

# THE ROBO ADVISOR - EM EQUITIES

## WHAT ROBO DOES:

“The Robo Advisor/EM Equities” tool assigns valuation scores to nine EM markets under our scope, based on quantitative analyses and econometric models that rely on historical regression, real exchange rate (REER) comparisons and equity valuations. The scores are complemented with technical trend analysis, to initiate a timely strategy.

For details on econometric methods please see page 4.

**IDEAS:** Since we have launched the RoboAdvisor, BIST100/Turkey has stayed as the most undervalued index whereas JCI/Indonesia-Sensex/India as the most overvalued. However overvaluation in those indices were not supported by downward trend. As we cross-check the scoring with technical trend in series, only Turkish equities seem to be the perfect match. Moreover Micex/Russia is moderately overvalued coupled with negative technical trend.

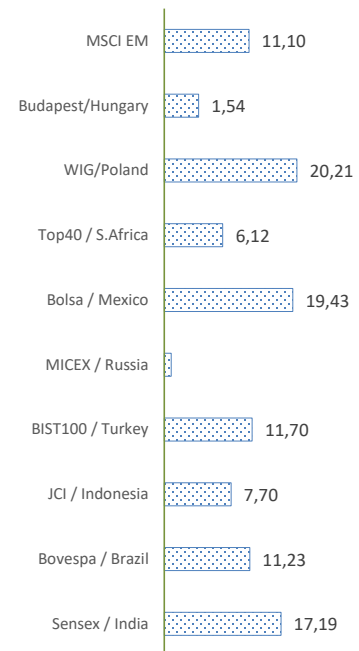
In summary, our analysis continue to evaluate BIST100/Turkey as undervalued with positive trend, whereas Micex/Russia stays overvalued with negative trend.

## IDEAS: TRACK RECORD

	Score	Trend	Signal	P&L
Turkey/BIST100	M.Undervalued	Positive	15 Dec 2016	17,85%
Russia/Micex	M.Overvalued	Negative	14 Feb 2017	10,08%

**ON WATCH:** JCI/Indonesia, Overvaluation is not supported by trend. Waiting for signal.

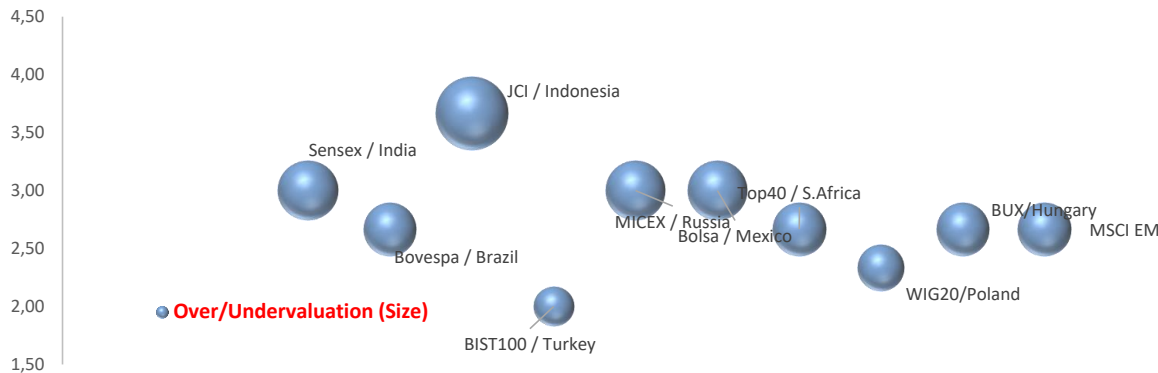
EM YTD Performance (USD) (%)



## SCORECARD

	MODEL (Short-Term)	REER (Long -Term)	VALUATION (Long-Term)	SCORE	TREND
Sensex / India	3	3	3	MODERATELY OVERVALUED	POS
Bovespa / Brazil	3	3	2	MODERATELY OVERVALUED	POS
JCI / Indonesia	4	4	3	OVERVALUED	POS
BIST100 / Turkey	4	1	1	MODERATELY UNDERVALUED	POS
MICEX / Russia	3	4	2	MODERATELY OVERVALUED	NEG
Bolsa / Mexico	4	2	3	MODERATELY OVERVALUED	POS
Top40 / S.Africa	2	4	2	MODERATELY OVERVALUED	POS
WIG20/Poland	3	3	1	MODERATELY OVERVALUED	POS
BUX/Hungary	3	3	2	MODERATELY OVERVALUED	POS
MSCI EM	1	4	3	MODERATELY OVERVALUED	POS

