

# **FLOW OF FUNDS REPORT**

## **TUYID Q3 2017**

November, 2017

Dear Readers,

We are happy to present the Flow of Funds Report for the third quarter of 2017. Our report offers detailed insight on the funds flow 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 three quarters of positive sentiment, investment in Turkish equities swung into the negative in Q3 with net sales of \$181M. The cause of this net divestment was mainly down to a handful of UK and Ireland based investors (led by Aberdeen Asset Managers), without which the market would be in positive territory. The Russian market saw the highest net inflow (\$1.4B), while Poland and Hungary saw inflows of \$317M and \$48M, respectively.

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

IPREO  
Director, Data & Analytics EMEA  
Dominic Mattiucci

TÜYİD Turkish IR Society  
Chairperson/ TAV Airports Holding  
Co. Director, Head of Investor Relations  
Nursel İlgen, CFA

*Acknowledgements: We express our gratitude to Dominic Mattiucci from IPREO Global Markets Intelligence and TÜYİD member Işıl Bük for their contributions.*

*Disclaimer: The evaluations and the information in the Report, where you can find significant statistics about the stock exchange, are prepared based on IPREO'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). IPREO and TÜYİD cannot be taken responsible for the problems that might emerge out of using these sources.*

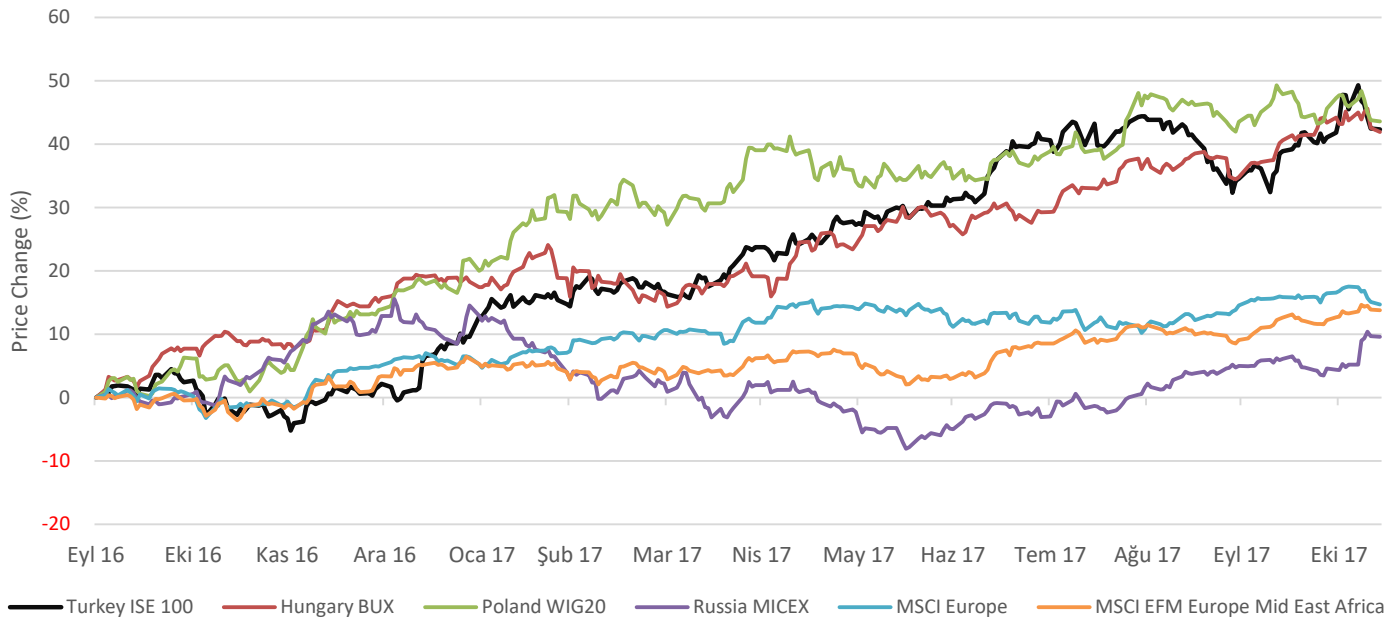
## Price performance:

