

A Source of Comparative Advantage

—The Comparison between Japan, Indonesia and Thailand—

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Introduction

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Introduction

In traditional trade theory, comparative advantage constitutes trade structure in a country. In this paper, an attempt will be made to calculate comparative advantage by using an I-O Table.

The differences of productivity, wage and other price of factors between countries which reflect the resource endowment are the main source of comparative advantage. Here the focus will be placed on the mark-up ratio among them, since main factor for production, especially in the manufacturing sector, is capital. As a case study, examining Asian countries whose export growth is remarkable seems to be suitable.

1. Approach to the Calculation of Comparative Advantage

1-1. Absolute Advantage and Comparative Advantage

Let us suppose there are two country —country A and country B— in the world. In those countries i -goods and j -goods, which are of equal quality among countries. Now, the price of i -goods can be denoted by P_i , and the price of j -goods by P_j . If the price of i -goods in country A is lower than that in country B, namely

$$P_i^A \leq eP_j^B \quad (i, j=1, 2, \dots, n) \quad (1)$$

then country A has the absolute advantage in i -goods, assuming transportation costs are zero, where, e is the exchange rate. On the other hand, if relative price of i -goods to j -goods in country B is lower than that in country A,

$$\frac{P_i^A}{P_j^A} \geq \frac{P_i^B}{P_j^B} \quad (i, j=1, 2, \dots, n) \quad (2)$$

then country B has the comparative advantage in i -goods.

To calculate comparative advantage, the price of each product must be known. In general, the work of gathering these data is complicated and requires much time, especially, in the case of developing countries. However, it is possible to get an approximate value by using International I-O Tables constructed by IDE (Institute of Developing Economies), making comparisons between countries easy.

To simplify the model, let us suppose a company sets a price equal to that of labor cost multiplied by mark-up ratio (r). Let L and w be labor input and wage respectively. The price of i -goods (P_i) can be defined as follows:

$$P_i = (1+r_i) \left(w_i \frac{L_i}{Q_i} \right) \quad (i=1, 2, \dots, n) \quad (3)$$

where, Q is the amount of products and (L/Q) represents the inverse of labor productivity. If equation (2) is rewritten using equation (3), and (L/Q) is replaced with l , the result is as follows:

$$\left(\frac{(1+r_i^A) w_i^A l_i^A}{(1+r_j^A) w_j^A l_j^A} \right) \geq \left(\frac{(1+r_i^B) w_i^B l_i^B}{(1+r_j^B) w_j^B l_j^B} \right) \quad (i, j=1, 2, \dots, n) \quad (4)$$

assuming that wl is the same in every sector within a country, the above equation can be rewritten as

$$\frac{(1+r_i^A)}{(1+r_j^A)} \geq \frac{(1+r_i^B)}{(1+r_j^B)} \quad (i, j=1, 2, \dots, n) \quad (5)$$

Equation (5) shows mark up ratio defines comparative advantage.

1-2. Mark-up Ratio

The row of *Value Added* in the I-O table consists of compensation to employees, operating surplus, depreciation, indirect tax and subsidies. Compensation to employees refers to distributions to workers, and operating surplus to the company's profit. This value added cannot be divided into price and quantities. Here, the ratio of operating surplus to total value added will be applied to mark-up ratio.

The rate of total value added (*TVA*) to Value Added distributed as operating surplus (*KVA*) is consider as average capital productivity, which corresponds to the inverse of mark-up ratio (r). Namely,

$$\frac{TVA_i}{KVA_i} = \frac{P_i Q_i}{r_i Q_i} = \frac{1}{(r_i/P_i)} \quad (i, j=1, 2, \dots, n) \quad (6)$$

where r/P is the mark-up ratio in real terms. Now, replacing r/P with r , equation (7) can be arrived at

$$\frac{TVA_i}{KVA_i} = \frac{1}{r_i} \quad (i, j=1, 2, \dots, n) \quad (7)$$

2. Comparison of Mark-up Ratio between Countries

Table 1-A shows mark-up ratio ($=KVA_i/TVA_i$) by sector calculated from *International I-O Table Japan and Indonesia 1990* regarding 80 sectors listed in descending order. Table 1-B shows the comparison between Japan and Thailand with regard to 118 sectors excluding service sectors on analysis.

