

## **Revision Study for Estimating Nominal/Real Effective Exchange Rates for Pakistan**

March 21, 2023

SBP has been (compiling and) publishing data on NEER and REER indices (base: 2010=100) through the website on monthly basis regularly. The indices are computed against the basket of countries constituting our *major* trading partners/competitors using weights as estimated by IMF periodically. It is a dynamic concept as trading partners/competitors, and their respective weights, for different countries, can change overtime and Pakistan is no exception.

IMF estimates the weights of trading partners/competitors for its member countries utilizing access to extensive datasets needed for calculating such weights<sup>1</sup>. The weights and trading partners are revised by IMF periodically as a routine exercise. The weights are calculated as three year averages using annual data on merchandise trade, manufacturing, and tourism of trading partners/competitors. The last revision for updating the list of trading partners and their respective weights was carried out in 2019<sup>2</sup> when weights based on 2013-15 data were estimated.

Now, the number of trading partners/competitors and their weights have been estimated by IMF for year 2016-18 following the regular three-year update cycle. Along with this exercise, the weights for year 2013-15 have also been revised by the IMF. This update/revision, for Pakistan, led to a decrease in number of countries in the basket of trading partners/competitors to 36 (from 37) for 2016-2018 and an increase to 38 (from 37) for 2013-15 period. Accordingly, NEER and REER series for Pakistan have been revised from January 2013 to December 2015 using revised weights 2013-15 and from January 2016-18 using the estimated weights for 2016-18. We will use 2016-18 weights for January 2019 and onward until estimation of this period weights by IMF (see Tables 1 and Table 2 below).

In recently estimated weights for Pakistan, for 2016-2018, Ireland and Sri Lanka have been added whereas Afghanistan, Kuwait, Denmark and Egypt are no longer that significant to be part of Pakistan's trading partners' / competitors' basket.

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<sup>1</sup> Methodology for the estimating trading partners' / competitors' weights is available at <https://www.imf.org/external/pubs/ft/wp/2005/wp0599.pdf>

<sup>2</sup> Previous revision study note is available at [https://www.sbp.org.pk/departments/stats/Notice/Revision-Study\(REER\).pdf](https://www.sbp.org.pk/departments/stats/Notice/Revision-Study(REER).pdf)

**Table 1: Pakistan's major trading partners/competitors and their respective weights***in percent*

S. #	Country	New weights (2016-18)	Revised weights (2013-15)	Previous weights (2013-15)	Remarks
1	China, P.R.: Mainland	32.1476	29.2171	29.1224	
2	United States	10.0547	11.2636	11.4734	
3	Germany	6.6308	6.6289	6.3794	
4	Japan	4.8880	4.6838	4.6707	
5	India	3.3896	3.3172	3.3288	
6	Italy	3.1108	3.0014	3.0651	
7	United Kingdom	3.0337	3.4600	3.4004	
8	France	2.6750	2.7447	2.7233	
9	Thailand	2.3135	1.8976	1.8889	
10	Korea, Rep. of	2.2980	2.5016	2.5049	
11	Spain	2.2363	2.0539	2.2392	
12	United Arab Emirates	2.2143	1.6815	2.1031	
13	Saudi Arabia	2.0535	2.4942	2.4562	
14	Indonesia	1.6731	1.3577	1.3606	
15	Netherlands, The	1.6589	1.7275	1.9640	
16	Turkey	1.4717	1.5900	1.4787	
17	Taiwan Province of China	1.3358	1.4587	1.4547	
18	Belgium	1.3251	1.2248	1.4675	
19	Singapore	1.2982	1.5278	1.5288	
20	Bangladesh	1.2453	1.3188	1.3142	
21	Malaysia	1.1870	1.3403	1.3412	
22	Canada	1.1837	1.2209	1.2040	
23	Switzerland	0.9890	1.0117	1.0138	
24	Australia	0.9881	0.9865	0.9871	
25	Brazil	0.9120	0.9369	0.9364	
26	Vietnam	0.9109	0.6885	0.6979	
27	Poland, Rep. of	0.9026	0.8194	0.8088	
28	Russian Federation	0.8949	0.9074	0.9079	
29	Mexico	0.8829	0.9113	0.8835	
30	Sweden	0.7816	0.8649	0.8702	
31	Iran, Islamic Rep. of	0.6273	0.7335		newly added from 2013
32	Austria	0.5612	0.5244	0.5201	
33	Morocco	0.5601	0.5818	0.5770	
34	South Africa	0.5508	0.7075	0.6746	
35	Ireland	0.5147			newly added from 2016
36	Sri Lanka	0.4994			newly added from 2016
37	Kuwait		0.5647	0.5629	Removed from 2016
38	Afghanistan, Islamic Rep. of		0.9604	1.0095	Removed from 2016
39	Denmark		0.5471	0.5412	Removed from 2016
40	Egypt, Arab Rep. of		0.5422	0.5398	Removed from 2016

