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## STATISTICAL RELEASE

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### EXPORT AND IMPORT PRICE INDICES FOR THE QUARTER ENDING SEPTEMBER, 2022

#### Background notes

#### Definition

The Export and Import Price Indices (XMPI) are average measures of price changes of goods exported outside or imported into the country. The XMPI are used in various areas to do analysis such as Terms of Trade (ToT) which is the ratio of Export Price Index (XPI) to the Import Price Index (MPI).

The Export and Import Price Indices, which are compiled on a quarterly basis, covers both exports and imports of merchandise trade. These quarterly specification based XMPI have been compiled and disseminated since the first quarter of 2013 up to the last quarter of 2017 with reference base period being the quarter ending March 2013. The updated XMPI has the fourth quarter of 2017 as the reference base period. The updated weights and the product sample for the XMPI used customs data for the years 2014 to 2016. Price collection for the updated XMPI was carried out during the period October-December 2017. This allowed for the compilation of the XMPI for the fourth quarter of 2017 using the new product and enterprise samples.

#### Weights and a reference period

The XMPI weights are based on values of imported and exported commodities for the period 2014 to 2016. A top-down approach was taken in the determination of the index structure, composition and the allocation of the weights. The aim was to maximize the indirect

representation of un-priced commodities in the index, through a chain of representation. The price reference period is the quarter ending December 2017.

### **Product Classification**

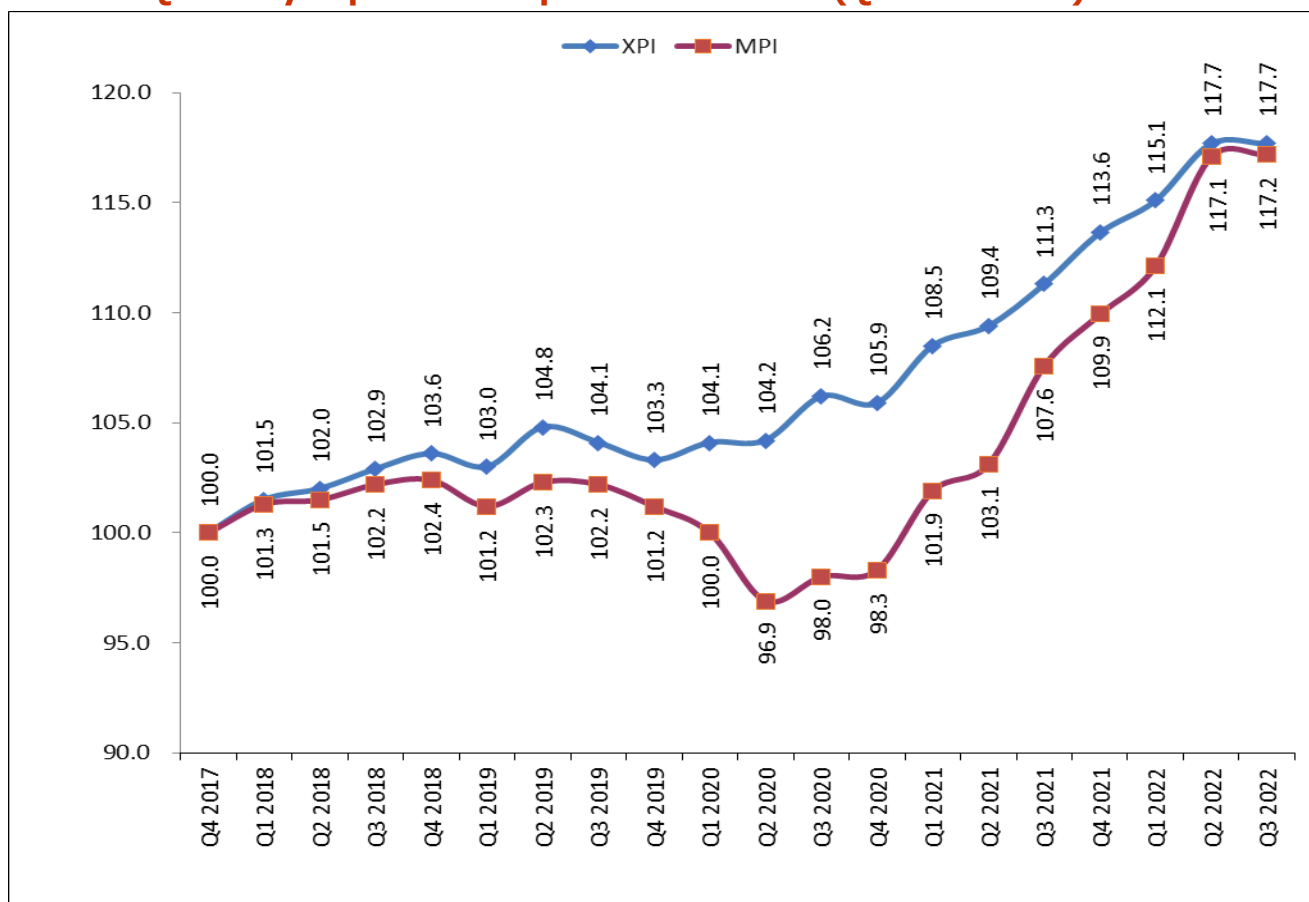
The products are classified according to the United Nations Harmonized Commodity Description and Coding System (HS). The HS is an international nomenclature for the classification of products.