The followings features were found to be common to both tables:

- 1) Most of the agricultural sector, has relatively higher mark-up ratios.
- 2) Most of the sectors in Indonesia and Thailand have higher mark-up ratios than those of Japan.
- 3) The difference of mark-up ratio between the highest sector and the lowest sector in Japan is bigger than the differences for Indonesia and Thailand.
- 4) Mark-up ratios of various manufacturing sectors within a country show similar figures.

Higher mark-up ratio in agricultural sectors reflects the comparatively smaller capital to total input. And generally, distribution to labor of value added is smaller in Indonesia and Thailand than in Japan.

3. Structure of Comparative Advantage —Japan, Indonesia, and Thailand—

In this section, an attempt will be made to calculate the comparative advantage based on equation (5). Table 2-3 shows how comparative advantage changes depending on the *numéraire* utilized. The first column indicates the code number of sector as the rod, *numéraire*, and the sector to

be numerator in the first row.

Table 2 shows the value arrived at by dividing $(1+r_i^J)/(1+r_j^J)$ with $(1+r_i^I)/(1+r_j^I)$.

If

$$\frac{(1+r_i^J)/(1+r_i^I)}{(1+r_j^J)/(1+r_j^I)} \geq 1 \quad (i, j=1, 2, \dots, n) \quad (5 a)$$

Japan has comparative advantage in i -sector, and Indonesia has comparative advantage in j -sector. In other words, Japan will export i -goods and import j -goods from Indonesia. Here J and I refer to Japan and Indonesia, respectively.

The value for Japan and Thailand can be arrived at in the same way. If

$$\frac{(1+r_i^T)/(1+r_i^J)}{(1+r_j^T)/(1+r_j^J)} \geq 1 \quad (i, j=1, 2, \dots, n) \quad (5 b)$$

Japan has comparative advantage in i -sector, and Thailand has comparative advantage in j -sector, T refers to Thailand. Table 3 show the result of calculation.

Here we summarize some features found in these Tables can be summarized as follows:

- 1) When we utilize the agricultural sector as numéraire, Japan has comparative advantage in most sectors.
- 2) Regardless of the rod utilized (with the exception of *the milled & polished rice* sector), Japan always has comparative advantage in *the yarn, other estate crop, and fertilizer & pesticide* sectors.
- 3) Many sectors in Indonesia lose comparative advantage when *the livestock, yarn, or petroleum refinery* sectors are used as numéraire.
- 4) There is little difference of relative mark-up ratio among machinery sectors of Indonesia and Japan.
- 5) Japan has comparative advantage in *the other textile* sector regardless

Table 4. Sectors of the lowest value (descending order)

JAPAN $\frac{(1+r_i^J)/(1+r_j^J)}{(1+r_i^I)/(1+r_j^I)}$		INDONESIA $\frac{(1+r_i^I)/(1+r_j^I)}{(1+r_i^J)/(1+r_j^J)}$	
045	Made-up textile goods	026	Milled & polished rice
033	Yarn	006	Rubber
047	Other textile goods	007	Sugarcane
021	Non-ferrous metal ores	010	Tobacco
017	Woods and other forest product	002	Other cereal
040	Plywood	005	Fabricated metal product
039	Lumber	044	Basic chemical
063	Motor cycle and non-motorized vehicles	013	Other estate crop
019	Crude petroleum & natural gas	028	Sugar manufacturing
025	Animal, fish & other milled cereal	029	Ground coffee & processed coffee
JAPAN $\frac{(1+r_i^J)/(1+r_j^J)}{(1+r_i^T)/(1+r_j^T)}$		THAILAND $\frac{(1+r_i^T)/(1+r_j^T)}{(1+r_i^J)/(1+r_j^J)}$	
038	Animal feeds	029	Canning and preserve of fruit & vegetable
017	Forestry product	030	Canning and preserve of seafood
014	Poultry and poultry product	003	Beans and nuts
015	Silk worm	041	Tobacco processing
019	Coal and Lignite	055	Paper product
036	Coffee and tea processing	006	Sugarcane and beets
085	Electric appliances for household and industry	065	Petroleum product
086	Radio wire and other electric appliance	060	Paints, varnishes and lacquers
062	Soap and cleaning preparation	002	Other cereals and Roots crops
063	Perfumes and cosmetics	004	Vegetables

of numéraire (excluding for *the canning & vegetable* sector). On the other hand, Thailand always has comparative advantage in *the animal feeds* sector.