Over the twelve months to the end October 2017, the BIST National Index rose by 44.00% - making it the second highest performer in the basket - behind the Poland WIG 20 index which climbed by 47.70%. The Hungary BUX continued to show strength with an increase of 43.19% over the same period, while the Russia MICEX index, though in positive territory rose by just 4.36%. The MSCI Europe and the MSCI EFM Europe Mid East Africa indices rose at a much slower pace with returns of 16.81% and 12.76% respectively

*"Looking at individual markets, in Russia, macroeconomic fundamentals have continued to improve, with economic growth accelerating sharply in the second quarter. Key risks, however, include oil prices, rouble volatility and additional economic sanctions. We continue to see value in energy, financials and IT companies. In addition, we believe that higher commodity prices could lead to positive earnings revisions. We are also positive on Turkey and the Czech Republic, and we are keeping a watchful eye on forthcoming elections in both countries."*

Templeton Eastern Europe Fund - September 2017

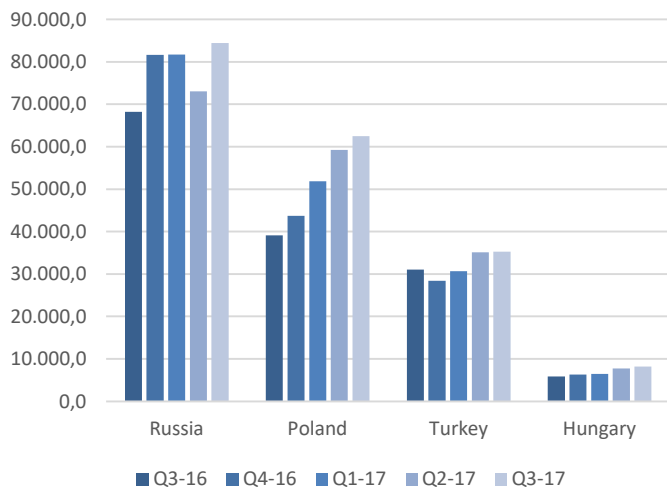
[https://www.franklintempleton.de/content-common/fund-commentary/en\\_GB/local-DE/1921-fund-commentary.pdf](https://www.franklintempleton.de/content-common/fund-commentary/en_GB/local-DE/1921-fund-commentary.pdf)



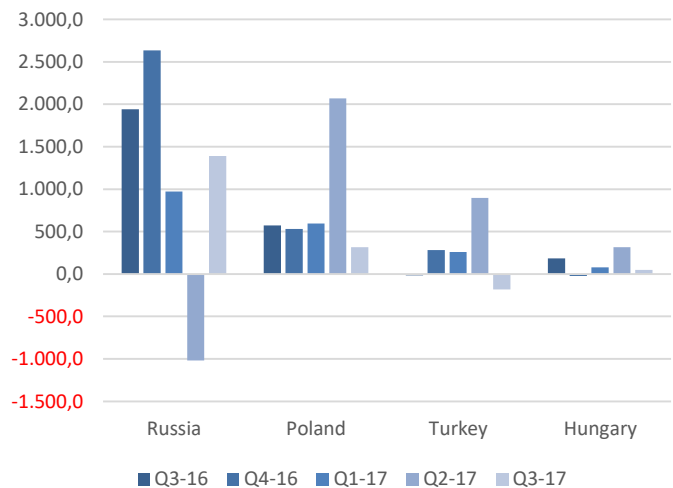
## Inflows and Outflows:

After three quarters of positive sentiment to Turkey, investor attitude turned to slightly negative mainly though a handful UK & Ireland based firms; Turkey, without sales from these firms in Q3-17, would be positive rather than showing aggregated divestment of \$181M. Attitude to Russian equities swung to positive in Q3 with net increases of \$1.4B, with Poland and to a lesser extent Hungary also witnessing buys of \$317M and \$48M respectively.