### **Methodology**

**Selection of items:** In the selection of items, a top - down procedure was applied in three steps. First, the major 2-digit HS chapters contributing to the total value of imports in terms of the sum of values for the year 2014 to 2016 were selected for direct inclusion in the indices. As a result, 14 chapters (2-digit HS codes) were selected for imports and 12 chapters for exports out of 99 chapters representing 80 percent or more depending on the degree of concentration. Secondly, the process was repeated at 4-digit level of HS; 73 items were selected for imports and 19 items were selected for exports. Finally, the procedure was repeated at the 8-digit level of the HS by selecting 178 items for imports and 23 items for exports. The result of these procedures was the derivation of the structure and composition of the indices.

The XMPI has incorporated a number of methodological improvements including the use of geometric means for compiling elementary index aggregates, the use of an improved index compilation system, and improved procedures for collecting and processing prices. The Laspeyres index formula was used to compute higher level aggregates for the XMPI. **Chart 1** depicts trends of XPI and MPI in the selected quarters.

**Chart 1: Quarterly Export and Import Price Indices (Q4 2017=100)**



1. Note: Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December

## Export Price Index

### Structure of the XPI

The XPI covers 12 chapters out of 99 chapters, namely; (i) Fish and crustacean, mollusk and other aquatic invertebrate, (ii) Edible vegetables and certain roots and tubers, (iii) Edible fruits and nuts, peel of citrus fruit or melons, (iv) Coffee, tea, mate and spices, (v) Oil seed, oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder, (vi) Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes, (vii) Residues & waste from the food industries; prepared animal fodder, (viii) Tobacco and manufactured tobacco substitutes, (ix) Cotton, (x) Wadding, felt & nonwoven; yarns; twine, cordage, etc, (xi) Glass and glassware and (xii) Natural/cultured pearls, precious stones and metals, coin, etc. The sample of twelve chapters constitute 80 percent of total value of exports, aggregated from 2014 to 2016.

## Quarterly Export Price Index

The overall Export Price Index during the third quarter of 2022 remained unchanged at 117.7 compared to the preceding quarter. When compared to the corresponding quarter of 2021, the index increased by 5.7 percent (**Table 1**).