Table 4 shows 10 sectors for which the value calculated (based on equation (5a) and (5b)) belong to the lowest group in the Table 2 and in the Table 3 respectively. Many agricultural sectors are included in the lowest group in both Indonesia and Thailand. On the other hand, there is good possibility of having comparative advantage in light industrial manufactures sector in Japan, besides in machinery sectors. However this ranking doesn't mean the country always have comparative advantage in that sectors because of depending on numéraire utilized.

Concluding Remarks

The comparative advantage between pairs of countries by sector has been shown through calculation based on a model defined. However, it is hard to accept this result directly because there remain some problem. The first, comparative advantage changes between countries depending on the *numéraire* utilized. Second, this model for calculation assumes that the mark-up ratio is the only source of comparative advantage. So that there is no consideration of differences of wage and labor productivity between sectors within a country. The influence of other factors in determining the comparative advantage between two countries may not be small. Third, the percentage of operating surplus to total value added are applied to mark-up ratio.

In general, most international trade is based on absolute advantage. However, it is important for the world, which is experiencing trade friction, to clarify structure of comparative advantage between countries. This is especially for developing countries which exhaust themselves to gain foreign currencies. Therefore such clarification will be preparation for considering another pattern of the world trade under the free trade regime.

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TABLE1-A. Mark-Up Ratio (Japan and Indonesia 1990)