Scoring as follows: 1 for UNDERVALUED, 2 for Moderately Undervalued, 3 for Moderately Overvalued, 4 for Overvalued



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# Valuation and Equity Performance

On the equity valuation side. We have compared key price multiples of the selected EM's from a perspective of historical discount/premiums. Consensus forecasts on EPS growth were also taken into account. Dully, several metrics put India as the most overvalued market, whereas Bolsa, BIST100, WIG20, MICEX and BUX might be moderately undervalued.

WIG20/Poland and Bovespa/Brazil still look moderately undervalued due to strong EPS growth expectations.

## Equity Markets / Historical Valuation

11/04/2017	Fwd P/E 12M	Premium/Discount to 3Y Average	Premium/Discount to 10Y average	EPS Growth Exp	QUANTILE SCORE
Sensex / India	17,39	2,1%	13,7%	27,0%	MODERATELY OVERVALUED
Bovespa / Brazil	12,05	-5,8%	20,2%	60,8%	MODERATELY UNDERVALUED
JCI / Indonesia	16,64	4,6%	9,8%	25,9%	MODERATELY OVERVALUED
BIST100 / Turkey	9,10	-8,7%	-11,6%	19,1%	MODERATELY UNDERVALUED
MICEX / Russia	6,11	-1,5%	-30,4%	17,4%	MODERATELY UNDERVALUED
Bolsa / Mexico	18,56	-8,7%	10,4%	32,5%	MODERATELY UNDERVALUED
Top40 / S.Africa	14,59	-11,6%	9,1%	35,7%	UNDERVALUED
WIG20/Poland	12,27	-4,3%	-0,2%	75,8%	UNDERVALUED
BUX/Hungary	11,50	-5,2%	6,4%	-2,0%	MODERATELY UNDERVALUED
MSCI EM	12,41	2,7%	6,0%	24,5%	MODERATELY OVERVALUED

## Equity Markets / EM comparative valuation

11/04/2017	Premium/Discount to EM	Premium/Discount to 3Y Average	Premium/Discount to 10Y average	QUANTILE SCORE
Sensex / India	0,40	40,7%	36,4%	OVERVALUED
Bovespa / Brazil	-0,03	4,9%	0,9%	MODERATELY UNDERVALUED
JCI / Indonesia	0,34	31,1%	22,4%	MODERATELY OVERVALUED
BIST100 / Turkey	-0,27	-17,5%	-16,8%	UNDERVALUED
MICEX / Russia	-0,51	-49,1%	-41,5%	UNDERVALUED
Bolsa / Mexico	0,50	67,6%	44,7%	OVERVALUED
Top40 / S.Africa	0,18	36,1%	12,4%	MODERATELY OVERVALUED
WIG20/Poland	-0,01	6,2%	1,3%	MODERATELY UNDERVALUED
BUX/Hungary	-0,07	0,5%	-10,4%	UNDERVALUED

11/04/2017	Fwd P/E 12M	P/E	P/B	P/EBITDA	P/SALES	Fwd ROE	ROE
Sensex / India	17,39	22,09	2,93	10,34	2,54	13,93	13,71
Bovespa / Brazil	12,05	19,37	1,64	6,00	1,19	11,59	8,02
JCI / Indonesia	16,64	20,95	2,53	9,78	2,10	17,87	12,70
BIST100 / Turkey	9,10	10,83	1,29	6,21	1,05	13,20	12,77
MICEX / Russia	6,11	7,17	0,77	3,18	0,93	9,76	10,74
Bolsa / Mexico	18,56	24,59	2,61	6,78	1,56	17,87	11,77
Top40 / S.Africa	14,59	19,80	2,08	9,95	1,81	14,43	13,39
WIG20/Poland	12,27	21,57	1,34	5,39	1,08	7,90	6,28
BUX/Hungary	11,50	11,27	1,47	4,82	1,23	9,52	14,46
MSCI EM	12,41	15,46	1,65	7,01	1,30	9,63	11,04