Institutional Investment in Region (\$M)



Institutional Investment in Region (\$M Chg)



## Investment by Investor Region:

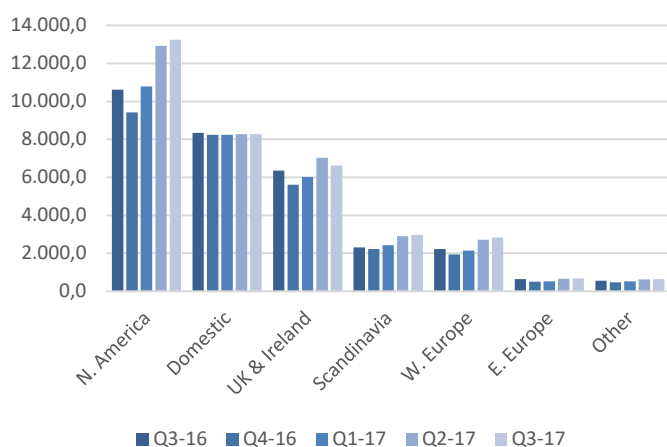
North American interest in the market continues to show positivity though at a smaller rate than in the previous three quarters with net increases of \$112M. Scandinavian investors were the largest net buyers of the region with purchases of \$114M, a third of this increase being attributed to Nordea Investment Management (Denmark) with net buys of \$38M. W. Europe investors showed support to the market for the third consecutive quarter with increases of \$76M, with Netherlands based Robeco Institutional Asset Management BV being the largest overall buyer of the equities with purchases of \$85M.

*Turkish Lira had another heavy underperformance year in 2017 after being one of the worst performing currencies in emerging markets in 2016. The weakness in TRY has also hit the Turkish equity market. After the underperformance in 2015 and 2016, we find the valuations of Turkish assets to be attractive at the current levels compared to other EMs. Turkey offers impressive growth potential with favorable demographic trends and rising household incomes in medium term. Macroeconomic policy has been stable over the last ten years, with reduced inflation and budget deficit. Bank lending increased largely in the same period, boosting domestic demand. Large current account deficit will remain as an Achilles' heel, though financed through direct investments and long-term portfolio inflows.*

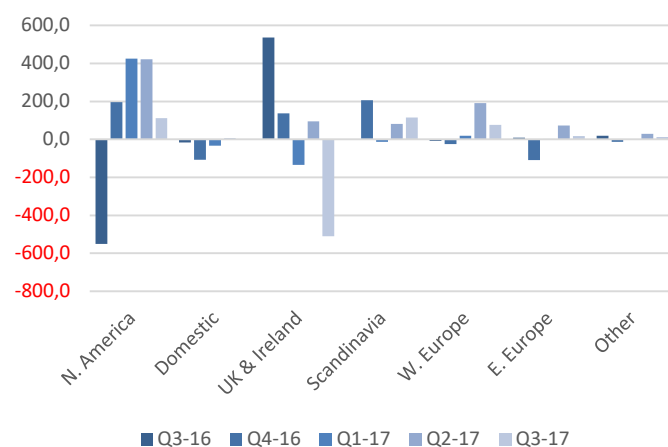
Garanti Turkish Equity Fund - September 2017

<https://www.garantiportfoy.com.tr/MediaLib/20171111613-Garanti%20Turkish%20Equity%20Fund.pdf>

Institutional Investment by Region (\$M)



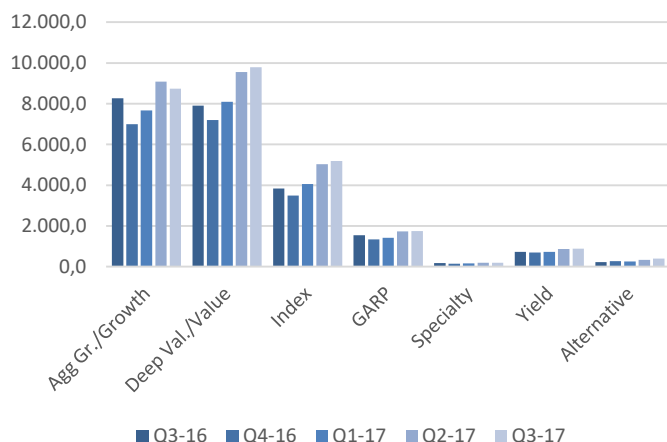
Institutional Investment by Region (\$M Chg)