**Table 1: Quarterly Export Price Indices by Chapter (Q4 2017= 100)**

HS Code	Description	Weight	Q3	Q4	Q1	Q2	Q3	% Change Previous Quarter	% Change the same quarter last year
			2021	2021	2022	2022	2022		
		<b>100.0</b>	<b>111.3</b>	<b>113.6</b>	<b>115.1</b>	<b>117.7</b>	<b>117.7</b>	<b>0.0</b>	<b>5.7</b>
03	Fish & crustacean, mollusk & other	6.2	111.9	111.7	111.8	111.9	112.2	0.2	0.3
07	Edible vegetables and certain roots and	11.4	111.7	111.2	111.3	112.4	112.3	0.0	0.6
08	Edible fruit and nuts; peel of citrus fruit or	17.4	68.7	68.3	67.2	67.2	67.4	0.2	-2.0
09	Coffee, tea, mate and spices	4.3	114.2	116.1	119.3	116.7	117.4	0.6	2.8
12	Oil seed, oleagi fruits; miscell grain, seed,	4.2	130.1	129.9	130.1	144.8	147.9	2.1	13.7
15	Animal/veg fats & oil & their cleavage	7.4	112.5	129.7	132.9	160.1	161.1	0.6	43.3
23	Residues & waste from the food indust;	6.2	112.2	104.8	105.5	105.1	105.4	0.2	-6.1
24	Tobacco and manufactured tobacco	5.9	102.6	102.4	104.5	104.6	104.8	0.2	2.2
52	Cotton	1.0	110.3	120.8	122.9	123.0	122.8	-0.2	11.4
56	Wadding, felt & nonwoven; yarns; twine,	4.9	106.0	113.4	114.8	115.0	116.3	1.2	9.7
70	Glass and glassware	2.2	118.0	118.0	117.8	109.2	109.4	0.2	-7.2
71	Natural/cultured pearls, prec stones &	28.9	137.8	137.5	143.2	142.3	134.9	-5.2	-2.1

Note: Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December

## Sub-indices by Chapter

This section gives detailed analysis on the movements of export price indices by chapter:

### Chapter 03: Fish and crustacean, mollusk and other aquatic invertebrate

The index for "Fish and crustacean, mollusk and other aquatic invertebrates" which accounts for 6.2 percent of the total weight, increased slightly by 0.2 percent to 112.2 in the third quarter of 2022 from 111.9 registered in the second quarter. Likewise, when compared to the corresponding quarter of 2021, the index increased by slightly by 0.3 percent.

### Chapter 07: Edible vegetables and certain roots and tubers

This chapter contributed 11.4 percent of the total weight of the exported commodities. During the third quarter of 2022, the index marginally decreased to 112.3 from 112.4 recorded in the second quarter. In comparison with the same quarter in the year 2021, the index increased by 0.6 percent.

### Chapter 08: Edible fruits and nuts, peel of citrus fruit or melons

During the third quarter of 2022, the export price index for "Edible fruits and nuts", which accounts for 17.4 percent of the total weight, increased slightly to 67.4 from 67.2 recorded in

the second quarter. However, when compared with the same quarter in the previous year, the index decreased by 2.0 percent.

### **Chapter 09: Coffee, tea, mate and spices**

This chapter contributed 4.3 percent of the total weight of exported commodities. During the third quarter of 2022, the index for “coffee, tea, mate and spices” increased by 0.6 percent to 117.4 from 116.7 recorded in the previous quarter, consistent with stable prices at Mombasa Auction. Likewise, when compared to the corresponding quarter of 2021, the index increased by 2.8 percent.

### **Chapter 12: Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder**

This chapter accounts for 4.2 percent of the total weight. During the third quarter of 2022, the index for “Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit; industrial or medicinal plants; straw and fodder” increased by 2.1 percent to 147.9 from 144.8 recorded in the second quarter. The performance was largely attributed to the increase in prices of sesame seeds following high global demand. Similarly, when compared with the corresponding quarter of 2021 the index increased by 13.7 percent.

### **Chapter 15: Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes**

The export price index for “Animal or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes”, accounts for 7.4 percent of the total weight for exports. The index increased slightly by 0.6 percent during the third quarter of 2022 to 161.1 from 160.1 recorded in the previous quarter, largely attributed with the increase in the prices of sunflower oil due to supply chain disruptions associated with the ongoing war in Ukraine. Likewise, in comparison with the corresponding quarter of 2021, the index increased by 43.3 percent.

