4	-39.8
AllianceBernstein, L.P. (U.S.)	United States	New York	Medium	187,619.7	182.6	-66.9	0.1	-26.8
Eurizon Capital SGR S.p.A.	Italy	Milan	High	27,795.9	119.4	-62.7	0.4	-34.4
TCW Investment Management Company, LLC	United States	Los Angeles	High	115,025.4	24.8	-56.7	0.0	-69.6
Amundi Asset Management (U.K.)	United Kingdom	London	Very High	13,465.7	68.3	-30.8	0.5	-31.1
TIAA-CREF Investment Management, LLC	United States	New York	Very High	293,006.9	274.6	-27.4	0.1	-9.1
Renta 4 Gestora, S.G.I.I.C., S.A.	Spain	Madrid	Medium	4,082.8	14.7	-25.5	0.4	-63.5
DWS Investment GmbH	Germany	Frankfurt	High	73,805.2	83.0	-18.7	0.1	-18.4
Fidelity International Limited - FIL Investment Services (U.K.), LTD	United Kingdom	London	High	42,903.1	188.7	-15.5	0.4	-7.6
T. Rowe Price Associates, Inc.	United States	Baltimore	Low	192,181.3	159.9	-15.4	0.1	-8.8
				1,563.0	-614.9			

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)	1,139,915.7	2,445.3	-273.5	55	United Kingdom (London)	1,139,915.7	2,445.3	-273.5	55
United States (New York)	1,995,456.3	1,053.7	-108.3	24	United States (New York)	1,995,456.3	1,053.7	-108.3	24
United States (Atlanta)	258,179.0	469.5	328.9	2	Spain (Madrid)	74,463.7	31.1	-39.2	19
Sw itzerland (Zürich)	237,490.6	420.3	2.5	14	Sw itzerland (Zürich)	237,490.6	420.3	2.5	14
Germany (Frankfurt)	210,420.4	346.3	-44.1	10	Italy (Milan)	151,024.0	270.0	-58.1	13
United States (Boston)	945,737.9	314.0	78.2	12	United States (Boston)	945,737.9	314.0	78.2	12
France (Paris)	267,023.2	309.5	177.5	11	France (Paris)	267,023.2	309.5	177.5	11
Italy (Milan)	151,024.0	270.0	-58.1	13	Austria (Vienna)	29,324.7	80.0	-8.2	11
Netherlands (The Hague)	52,297.0	196.2	34.7	3	Sw itzerland (Lugano)	4,113.1	75.9	-0.1	11
Singapore (Singapore)	24,186.4	184.0	-4.3	6	Germany (Frankfurt)	210,420.4	346.3	-44.1	10
United States (Baltimore)	192,181.3	159.9	-15.4	1	Luxembourg (Luxembourg)	25,847.5	56.9	9.1	8
United States (Charlotte)	148,547.4	152.8	-8.1	2	Singapore (Singapore)	24,186.4	184.0	-4.3	6
Belgium (Brussels)	22,585.7	105.1	-13.0	2	Sw itzerland (Geneva)	30,514.8	73.2	-1.4	6
United States (Jersey City)	137,155.7	100.2	-0.0	1	United States (Chicago)	165,024.6	18.8	-0.1	6
Ireland (Dublin)	29,845.2	90.7	2.3	4	Malaysia (Kuala Lumpur)	1,247.5	72.5	0.5	5
United Kingdom (Edinburgh)	101,758.0	87.8	-1.3	2	Ireland (Dublin)	29,845.2	90.7	2.3	4
Austria (Vienna)	29,324.7	80.0	-8.2	11	Spain (Barcelona)	3,839.7	60.2	-12.6	4
Denmark (Copenhagen)	57,956.1	79.1	0.3	3	United States (Los Angeles)	621,549.4	54.6	-59.2	4
United States (Merrimack)	693,765.9	78.1	-0.8	1	Poland (Warsaw)	4,334.1	38.0	0.3	4
Sw itzerland (Lugano)	4,113.1	75.9	-0.1	11	Germany (Munich)	6,654.6	19.5	0.0	4
		7,018.2	89.0	188			6,014.4	-338.8	231

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 2019 can be considered a snapshot of the most current positions.