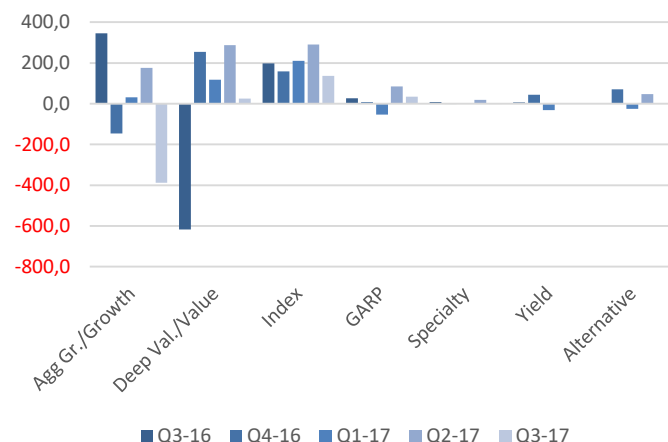
## Investment by Style:

With over \$1.2B invested each, Lazard Asset Management, LLC (U.S.) and Norges Bank Investment Management (Norway) helped Value investors to hold the top spot in dollar terms; with this style of investment holding over \$1B more than their Growth counterparts. While Value investors were relatively flat in Q3 (increasing by just \$25M), Growth investors withdrew \$388M from the market with Aberdeen Asset Managers, LTD (U.K.) reducing its exposure by \$384M. Index investors continued to invest for the fifth straight quarter with increases of \$137M making this style the largest buyers in Q3.

Institutional Investment by Style (\$M)



Institutional Investment by Style (\$M Chg)