JAPAN		INDONESIA		JAPAN		INDONESIA		
No.	mark-up	No.	mark-up	No.	mark-up	No.	mark-up	
026	6.364	045	2.230	064	0.163	050	0.417	042 Pulp, Paper, paperboard and paper products
005	1.040	019	0.937	039	0.160	067	0.411	043 printed & published materials & publishing
002	1.011	020	0.898	031	0.155	046	0.410	044 basic chemical
013	0.825	003	0.895	071	0.142	066	0.385	045 Fertilizer & Pesticide
004	0.802	005	0.863	035	0.133	043	0.384	046 Chemical products
007	0.792	004	0.847	021	0.122	031	0.372	047 Petroleum refinery products
010	0.772	002	0.828	040	0.109	059	0.362	048 Coal products & paving materials
003	0.757	018	0.819	072	0.108	059	0.362	049 Tyre and other rubber products
006	0.752	074	0.811	022	0.107	028	0.362	050 plastic products
001	0.724	009	0.810	033	0.071	034	0.354	051 Glass and Glass products
011	0.624	001	0.792	016	0.061	049	0.349	052 Cement
015	0.579	013	0.785	077	0.056	022	0.339	053 Cement clay, ceramic & other non-metallic mineral products
074	0.559	018	0.772	032	0.055	069	0.325	054 Basic iron and steel products
080	0.521	054	0.754	047	0.052	068	0.315	055 non-ferrous refined metal & processed products
027	0.503	017	0.749	008	-	032	0.271	056 fabricated metal products
029	0.489	015	0.726	009	-	077	0.256	057 prime mover & engine
014	0.470	027	0.711	012	-	026	0.249	058 General industrial machinery & equipment
019	0.461	070	0.695	020	-	044	0.206	059 Special industrial machinery & office machinery
045	0.408	033	0.688	076	-	076	-	060 generator, rotating & electrical machinery
024	0.402	009	0.685					061 Electrical equipment and apparatus
028	0.367	014	0.682	001 Paddy				062 Motor vehicle
054	0.362	063	0.680	002 Other Cereals				063 Motor cycle and non-motorized vehicle
018	0.362	012	0.670	003 Roots Crops				064 Other transport equipment
048	0.352	080	0.653	004 Vegetables and Fruit				065 Other industrial products
051	0.350	051	0.643	005 Beans				066 Electricity & gas supply
046	0.339	025	0.634	006 Rubber				067 Water supply
059	0.327	011	0.633	007 Sugarcane				068 Residential & nonresidential building
068	0.315	024	0.623	008 Coconuts				069 Construction
044	0.315	041	0.617	009 Crude Palm oil				070 Wholesale & retail trade
023	0.308	078	0.587	010 Tobacco leaves				071 Transport
066	0.304	039	0.587	011 Coffee beans				072 Postal & telecommunication
078	0.300	037	0.582	012 Inedible fiber crops				073 Financial services
041	0.292	062	0.571	013 Other estate crop				074 real estate & house rent
038	0.280	021	0.570	014 Other crops				075 Business services
036	0.275	030	0.561	015 Livestock and its product				076 Public administration
050	0.271	057	0.557	016 Poultry and Poultry products				077 Educational service
057	0.269	075	0.550	017 Woods and other forest products				078 Amusement and recreational services
060	0.265	073	0.546	018 Fishery products				079 Other services
052	0.264	047	0.543	019 Crude Petroleum & natural gas				080 Unspecified
061	0.260	042	0.526	020 Liquefied Natural gas				
073	0.257	040	0.517	021 non-ferrous metal ores				
017	0.257	048	0.512	022 coal				
003	0.256	052	0.512	023 Quarrying products				
025	0.255	007	0.509	024 processed and preserved fish, meat, vegetables and daily products				
053	0.254	060	0.508	025 animal, Fish & other milled cereal				
079	0.252	053	0.504	026 Milled & polished rice				
065	0.247	038	0.503	027 Wheat flour & other milled cereal				
062	0.242	064	0.503	028 Sugar manufacturing				
043	0.240	071	0.500	029 ground coffee & processed coffee				
042	0.238	010	0.500	030 other processed products				
055	0.237	055	0.495	031 Syrup and beverage				
069	0.235	029	0.491	032 Cigarette & other manufactured tobacco				
037	0.232	023	0.489	033 Yarn				
067	0.228	061	0.475	034 Textiles				
030	0.226	072	0.473	035 knitted products				
056	0.225	065	0.471	036 Wearing apparel				
038	0.225	036	0.461	037 Other textile products				
075	0.209	079	0.460	038 Leather and Leather products				
049	0.206	035	0.443	039 lumber				
070	0.174	056	0.437	040 Plywood				
034	0.173	008	0.435	041 Other wooden products				

TABLE1-B. Mark-Up Ratio (Japan and Thailand 1990)