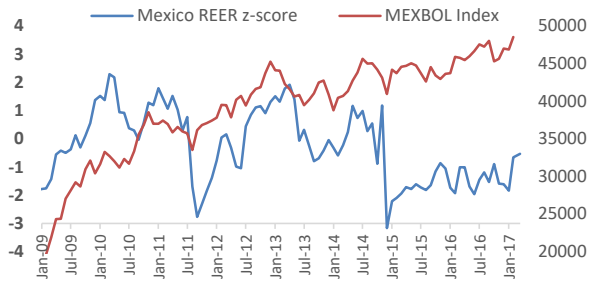
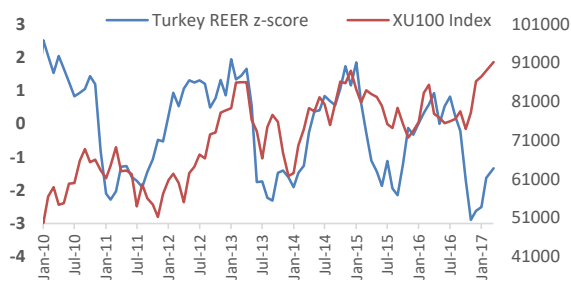
Source: Ak Investment, Bloomberg

# Real Exchange Rates and Equity Markets

## UNDERVALUED/SIGNIFICANT LONG TERM POTENTIAL

Our statistical measure derived from real exchange rates indicate Turkish and Mexican real exchange rates stay at historically low levels...

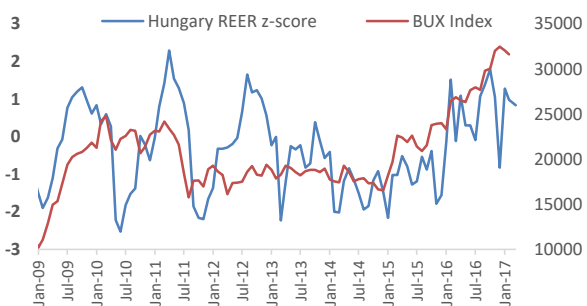
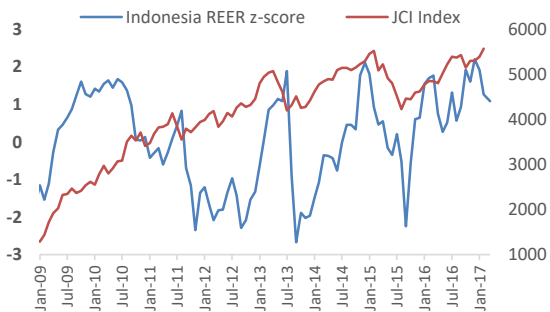
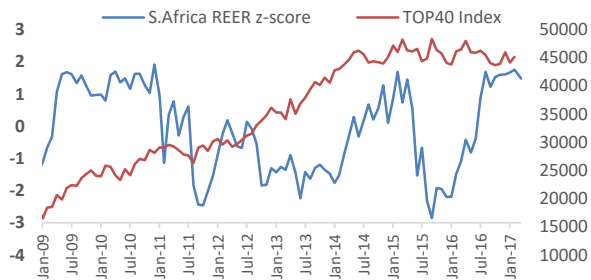
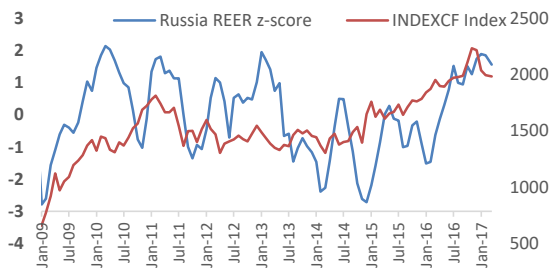
A good proxy for long term upside potential...



## OVERVALUED/MINOR LONG TERM POTENTIAL

Russia, S.Africa, Indonesia and Hungary looks overvalued from a long term perspective.