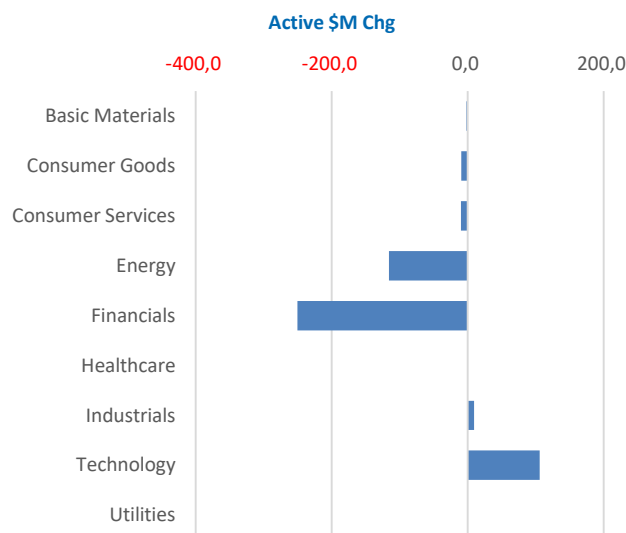


## Top Active Holders, Buyers & Sellers

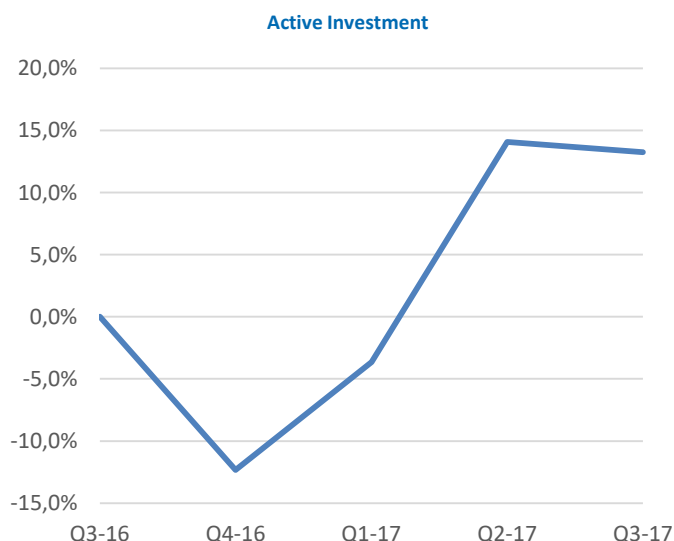
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Lazard Asset Management, LLC (U.S.)	United States	Value	Medium	93,669.0	1,232.1	-94.8	1.3	-7.1
Norges Bank Investment Management (Norway)	Norway	Value	Low	634,737.8	1,205.5	0.0	0.2	0.0
Aberdeen Asset Managers, LTD (U.K.)	United Kingdom	Growth	Low	96,730.9	1,077.4	-383.6	1.1	-26.3
APG Asset Management N.V.	Netherlands	Yield	Low	163,579.5	829.3	0.0	0.5	0.0
Genesis Investment Management, LLP	United Kingdom	Growth	Low	26,241.4	733.7	3.6	2.8	0.5
Fidelity Management & Research Company	United States	Growth	Low	903,219.5	498.9	26.7	0.1	5.7
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	40,404.6	473.5	23.7	1.2	5.3
OppenheimerFunds, Inc	United States	Growth	Medium	160,725.6	468.6	9.5	0.3	2.1
Invesco Advisers, Inc.	United States	Growth	Low	180,415.4	425.5	14.8	0.2	3.6
BlackRock Investment Management (U.K.), LTD	United Kingdom	Growth	Low	353,985.0	409.2	-14.2	0.1	-3.4
				7,353.6	-414.3			
TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Robeco Institutional Asset Management BV	Netherlands	Value	Medium	40,840.4	367.0	85.4	0.9	30.3
Nordea Investment Management (Denmark)	Denmark	Value	Low	73,220.0	379.7	38.2	0.5	11.2
Causeway Capital Management, LLC	United States	Value	Medium	29,241.6	112.8	36.3	0.4	47.4
Danske Capital (Denmark)	Denmark	Growth	Medium	21,610.1	74.4	30.4	0.3	69.0
SEB Investment Management AB	Sweden	Value	Medium	38,088.0	226.6	28.5	0.6	14.4
Harding Loevner, L.P.	United States	GARP	Low	34,363.6	260.6	28.3	0.8	12.2
Fidelity Management & Research Company	United States	Growth	Low	903,219.5	498.9	26.7	0.1	5.7
Goldman Sachs Asset Management, L.P. (U.S.)	United States	GARP	Medium	123,665.5	53.6	25.3	0.0	89.4
Grantham Mayo Van Otterloo & Co., LLC	United States	Value	Medium	40,404.6	473.5	23.7	1.2	5.3
AllianceBernstein, L.P. (U.S.)	United States	Value	Medium	160,723.6	103.1	23.5	0.1	29.5
				2,550.0	346.2			
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Aberdeen Asset Managers, LTD (U.K.)	United Kingdom	Growth	Low	96,730.9	1,077.4	-383.6	1.1	-26.3
Templeton Global Advisors, LTD	Bahamas	Value	Medium	41,151.3	0.0	-124.8	0.0	-100.0
Lazard Asset Management, LLC (U.S.)	United States	Value	Medium	93,669.0	1,232.1	-94.8	1.3	-7.1
Lazard Asset Management, LTD (U.K.)	United Kingdom	Value	Medium	9,697.4	6.7	-63.1	0.1	-90.4
Investec Asset Management, LTD (U.K.)	United Kingdom	Growth	Medium	43,261.1	71.6	-48.3	0.2	-40.3
Capital Guardian Trust Company (U.S.)	United States	Growth	Low	25,502.0	19.6	-34.1	0.1	-63.5
J.P. Morgan Asset Management (UK), LTD	United Kingdom	Growth	Medium	114,566.9	346.8	-30.4	0.3	-8.1
J.P. Morgan Investment Management, Inc.	United States	Growth	Low	273,230.1	123.5	-17.1	0.0	-12.1
Thornburg Investment Management, Inc.	United States	GARP	Medium	29,111.3	0.0	-16.1	0.0	-100.0
Carmignac Gestion	France	Growth	Medium	22,114.0	23.2	-14.5	0.1	-38.4
				2,901.0	-826.8			