JAPAN		THAILAND		JAPAN		THAILAND	
No.	mark-up	No.	mark-up	No.	mark-up	No.	mark-up
032	6.359	075	0.890	067	0.221	061	0.495
003	1.038	001	0.889	094	0.219	078	0.494
002	0.863	038	0.885	105	0.213	062	0.493
004	0.838	007	0.846	044	0.209	072	0.490
033	0.826	011	0.845	037	0.207	057	0.485
006	0.794	009	0.845	038	0.204	081	0.484
001	0.726	004	0.842	079	0.201	045	0.484
005	0.723	005	0.835	068	0.191	059	0.481
010	0.648	003	0.833	045	0.190	035	0.481
013	0.643	010	0.810	060	0.188	048	0.480
009	0.627	002	0.809	071	0.185	096	0.471
011	0.808	024	0.804	104	0.180	043	0.464
015	0.587	008	0.799	095	0.170	021	0.463
114	0.564	031	0.762	043	0.154	108	0.462
034	0.491	017	0.748	111	0.149	012	0.457
006	0.490	033	0.748	021	0.143	074	0.455
063	0.480	014	0.742	051	0.143	076	0.451
012	0.475	104	0.733	016	0.141	109	0.449
030	0.474	019	0.708	025	0.133	044	0.441
020	0.464	013	0.698	108	0.125	113	0.435
074	0.436	016	0.690	112	0.123	069	0.432
058	0.412	079	0.685	023	0.123	060	0.428
062	0.392	087	0.684	098	0.117	091	0.423
061	0.389	029	0.658	019	0.118	046	0.415
027	0.368	054	0.649	049	0.095	117	0.413
018	0.366	006	0.649	041	0.085	082	0.397
029	0.365	049	0.643	039	0.090	030	0.392
049	0.384	094	0.642	014	0.089	114	0.384
040	0.382	025	0.641	039	0.089	098	0.355
110	0.360	023	0.638	024	0.087	020	0.335
070	0.353	018	0.630	065	0.084	042	0.323
075	0.341	110	0.620	029	0.084	055	0.296
064	0.332	083	0.619	042	0.080	039	0.227
026	0.331	083	0.616	107	0.073	065	0.222
028	0.326	034	0.615	116	0.059	099	0.206
057	0.321	112	0.615	109	0.007	040	0.200
101	0.318	022	0.607			116	0.186
052	0.317	066	0.603			041	0.092
100	0.311	047	0.601	001	Paddy		
092	0.310	093	0.601	002	Other Cereals and Roots crops		
037	0.309	036	0.591	003	Beans and Nuts		
085	0.307	030	0.590	004	Vegetables		
072	0.306	085	0.588	005	Fruits		
076	0.298	098	0.588	006	Sugarcane and Beets		
089	0.297	037	0.583	007	Cocanuts		
084	0.293	053	0.576	008	Oil Palms		
091	0.289	097	0.569	009	Cofee beans and tea leaves		
059	0.282	090	0.565	010	Other Agricultural products		
053	0.280	111	0.563	011	Cattle		
050	0.279	101	0.561	012	Swine		
113	0.273	097	0.559	013	Other Livestock		
068	0.273	028	0.557	014	Poul try and poul try products		
035	0.273	059	0.556	015	Silk worm		
093	0.272	103	0.555	016	Agricultural service		
087	0.270	027	0.555	017	Forestry products		
117	0.269	102	0.552	018	Fishing		
083	0.268	029	0.552	019	Coal and Lignite		
089	0.261	084	0.548	020	Petroleum and natural gas		
017	0.259	073	0.547	021	Iron ore mining		
103	0.259	092	0.547	022	Tin Ore mining		
047	0.259	086	0.545	023	Other non-ferrous mining		
054	0.259	105	0.541	024	Salt		
081	0.256	099	0.539	025	Limestone Quarrying		
056	0.255	032	0.539	026	Other Mining and Quarrying		
046	0.252	095	0.533	027	Slaught, Canning and Preserv.of Meat		
073	0.252	107	0.528	028	Dairy products		
102	0.251	051	0.526	029	Canning and preserv.of Fruits &Vegetables		
096	0.247	100	0.524	030	Canning and preserv.of Seafood		
077	0.247	052	0.524	031	Animal and Vegetable oil		
106	0.243	056	0.521	032	Rice Milling		
076	0.243	070	0.520	033	Cassava and Tapioca milling		
090	0.242	050	0.520	034	Flours, and Other grain milling		
086	0.241	071	0.519	035	Sugar, Confectionary, and Bakery prod.		
080	0.235	077	0.518	036	coffee and Tea processing		
099	0.233	089	0.516	037	Other food producy		
031	0.227	084	0.512	038	Animal Feeds		
055	0.226	075	0.495				