Source: IMF

**Table 2: NEER and REER indices**

2010=100

Period	As per New weights		As per Old weights		Period	As per New weights		As per Old weights	
	NEER	REER	NEER	REER		NEER	REER	NEER	REER
Jan-13	86.3827	100.7387	84.4900	100.6813	Jul-15	91.9713	116.5042	89.4000	118.4576
Feb-13	86.3331	100.5226	84.3477	99.6707	Aug-15	92.7917	117.6099	90.1836	119.0459
Mar-13	87.1821	101.6882	85.0358	101.1362	Sep-15	91.7123	116.0382	89.0954	116.9674
Apr-13	86.8664	101.7264	84.7000	101.8477	Oct-15	91.0229	115.7239	88.4441	116.5645
May-13	86.7675	102.1989	84.8116	102.7592	Nov-15	91.4131	116.9479	88.8283	118.1190
Jun-13	86.5918	102.5267	84.7074	102.9891	Dec-15	92.5011	117.4621	89.8615	118.2825
Jul-13	85.4842	102.9978	83.6080	103.5022	Jan-16	92.9791	118.6835	90.7838	119.4852
Aug-13	83.7110	101.6360	81.5235	101.4977	Feb-16	92.3761	116.9139	90.2259	117.5946
Sep-13	81.6706	98.4619	79.4735	98.1800	Mar-16	91.4942	115.7301	89.4482	116.3461
Oct-13	80.2345	98.5023	78.0832	98.1066	Apr-16	90.4262	116.0055	88.4342	116.3703
Nov-13	79.7667	99.0806	77.6272	98.8126	May-16	90.8761	116.2011	88.8634	116.3662
Dec-13	79.9779	97.8578	77.8303	97.6852	Jun-16	91.3312	117.4041	89.2890	117.3399
Jan-14	81.6055	99.9779	79.4095	100.0887	Jul-16	91.7793	119.3913	89.7041	119.3629
Feb-14	81.7561	100.1844	79.5540	99.4522	Aug-16	91.2529	118.3054	89.1889	118.2632
Mar-14	85.6916	105.6205	83.3413	104.9586	Sep-16	91.6100	118.5530	89.4504	118.3179
Apr-14	87.5907	109.1215	85.2434	108.8119	Oct-16	92.4826	120.4495	90.2882	120.4555
May-14	86.5953	107.4371	84.2805	107.0936	Nov-16	93.8283	122.4624	92.1265	122.3648
Jun-14	86.9602	108.4482	84.6186	108.1043	Dec-16	95.3973	123.4016	93.7125	123.3642
Jul-14	86.7690	109.8511	84.4264	109.6004	Jan-17	95.1159	122.7701	93.4178	122.8520
Aug-14	86.1119	109.1802	83.7697	109.1233	Feb-17	94.4556	122.0675	92.7121	122.0453
Sep-14	85.2099	108.1614	82.8884	108.3932	Mar-17	94.3688	122.8225	92.6922	122.7800
Oct-14	85.6534	108.8836	83.3164	109.3464	Apr-17	93.9640	123.7107	92.3127	123.5133
Nov-14	87.2518	110.5218	84.8671	111.4406	May-17	93.3924	122.9095	91.7347	122.4700
Dec-14	89.1164	111.6234	86.6603	112.8538	Jun-17	92.5415	121.2569	90.9981	121.0086
Jan-15	90.6488	113.7389	88.1596	115.6210	Jul-17	91.2213	119.9589	89.6733	119.6111
Feb-15	90.7503	113.4634	88.2579	114.1023	Aug-17	90.2672	118.5233	88.7770	118.2829
Mar-15	91.8153	114.6260	89.2659	115.5468	Sep-17	89.4759	117.7471	88.0179	117.6544
Apr-15	91.6167	114.6204	89.0739	116.5609	Oct-17	90.3955	119.6735	88.8910	119.5480
May-15	90.7577	114.2471	88.2461	115.8373	Nov-17	90.5969	120.3019	89.0541	120.2306
Jun-15	91.1884	115.3515	88.6289	117.0138	Dec-17	87.2328	115.3999	85.7316	115.3417