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

## Sector Inflows/Outflows



## % Change in Active Investment vs 5 Previous Quarters

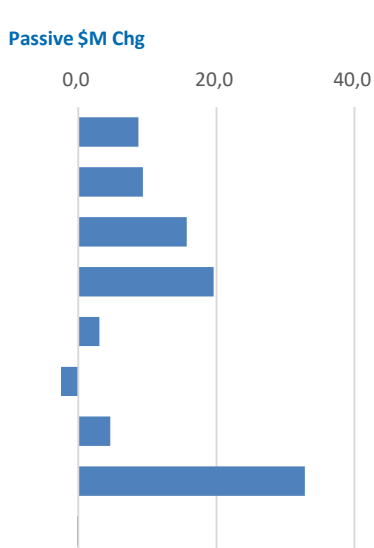


## Top Passive Holders, Buyers & Sellers

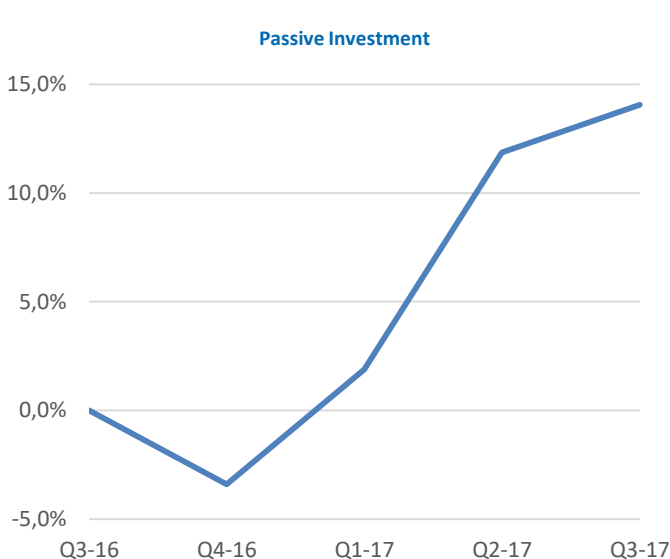
TOP HOLDERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	2,599,728.0	2,121.3	57.9	0.1	2.8
BlackRock Fund Advisors	United States	Index	Low	1,792,283.0	1,321.9	34.2	0.1	2.7
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	395,538.9	1,055.4	24.1	0.3	2.3
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	165,864.4	360.3	4.0	0.2	1.1
Arrowstreet Capital, L.P.	United States	Deep Value	Very High	43,694.1	275.5	0.5	0.6	0.2
Parametric Portfolio Associates, LLC	United States	GARP	Medium	91,148.8	251.0	-10.8	0.3	-4.1
California Public Employees Retirement System	United States	Index	Low	119,177.7	235.8	0.0	0.2	0.0
Acadian Asset Management, LLC	United States	Deep Value	Medium	37,048.0	231.4	-3.2	0.6	-1.4
Mellon Capital Management Corporation	United States	Index	Low	175,766.8	157.7	7.7	0.1	5.1
State Street Global Advisors (SSgA)	United States	Index	Low	1,203,367.0	131.6	9.8	0.0	8.1
				6,141.9	124.3			
TOP BUYERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
The Vanguard Group, Inc.	United States	Index	Low	2,599,728.0	2,121.3	57.9	0.1	2.8
BlackRock Fund Advisors	United States	Index	Low	1,792,283.0	1,321.9	34.2	0.1	2.7
Dimensional Fund Advisors, L.P. (U.S.)	United States	Value	Low	395,538.9	1,055.4	24.1	0.3	2.3
Invesco PowerShares Capital Management, LLC	United States	Index	Low	102,961.8	49.0	14.7	0.0	43.1
State Street Global Advisors (SSgA)	United States	Index	Low	1,203,367.0	131.6	9.8	0.0	8.1
Mellon Capital Management Corporation	United States	Index	Low	175,766.8	157.7	7.7	0.1	5.1
Charles Schwab Investment Management, Inc.	United States	Index	Low	145,939.0	86.2	6.9	0.1	8.6
First Trust Advisors, L.P.	United States	Growth	Medium	43,275.9	33.3	5.1	0.1	17.9
BlackRock Advisors (U.K.), LTD	United Kingdom	Index	Low	165,864.4	360.3	4.0	0.2	1.1
Numeric Investors, LLC	United States	Alternative	Very High	12,011.9	14.6	4.0	0.1	37.9
				5,331.3	168.5			
TOP SELLERS	Country	Style	Turnover	Equity Assets (\$M)	Value (\$M)	Change (\$M)	% Portfolio	% Portfolio Chg
Stewart Investors (U.K.)	United Kingdom	Growth	Medium	5,926.8	127.0	-64.9	2.1	-33.8
AQR Capital Management, LLC	United States	Alternative	Medium	89,038.5	35.3	-11.8	0.0	-25.1
Parametric Portfolio Associates, LLC	United States	GARP	Medium	91,148.8	251.0	-10.8	0.3	-4.1
Quantitative Management Associates, LLC	United States	Index	Medium	62,371.5	16.8	-7.4	0.0	-30.5
Legal & General Investment Management, LTD	United Kingdom	Index	Low	217,350.3	70.3	-5.7	0.0	-7.6
Acadian Asset Management, LLC	United States	Deep Value	Medium	37,048.0	231.4	-3.2	0.6	-1.4
Hexavest, Inc.	Canada	Growth	High	10,760.7	1.7	-2.9	0.0	-63.5
Vident Investment Advisory, LLC	United States	Index	High	3,536.8	75.9	-2.0	2.1	-2.5
TOBAM	France	Specialty	Medium	6,412.7	31.0	-1.4	0.5	-4.3
INVECO Asset Management Deutschland GmbH	Germany	Value	Medium	10,418.5	7.4	-1.1	0.1	-12.7
				847.9	-111.3			