039 Liquor

040 Soft drinks and carbonated water

041 Tobacco processing

042 Spinning

043 Weaving

044 Textile bleaching and finishing

045 Made-up Textile goods

046 Knitting and wearing apparel

047 Other textile goods

048 Tanneries and leather finishing

049 leather products

050 footwear, Except of rubber

051 Swan mill and plywood

052 Wood and Cork products

053 Wooden furniture and Fixture

054 Pulp and Paper

055 paper products

056 printing and publishing

057 basic industrial chemicals

058 fertilizer and pesticide

059 Synthetic products

060 paints, varnishes and lacquers

061 Drugs and medicine

062 Soap and Cleaning preparation

063 perfumes and cosmetics

064 Other chemical products

065 petroleum products

066 Tires and tubes

067 Other rubber products

068 Plastic Wares

069 ceramic and earthen wares

070 Glass and Glass products

071 Structural Clay products

072 cement

073 Other Non-metallic products

074 primary iron and Steel

075 Secondary Steel products

076 Non-ferrous metal

077 Cutlery and hand tools

078 Metal Furniture and Fixtures

079 Structural Metal products

080 Other Fabricated metal products

081 Engines and Turbines

082 Agricultural Machinery and equipment

083 Wood and metal Working machinery

084 Other industrial Machinery

085 Electric appl. for household and Industry

086 Radio Wires and Other Electric Appliance

087 Cable Wires and Other Electric Appliance

088 Ship Buildinf

089 Railway equipment

090 Motor vehicles

091 Motorcycle and other Transport equipmen

092 repair of motor vehicles

093 Scientific and clocks

094 Photographic and Optical Goods

095 Watches and clocks

096 Other manufacturing products

097 Electricity

098 Gas Supply

099 Water Works and Supply

100 Residential/Building Construction

101 Non-residential building construction

102 Public Utility Construction

103 Other construction

104 Wholesale and retail

105 Restaurants and Hotels

106 Railways

107 Road Transport

108 Water transport

109 Air Transport

110 Other Transport Reservices

111 Storage and Warehouse

112 Post and Telecommunication

113 banking and Insurance Services

114 Real estate

115 Public Administration

116 Community Serces

117 Business and other Services

TABLE2. Comparative Advantage between Indonesia and Japan

Sector	Indonesia Export										(Japan Import)									
	026	006	007	010	002	005	044	013	028	029	011	004	059	001	046	003	015	058	050	
045	13.53	2.80	2.72	2.71	2.52	2.51	2.50	2.34	2.30	2.29	2.28	2.24	2.23	2.21	2.18	2.13	2.10	2.06	2.06	
018	10.11	2.09	2.03	2.02	1.88	1.88	1.87	1.75	1.72	1.71	1.70	1.67	1.67	1.67	1.65	1.63	1.59	1.57	1.54	
033	9.30	1.93	1.87	1.86	1.73	1.73	1.72	1.61	1.58	1.57	1.57	1.54	1.54	1.52	1.50	1.46	1.44	1.42	1.41	
047	8.65	1.79	1.74	1.73	1.61	1.61	1.60	1.50	1.47	1.46	1.46	1.43	1.43	1.41	1.39	1.36	1.34	1.32	1.32	
021	8.25	1.71	1.66	1.65	1.54	1.53	1.53	1.43	1.40	1.40	1.39	1.37	1.36	1.35	1.33	1.30	1.28	1.26	1.26	