This may limit upside potential for the countries in question.

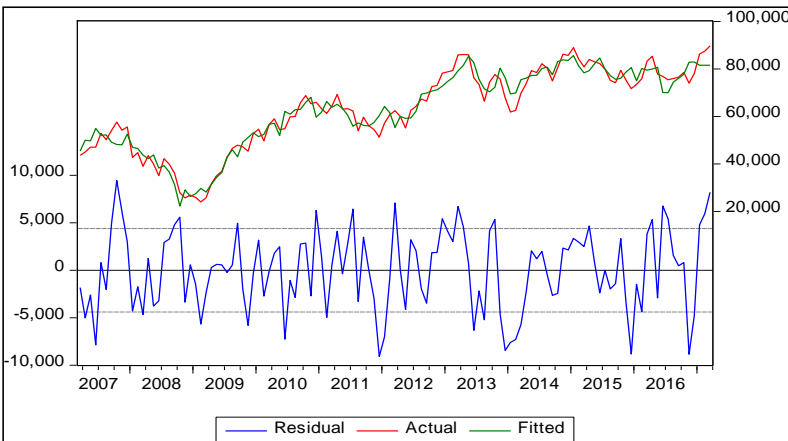


# Regression models (Short-term view)

Our regression models are designed to come up with a short-term view to contribute to long-term REER and valuation models. From a dataset of over 500 global macro and financial variables, regressions with highest R-Sq and favorable backtesting results are chosen to evaluate equity markets short-term potential. Thresholds and valuation graphs (shown as blue series) are derived from the difference between actual index series and model forecasts.

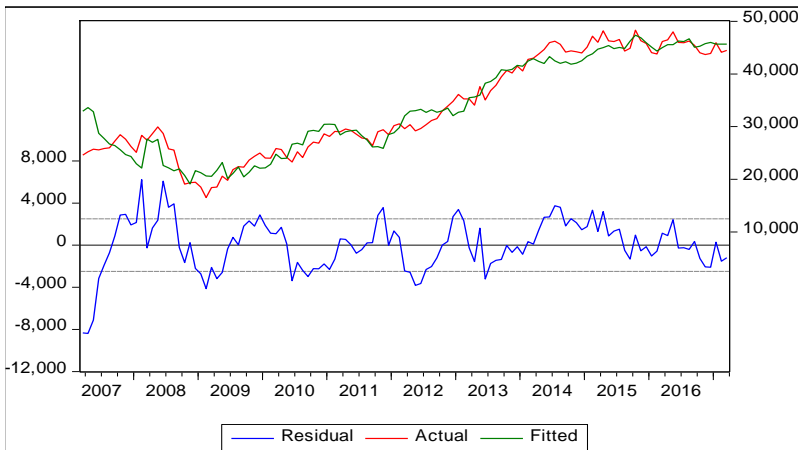
Recent short-term regression models indicate a short-term overvaluation for BIST100 and SENSEX, whereas undervaluation for Top40 and

11/04/2017	R-Sq	LOWER THRESHOLD	MID	UPPER THRESHOLD	LATEST	QUANTILE SCORE
Sensex / India	93%	-1500	250	2000	1704	MODERATELY OVERVALUED
Bovespa / Brazil	75%	-5000	1000	7000	3271	MODERATELY OVERVALUED
JCI / Indonesia	94%	-400	0	400	667	OVERVALUED
BIST100 / Turkey	93%	-5000	500	6000	7638	OVERVALUED
MICEX / Russia	73%	-200	-25	150	45	MODERATELY OVERVALUED
Bolsa / Mexico	95%	-2900	0	2900	3038	OVERVALUED
Top40 / S.Africa	93%	-2500	500	3500	237	MODERATELY UNDERVALUED
WIG20/Poland	86%	-240	0	240	6	MODERATELY OVERVALUED
BUX/Hungary	92%	-2000	0	2000	487	MODERATELY OVERVALUED
MSCI EM	67%	85	-8	-100	15	UNDERVALUED



BIST100/ Turkey could face a short-term correction. However Turkish equities look relatively undervalued from the longer-term perspective.