### **Chapter 23: Residues & waste from the food industries; prepared animal fodder**

The export price index for “Residues & waste from the food industries; prepared animal fodder”, accounting for 6.2 percent of the total weight, increased marginally by 0.2 percent to 105.4 in the third quarter of 2022 from 105.1 recorded in the previous quarter. However, when compared to the same quarter of 2021, the index decreased by 6.1 percent.

### **Chapter 24: Tobacco and manufactured tobacco substitutes**

This chapter accounts for 5.9 percent of the total weight. During the third quarter of 2022, the index increased marginally to 104.8 from 104.6 recorded in the previous quarter. When compared to the same quarter in 2021, the index increased by 2.2 percent.

### **Chapter 52: Cotton**

During the third quarter of 2022, the export price index for "Cotton", which accounts for 1.0 percent of the total weight, slightly decreased by 0.2 percent to 122.8 compared to 123.0 in the second quarter of 2022, largely associated with lower demand from China, the world's largest importer of cotton. Nonetheless, when compared with the same quarter in 2021, the index has increased by 11.4 percent.

### **Chapter 56: Wadding, felt & nonwoven; yarns; twine, cordage, etc.**

The chapter contributes 4.9 percent of the total weight of exported commodities. During the third quarter of 2022, the index increased by 1.2 percent to 116.3 from 115.0 in the previous quarter. The increase in prices of sisal fibre and yarn in the world market was on account of increased demand. Likewise, the index has increased by 9.7 percent when compared with the same quarter in the preceding year.

### **Chapter 70: Glass and glassware**

During the third quarter of 2022, the export price index for "Glass and glassware", which accounts for 2.2 percent of the total weight, increased slightly by 0.2 percent to 109.4 from 109.2 recorded in the preceding quarter. However, when compared to the same quarter of the previous year, the index declined by 7.2 percent.

### **Chapter 71: Natural/cultured pearls, precious stones and metals, coin etc.**

The export price index for "Natural/cultured pearls, precious stones and metals, coin etc", which accounts for 28.9 percent of the total weight of exported commodities, decreased by 5.2 percent to 134.9 in the third quarter of 2022 from 142.3 recorded in the second quarter. The performance was largely associated with the decrease in the gold price in the world market attributed by the increase in interest rates and appreciation of the U.S. Dollar that has outweighed concerns about rising inflation and geopolitical risks. Likewise, when compared to the corresponding quarter of 2022 the index decreased by 2.1 percent.

## Import Price Index

### Structure of the MPI

The MPI covers 14 chapters out of 99 chapters, namely; (i) Cereals, (ii) Animal fats and oil & their cleavage product, (iii) Mineral fuels, oils and product of their distillation, (iv) Pharmaceutical products, (v) Fertilisers, (vi) Miscellaneous chemical products, (vii) Plastics and articles thereof, (viii) Rubber and articles thereof, (ix) Iron and steel, (x) Articles of iron and steel, (xi) Nuclear reactors, boilers, machinery and machinery appliance, parts, (xii) Electrical machinery equipment parts thereof; sound recorder etc, (xiii) Vehicles other than railway/transport way roll-stock, parts and accessories and (xiv) Optical, photo, cine, meas, checking, precision, etc. The sampled fourteen chapters constitute 80 percent of total value of imports aggregated from 2014 to 2016.

### Quarterly Import Price Index

The overall Import Price Index for the third quarter of 2022 increased marginally by 0.1 percent to 117.2 from 117.1 recorded in the second quarter. Prices of most commodities were mostly stable compared to the preceding quarter. Likewise, when compared to the same quarter of 2021, the index increased by 9.0 percent (**Table 2**).