*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 dominant investor centres in both dollar terms as well as the number of active investors. As in Q2, London based investors continued to divest their portfolios in the region (mainly through Aberdeen Asset Managers), while New York investors remained relatively flat (-\$24M) vs the previous quarter when they made net purchases of \$108M. Boston based investors continued their aggregated support to the market with net increases of \$70M, with Fidelity Management & Research Company and Grantham Mayo Van Otterloo & Co., LLC buying \$27M and \$24M respectively.

Most Invested				
Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,927,957.4	5,644.2	-465.9	74
United States (New York)	2,661,658.0	2,576.6	-24.4	46
Norway (Oslo)	664,412.5	1,219.1	0.1	3
United States (Boston)	2,199,922.1	1,170.2	69.5	15
Netherlands (Amsterdam)	169,258.6	833.7	0.0	4
United States (Los Angeles)	1,174,144.2	485.6	49.0	8
United States (Atlanta)	192,639.6	461.7	13.3	2
Sweden (Stockholm)	207,670.8	440.9	1.3	11
Denmark (Copenhagen)	92,752.0	385.8	39.5	5
Netherlands (Rotterdam)	40,840.4	367.0	85.4	1
United States (San Francisco)	267,943.8	338.7	-47.3	3
Norway (Stavanger)	8,734.0	306.2	0.0	1
Turkey (Istanbul)	295.2	305.9	-2.5	8
Switzerland (Geneva)	96,685.8	289.7	1.0	9
United States (Bridgewater)	34,363.6	260.6	28.3	1
Germany (Frankfurt)	309,181.0	258.7	-18.9	6
Singapore (Singapore)	145,945.3	240.0	-14.6	10
Sweden (Solna)	38,088.0	226.6	28.5	1
Canada (Toronto)	465,054.9	210.4	8.2	14
Poland (Warsaw)	20,918.2	198.0	0.0	19
Excludes Passive/Index Investors		16,219.6	-249.4	242

Most Investors				
Country / City	Total Equity Assets (\$M)	Value (\$M)	Activity (\$M)	# Firms
United Kingdom (London)	1,927,957.4	5,644.2	-465.9	74
United States (New York)	2,661,658.0	2,576.6	-24.4	46
Poland (Warsaw)	20,918.2	198.0	0.0	19
United States (Boston)	2,199,922.1	1,170.2	69.5	15
Japan (Tokyo)	631,157.2	116.3	8.4	15
Canada (Toronto)	465,054.9	210.4	8.2	14
South Korea (Seoul)	51,287.9	15.2	-0.2	14
France (Paris)	199,673.6	154.0	-12.0	12
United States (Chicago)	297,078.9	166.4	9.6	11
Sweden (Stockholm)	207,670.8	440.9	1.3	11
Singapore (Singapore)	145,945.3	240.0	-14.6	10
Switzerland (Geneva)	96,685.8	289.7	1.0	9
Taiwan (Taipei)	22,985.1	20.7	0.0	9
United States (Los Angeles)	1,174,144.2	485.6	49.0	8
Finland (Helsinki)	16,384.8	85.6	3.5	8
Switzerland (Zürich)	247,672.6	157.9	-0.3	8
Turkey (Istanbul)	295.2	305.9	-2.5	8
Hong Kong (Central)	72,137.0	68.3	18.4	7
Ireland (Dublin)	31,591.8	35.9	-5.1	6
Austria (Vienna)	9,610.9	175.8	-5.7	6
Excludes Passive/Index Investors		12,557.5	-361.7	311