The series (blue) on the lower panel stays close to upper band.



Top40/ South Africa looks oversold from a short-term perspective.

The series (blue) on the lower panel stays close to lower band.

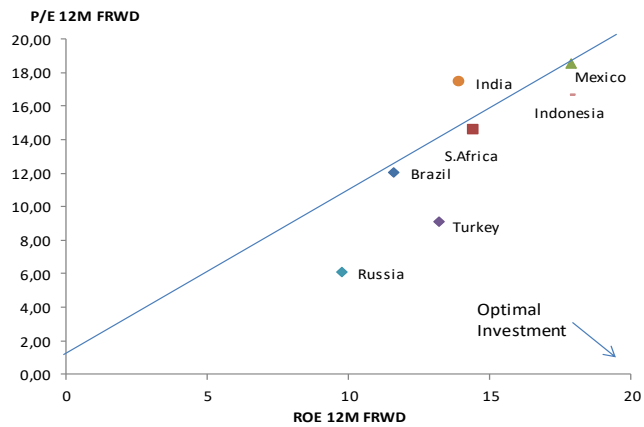
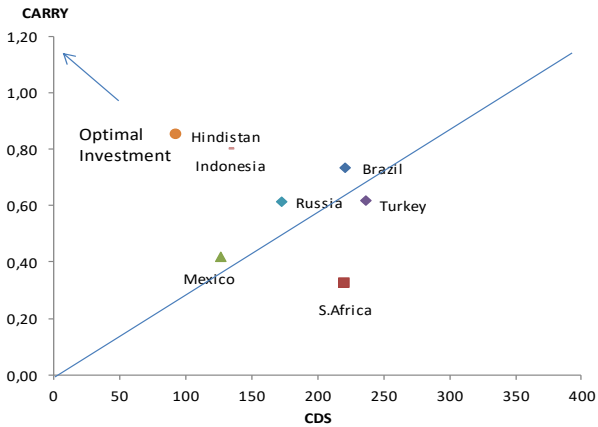
# APPENDIX: MACRO INDICATORS

## Bond and FX Markets

11/04/2017	CARRY	CDS (bps)	FX VOL (1M imp %)	1M LIBOR (%)	YIELD CURVE SLOPE	SWAP CURVE SLOPE
India	0,85	93	6,4	6,4	POSITIVE	POSITIVE
Brazil	0,73	221	14,0	11,2	POSITIVE	POSITIVE
Indonesia	0,80	134	5,9	5,8	POSITIVE	POSITIVE
Turkey	0,62	237	17,9	12,0	NEGATIVE	NEGATIVE
Russia	0,61	173	14,6	10,0	NEGATIVE	NEGATIVE
Mexico	0,42	127	13,2	6,5	POSITIVE	POSITIVE
S.Africa	0,32	221	18,9	7,1	POSITIVE	POSITIVE
Mexico	0,05	68	13,9	1,7	POSITIVE	POSITIVE
S.Africa	-0,06	115	13,8	0,1	POSITIVE	POSITIVE

## MACRO AND FINANCIAL VARIABLES

11/04/2017	GDP yoy (%)	CPI yoy(%)	Unemp (%)	CA/GDP (%)	Budget/GDP(%)	2 Year Gov Bond	10 Year Gov Bond	Real Rate 2 Year (%)
India	5,30	2,62	7,10	-0,54	-3,69	6,53	6,83	1,88
Brazil	-2,46	4,57	8,20	-1,29	-9,03	9,50	9,95	5,10
Indonesia	4,94	3,61	7,30	-1,73	-1,93	6,62	7,11	2,22
Turkey	3,09	11,29	12,70	-3,81	-1,23	11,21	10,69	2,34
Russia	0,30	4,30	5,60	1,88	-3,93	8,36	7,94	4,01
Mexico	2,38	5,35	3,37	-3,33	-2,58	6,79	7,21	2,29
S.Africa	-0,30	6,30	26,50	-1,70	-4,14	8,98	7,65	3,33
Poland	2,70	2,00	8,50	-0,30	-2,60	2,02	3,46	-0,03
Hungary	1,60	2,70	4,40	2,22	-1,60	0,66	3,37	-1,94



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