**Table 2: Quarterly Import Price Indices by Chapter (Q4 2017= 100)**

HS Code	Description	Weight	Q3 2021	Q4 2021	Q1 2022	Q2 2022	Q3 2022	% Change Previous Quarter	% Change same Quarter last year
		<b>100.0</b>	<b>107.6</b>	<b>109.9</b>	<b>112.1</b>	<b>117.1</b>	<b>117.2</b>	<b>0.1</b>	<b>9.0</b>
10	Cereals	4.1	120.1	122.7	122.9	131.4	132.5	0.9	10.3
15	Animal/veg fats & oil & their cleavage products; etc	4.2	98.3	98.1	98.3	98.4	98.6	0.2	0.3
27	Mineral fuels, oils & product of their distillation; etc	21.7	96.5	103.6	113.3	161.9	160.8	-0.7	66.7
30	Pharmaceutical products	5.2	106.2	104.4	104.6	104.7	104.9	0.2	-1.2
31	Fertilisers	1.8	136.0	141.4	146.7	152.3	151.4	-0.6	11.3
38	Miscellaneous chemical products	2.0	98.3	97.5	97.4	99.4	101.4	2.1	3.2
39	Plastics and articles thereof	6.2	117.8	118.1	119.8	120.6	119.6	-0.8	1.5
40	Rubber and articles thereof	2.8	93.6	111.0	111.4	111.3	112.4	0.9	20.1
72	Iron and steel	5.3	101.6	104.8	105.9	106.0	105.4	-0.6	3.8
73	Articles of iron and steel	4.0	110.9	111.0	121.0	121.2	121.3	0.1	9.4
84	Nuclear reactors, boilers, mchy & mech appliance; parts	15.2	118.4	119.0	118.3	119.7	118.7	-0.8	0.2
85	Electrical mchy equip parts thereof; sound recorder etc	10.9	108.8	108.1	110.4	112.0	113.1	1.0	4.0
87	Vehicles o/t railw/tranw rool-stock, pts & accessories	14.4	109.0	109.3	109.6	110.5	110.8	0.3	1.7
90	Optical, photo, cine, meas, checking, precision, etc	2.1	90.6	90.0	90.1	90.2	90.4	0.2	-0.3

Note: Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December

## **Sub-indices by Chapter**

This section analyses movements of import price indices for each chapter.

### **Chapter 10: Cereals**

This chapter accounts for 4.1 percent of the total weight. During the third quarter of 2022, the import price index for “Cereals” increased marginally by 0.9 percent to 132.5 from 131.4 recorded in the previous quarter, largely on account of a shortage in supply of grain globally due to the War in Ukraine. Similarly, when compared to the same quarter in the previous year, the index increased by 10.3 percent.

### **Chapter 15: Animal fats and oil and their cleavage product**

This chapter contributes 4.2 percent of the total weight of the imported commodities. During the third quarter of 2022, the index increased slightly by 0.3 percent to 98.6 from 98.4 that was recorded in the previous quarter. Similarly, when compared to the same quarter in the previous year, the index increased slightly by 0.2 percent.

### **Chapter 27: Mineral fuels, oils and product of their distillation**

During the third quarter of 2022, import price index for “Mineral fuels, oils and product of their distillation” which contributes 21.7 percent to the total weight of the imported commodities, decreased slightly by 0.7 percent to 160.8 from 161.9 recorded in the second quarter. The performance was explained by a lower demand due to strengthening of the dollar associated with an increase in interest rates. Similarly, when compared to the corresponding quarter of 2021, the index increased by 66.7 percent.

### **Chapter 30: Pharmaceutical products**

The index for “Pharmaceutical products” which represents about 5.2 percent of the total weight, increased slightly by 0.2 percent to 104.9 in the third quarter of 2022 from 104.7 recorded in the previous quarter. When compared to the corresponding quarter of 2021, the index decreased by 1.2.

### **Chapter 31: Fertilisers**

The index for “Fertilisers” which accounts for 1.8 percent of the total weight of the imported commodities, decreased slightly by 0.6 percent to 151.4 in the third quarter of 2022 from 151.3 recorded in the second quarter. In correspondence with the same quarter in 2021, the index increased percent.



### **Chapter 38: Miscellaneous chemical products**

The index for “Miscellaneous chemical products” which accounts for 2.0 percent of the total weight, increased by 2.1 percent to 101.4 in the third quarter of 2022 from 99.4 recorded in the second quarter. The increase was due to strong demand in major end markets such as construction, health and safety. When compared to the similar quarter last year, the index increased by 3.2 percent.