## Active vs. Passive investors:

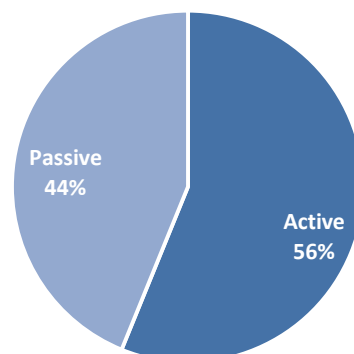
On the back of heavy buying in Q2, Active investors posted net sales \$272M while Passive investment continued to increase – albeit at a much slower pace than previous quarters.

“YTD Turkish stocks have appreciated over +43% in Turkish lira and in euro terms +21%. Based on sentiment indices Turkish economy continues at high growth space. PMI index was 52.8 points level. Industrial production increased by +5.2%YoY in August.”

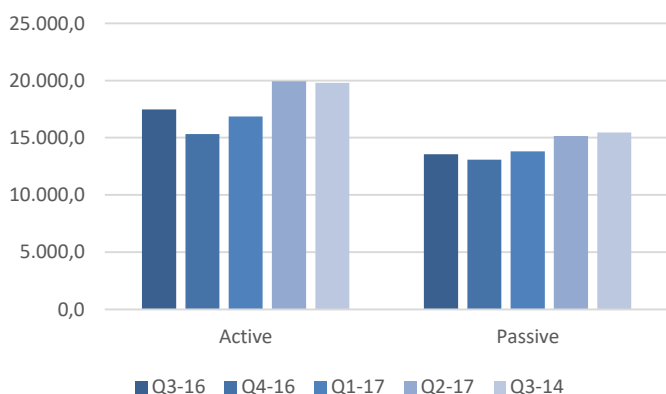
Swedbank Eastern Europe Equity Fund - October 2017

[https://www.swedbank.ee/static/investor/funds/SEEEF\\_raport\\_eng.pdf](https://www.swedbank.ee/static/investor/funds/SEEEF_raport_eng.pdf)

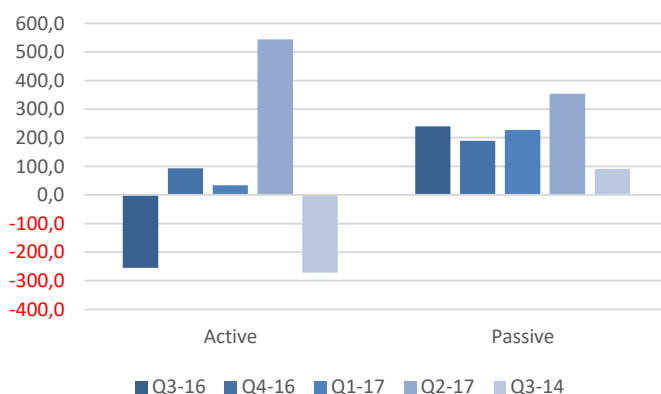
## Active vs Passive Split



## Active vs Passive (\$M)



## Active vs Passive (\$M Chg)



## 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.

### 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)





## GLOSSARY

**Equity Assets (\$M)** – The market value of all current publicly disclosed ownership of equity securities held by an account/institution as identified by Ipreo, 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:  $[(\sum \text{Value} (\$M)) / ((\sum \text{Value} (\$M) - (\sum \text{Change} (\$M)) \times 100)]$

Ipreo'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, Ipreo 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 2017 can be considered a snapshot of the most current positions.