**Table 2: NEER and REER indices (continued from pre page)**

2010=100

Period	As per New weights		As per Old weights		Period	As per New weights		As per Old weights	
	NEER	REER	NEER	REER		NEER	REER	NEER	REER
Jan-18	84.1206	110.9944	82.7452	111.0343	Aug-20	58.7177	92.9868	57.5413	91.7888
Feb-18	83.2473	108.8855	81.9776	109.2191	Sep-20	59.3977	95.3491	58.1729	94.1174
Mar-18	81.9058	107.6159	80.6127	107.8884	Oct-20	60.3042	98.3796	59.0687	97.1044
Apr-18	79.9459	106.7891	78.7223	107.1773	Nov-20	61.0225	100.5849	59.8030	99.3417
May-18	81.5707	109.2750	80.2699	109.7098	Dec-20	59.8182	97.5022	58.6234	96.3266
Jun-18	79.7399	107.2731	78.4221	107.4833	Jan-21	59.4291	96.2836	58.2541	95.1638
Jul-18	77.5599	105.1248	76.1841	104.6808	Feb-21	59.8695	98.3525	58.6869	97.2192
Aug-18	79.3087	107.2514	77.8719	106.7118	Mar-21	61.8281	101.7767	60.5813	100.8229
Sep-18	79.2625	106.6351	77.8306	106.0149	Apr-21	63.0397	104.2029	61.7514	102.9503
Oct-18	75.6074	103.8276	74.1638	103.1371	May-21	62.5029	103.4902	61.2430	102.2170
Nov-18	74.1473	102.2008	72.7696	101.4948	Jun-21	61.2522	101.0253	60.0186	99.7778
Dec-18	71.3517	97.9682	70.0615	97.4692	Jul-21	60.4638	100.6238	59.3409	99.5682
Jan-19	70.6145	97.9390	69.3716	97.6124	Aug-21	58.9961	98.4772	57.8110	97.4062
Feb-19	70.4669	97.8386	69.2257	97.6775	Sep-21	57.4742	97.7599	56.3249	96.7089
Mar-19	70.2614	98.7129	69.0250	98.6660	Oct-21	56.6114	97.4133	55.4874	96.3782
Apr-19	69.4808	98.4526	68.2846	98.5519	Nov-21	56.4587	99.6074	55.3541	98.6014
May-19	68.1519	97.1561	66.9004	96.9998	Dec-21	55.6059	97.7608	54.5239	96.7978
Jun-19	64.1989	92.4433	62.8885	90.9787	Jan-22	55.7368	97.7878	54.7694	97.0363
Jul-19	61.9640	91.0970	60.7301	89.7437	Feb-22	55.9180	98.5171	54.9725	97.8186
Aug-19	63.3632	94.3884	62.0595	92.6822	Mar-22	55.3361	97.1430	54.3456	96.6611
Sep-19	64.4359	96.1710	63.0797	94.3617	Apr-22	54.4979	96.7595	53.4026	95.8710
Oct-19	64.3994	97.3986	63.0324	94.8143	May-22	53.2524	94.5533	52.1136	93.5919
Nov-19	64.2875	98.5175	62.9352	95.7936	Jun-22	50.6147	94.8613	49.5111	93.9786
Dec-19	64.3847	98.2742	63.0070	95.7183	Jul-22	48.3242	94.0103	47.2663	93.2008
Jan-20	64.1251	99.4192	62.7876	96.4636	Aug-22	47.8491	95.1676	46.8065	94.3798
Feb-20	65.0648	99.4352	63.6871	97.2227	Sep-22	46.8917	91.7126	45.8510	90.7125
Mar-20	63.8370	98.0786	62.4790	97.1535	Oct-22	49.8902	101.5707	48.7498	100.1873
Apr-20	62.5515	95.7005	61.1568	94.4187	Nov-22	48.8663	100.3139	47.7493	98.9035
May-20	63.9026	98.3583	62.5240	97.1981	Dec-22	47.2550	97.4737	46.2441	96.1868
Jun-20	61.0766	94.5067	59.7676	93.0417	Jan-23	44.4633	93.9621	43.5612	92.8535
Jul-20	59.9826	94.6588	58.6417	93.1023	Feb-23	39.2896	86.4465		

Source: State Bank of Pakistan