



ISTANBUL STOCK EXCHANGE

Presentation on Index Creation

by

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FEAS REGIONAL INDEX (FRI)

- Discussion Points

- 1) Calculation methodology of FRI

- 2) Composition of the Index

- 3) Criteria for the stocks to be chosen

- 4) Frequency of calculation

- 5) Denomination

- 6) Who will make the FRI

- 7) Creation of sector indices

- 8) Creation of sub-regional indices instead of one FRI

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1) Calculation Methodology

- weighted by market capitalization of each participating exchange (market value index)
- weighted by total outstanding shares
- weighted by shares available for foreign investors
- weighted by publicly held shares (free float ratio)

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2) Composition of the Index

(Number and type of companies for each participating exchange)

- All stocks listed
 - Representative stocks to be chosen
 - Blue chip stocks
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3) Criteria for Stocks to be Chosen

- Liquidity of stocks
- Turnover of stocks
- Profitability of companies
- Holders of companies (strategic shareholders, workers)

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4) Frequency of Calculation

- Daily
- Monthly
- Real Time, etc...

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5) Denomination

- Common currency (US Dollars, Euro,)
- Different currencies (currency of each participating exchange)

(Concerns for convertability)

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6) Who will make the FRI

- Professional Institutions (Dow Jones, S&P, FT etc.) (marketable but expensive)
- FEAS members (Cheap but not marketable)

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Last but not the least...

7) Creation of sector indices

- Whether sector indices should be created immediately

8) Creation of sub-regional indices instead of one FRI

- Which will be a better marketing tool?

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Work done for the formation of FRI

Resolutions:

- A benchmark index representative of the whole region
- Problems with forming an investible index:
 - availability and timeliness of data,
 - convertability and
 - restrictions on foreign portfolio investments.

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Methodology

- Economic parameters of the countries are included in order to assign each country a weight in accordance to the relative size of its economy
- The GDP's of the member countries and their market caps are gathered from the web site of FEAS and the World Bank.

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Methodology

- GDP/ Σ GDP: each country's GDP is divided by the total GDP of the FEAS members.
- Market Cap/ Σ Market Cap: Each country's market cap is divided by the total market cap of the FEAS region.
- Market Cap/GDP : the ratio of each country's respective ratio to the total Σ Market Cap/GDP

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Methodology

- The arithmetic average of these ratios are calculated for each country.
- It is a number between one and zero and it shows the relative weight of each country.
- Multiplying this number for each country by the total number of companies to be included in the index will give the number of companies from each country.
- In this sample work, total number of companies is chosen as 200.

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Table 1

	(Mrkt Cap/GDP) /(Total Mrkt Cap/GDP) (%) 1	GDP/ Total GDP (%) 2	Mrkt Cap / Total. Mrkt Cap (%) 3	AVR (1,2,3)	No.of companie s	Adjustme nts	Final no. of compani es
Turkey	7.33	27.34	32.40	22.35	44	-10	34
Iran, Islamic Rep.	6.42	15.72	16.32	12.82	25	-5	20
Jordan	28.36	1.13	5.19	11.56	22	-4	18
United Arab Emirates	13.42	6.63	14.39	11.48	22	-4	18
Egypt, Arab Rep.	8.38	9.47	12.83	10.22	20	-4	16
Pakistan	6.15	7.90	7.85	7.30	15	-3	12
Romania	2.36	6.93	2.65	3.98	8	+2	10
Croatia	5.52	3.25	2.90	3.89	8	+2	10
Oman	3.48	4.22	2.38	3.36	8	+2	10
Moldova	6.59	0.23	0.24	2.35	4	+2	6
Kazakhstan	2.08	3.42	1.15	2.21	4	+2	6
Ukraine	0.05	5.69	0.04	1.93	4	+2	6
Bulgaria	2.25	2.28	0.83	1.79	4	+2	6
Serbia and Montenegro	0.74	2.20	0.26	1.07	2	+2	4
Bosnia and Herzegovina	1.94	0.80	0.25	1.00	2	+2	4
Macedonia	1.97	0.54	0.17	0.89	2	+2	4
Georgia	1.31	0.45	0.10	0.62	2	+2	4
Uzbekistan	0.04	1.14	0.01	0.40	1	+2	3
Mongolia	0.91	0.14	0.02	0.36	1	+2	3
Kyrgyz Republic	0.45	0.20	0.01	0.22	1	+2	3
Armenia	0.25	0.32	0.01	0.19	1	+2	3
Grand Total				100.00	200	0	200

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Methodology

- The weight of the stocks from the first 6 countries are lowered by 20% to partially eliminate the dominance of these countries and make the index more representative of the region
- Albania, Azarbaijan Turkmenistan and Palestine are excluded due to unavailibility of listed companies and/or GDP figures.

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Methodology

- It is important to have enough number of companies from each country so that around 50% (35%-65%) of the market cap of each market is represented.
- Table 2 shows the results of this sample work.

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Table 2

	<i>No. of companies Corresponding Market Cap (%)</i>	
Turkey	34	81.46
Iran, Islamic Rep.	20	
Jordan	18	75.19
United Arab Emirates	18	
Egypt, Arab Rep.	16	56.17
Pakistan	12	51.37
Romania	10	87.26
Croatia	10	65.97
Oman	10	57.74
Moldova	6	
Kazakhstan	6	70.16
Ukraine	6	80.00
Bulgaria	6	50.00
Serbia and Montenegro	4	
Bosnia and Herzegovina	4	60.67
Macedonia	4	35.00
Georgia	4	
Uzbekistan	3	
Mongolia	3	66.35
Kyrgyz Republic	3	
Armenia	3	46.27
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