### **Chapter 39: Plastics and articles thereof**

In the third quarter of 2022, the index for “Plastic and articles thereof” which contributes 6.2 percent to the total weight of imported commodities, slightly decreased by 0.8 percent to 119.6 from 120.6 recorded in the previous quarter. Nonetheless, when compared to the corresponding quarter in 2021, the index increased by 1.5 percent.

### **Chapter 40: Rubber and articles thereof**

This chapter contributes 2.8 percent to the total weight of imported commodities. During the third quarter of 2022, the index increased marginally by 0.9 percent to 112.4 from 111.3 recorded in the previous quarter. Similarly, when compared to the same quarter last year the index increased by 20.1 percent.

### **Chapter 72: Iron and steel**

During the third quarter of 2022, the index for “Iron and steel”, which accounts for 5.3 percent of the total weight, slightly decreased by 0.6 percent to 105.4 from 106.0 recorded in the previous quarter. However, the index increased by 3.8 percent when compared to the same quarter of 2021.

### **Chapter 73: Articles of iron and steel**

This chapter contributes 4.0 percent of the total weight. In the third quarter of 2022, the index for “Articles of iron and steel” had a slight increase of 0.1 percent to 121.3 from 121.2 recorded in the second quarter. Likewise, when compared to the corresponding quarter of 2021, the index rose by 9.4 percent.

### **Chapter 84: Nuclear reactors, boilers, machinery and mechanical appliance and parts**

The chapter accounts for 15.2 percent of the total weight of imported commodities. The index decreased marginally by 0.8 percent to 118.7 in the third quarter of 2022 from 119.7 in the preceding quarter of 2022. However, when compared to the same quarter of 2021, the index increased by 0.2 percent.

### **Chapter 85: Electrical machinery equipment and parts thereof**

The index for “Electrical machinery equipment and parts thereof”, which accounts for 10.8 percent of the total weight, increased by 1.0 percent to 113.1 in the third quarter of 2022 compared to 112.0 recorded in the previous quarter. Similarly, when compared to the same quarter of 2021, the index increased by 4.0 percent.

### **Chapter 87: Vehicles other than railway/transport ways roll-stock**

The index for “vehicles other than railway/transport ways roll-stock” which accounts for 14.4 percent of total weight, increased marginally by 0.3 percent to 110.8 in the third quarter of 2022 from 110.5 recorded in the previous quarter. Likewise, when compared to the corresponding quarter of 2021, the index increased by 1.7 percent.

### **Chapter 90: Optical, photo, cine, meas, checking, precision, etc.**

This chapter accounts for 2.1 percent of the total weight. During the third quarter of 2022, the index increased slightly by 0.2 percent to 90.4 from 90.2 recorded in the second quarter. However, when compared with the similar quarter of 2021, the index decreased slightly by 0.3 percent.

### **Terms of Trade**

The Terms of Trade Index is the ratio of Export Price Index to Import Price Index. The Exports Price Index was mostly influenced by world market prices of edible oil and oil seeds while the Imports Price Index was driven by prices of petroleum products, cereals, and fertilisers. Overall, during the third quarter of 2022, Terms of Trade remained favourable, albeit decreasing by 0.1 percentage point to 100.4 from 100.5 recorded in the second quarter of 2022 (**Table 3**). This implies that for every unit of goods exported, the country can obtain more units of imports. Nonetheless, the country’s competitiveness in the global market has decreased as a result of sharp increase in import prices.

**Table 3: Quarterly Terms of Trade (Q4 2017 = 100)**

Period	2020				2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
XPI	104.1	104.2	106.2	105.9	108.5	109.4	111.3	113.6	115.1	117.7	117.7
MPI	100.0	96.9	98.0	98.3	101.9	103.1	107.6	109.9	112.1	117.1	117.2
TOT	104.1	107.5	108.4	107.7	106.5	106.1	103.4	103.4	102.7	100.5	100.4

**Note;**

Q1=January-March, Q2=April-June, Q3=July-September, Q4=October-December

XPI = Export Price Index

MPI = Import Price Index

ToT = Terms of Trade

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