017	8.20	1.70	1.65	1.64	1.53	1.52	1.52	1.42	1.40	1.39	1.38	1.36	1.36	1.34	1.32	1.29	1.27	1.25	1.25	
040	8.07	1.67	1.63	1.62	1.51	1.50	1.49	1.40	1.37	1.37	1.36	1.34	1.33	1.32	1.30	1.27	1.25	1.23	1.23	
039	8.07	1.67	1.62	1.62	1.50	1.50	1.49	1.40	1.37	1.37	1.36	1.33	1.33	1.32	1.30	1.27	1.25	1.23	1.23	
063	7.89	1.63	1.59	1.58	1.47	1.47	1.46	1.37	1.34	1.34	1.33	1.31	1.30	1.29	1.27	1.24	1.22	1.20	1.20	
019	7.82	1.62	1.57	1.57	1.46	1.45	1.45	1.35	1.33	1.32	1.32	1.29	1.29	1.27	1.26	1.23	1.21	1.19	1.19	
025	7.88	1.59	1.55	1.54	1.43	1.43	1.42	1.33	1.31	1.30	1.29	1.27	1.27	1.25	1.24	1.21	1.19	1.17	1.17	
018	7.67	1.59	1.55	1.54	1.43	1.43	1.42	1.33	1.31	1.30	1.29	1.27	1.27	1.25	1.24	1.21	1.19	1.17	1.17	
064	7.82	1.58	1.53	1.53	1.42	1.42	1.41	1.32	1.30	1.29	1.28	1.26	1.26	1.24	1.23	1.20	1.18	1.16	1.16	
054	7.80	1.57	1.53	1.52	1.42	1.41	1.40	1.32	1.29	1.29	1.28	1.26	1.25	1.24	1.22	1.19	1.18	1.16	1.16	
037	7.57	1.57	1.52	1.52	1.41	1.41	1.40	1.31	1.29	1.28	1.28	1.25	1.25	1.23	1.22	1.19	1.17	1.15	1.15	
035	7.52	1.56	1.51	1.51	1.40	1.40	1.39	1.30	1.28	1.27	1.27	1.24	1.24	1.23	1.21	1.18	1.17	1.15	1.14	
030	7.51	1.56	1.51	1.50	1.40	1.39	1.39	1.30	1.28	1.27	1.27	1.24	1.24	1.23	1.21	1.18	1.16	1.15	1.14	
062	7.46	1.55	1.50	1.50	1.39	1.39	1.38	1.29	1.27	1.26	1.26	1.23	1.23	1.22	1.20	1.17	1.16	1.14	1.14	
041	7.38	1.53	1.49	1.48	1.38	1.37	1.36	1.28	1.26	1.25	1.24	1.22	1.22	1.20	1.19	1.16	1.14	1.13	1.12	
042	7.27	1.51	1.46	1.46	1.36	1.35	1.34	1.26	1.24	1.23	1.23	1.20	1.20	1.19	1.17	1.14	1.13	1.11	1.11	
057	7.24	1.50	1.46	1.45	1.35	1.34	1.34	1.25	1.23	1.23	1.22	1.20	1.19	1.18	1.17	1.14	1.12	1.10	1.10	
021	7.18	1.49	1.45	1.44	1.34	1.33	1.33	1.24	1.22	1.22	1.21	1.19	1.19	1.17	1.16	1.13	1.11	1.09	1.09	
022	7.13	1.48	1.44	1.43	1.33	1.32	1.32	1.24	1.21	1.21	1.20	1.18	1.18	1.16	1.15	1.12	1.11	1.09	1.09	
055	7.13	1.48	1.44	1.43	1.33	1.32	1.32	1.24	1.21	1.21	1.20	1.18	1.18	1.16	1.15	1.12	1.11	1.09	1.08	
032	7.10	1.47	1.43	1.42	1.32	1.31	1.31	1.23	1.20	1.20	1.19	1.17	1.17	1.16	1.14	1.12	1.10	1.08	1.08	
053	7.07	1.47	1.42	1.42	1.32	1.31	1.31	1.23	1.20	1.20	1.19	1.17	1.17	1.15	1.14	1.11	1.10	1.08	1.08	
052	7.05	1.46	1.42	1.41	1.32	1.31	1.30	1.22	1.20	1.19	1.19	1.17	1.16	1.15	1.14	1.11	1.09	1.08	1.07	
060	7.03	1.46	1.42	1.41	1.31	1.31	1.30	1.22	1.20	1.19	1.19	1.16	1.16	1.15	1.13	1.11	1.09	1.07	1.07	
031	7.01	1.45	1.41	1.40	1.31	1.30	1.30	1.21	1.19	1.19	1.18	1.16	1.16	1.14	1.13	1.10	1.09	1.07	1.07	
065	6.95	1.44	1.40	1.39	1.30	1.29	1.29	1.21	1.18	1.18	1.17	1.15	1.15	1.13	1.12	1.09	1.08	1.06	1.06	
058	6.91	1.43	1.39	1.39	1.29	1.28	1.28	1.20	1.18	1.17	1.17	1.14	1.14	1.13	1.11	1.09	1.07	1.05	1.05	
061	6.91	1.43	1.39	1.38	1.29	1.28	1.28	1.20	1.18	1.17	1.16	1.14	1.14	1.13	1.11	1.09	1.07	1.05	1.05	
038	6.87	1.42	1.38	1.38	1.28	1.28	1.27	1.19	1.17	1.16	1.16	1.14	1.14	1.12	1.11	1.08	1.07	1.05	1.05	
024	6.83	1.41	1.37	1.37	1.27	1.27	1.26	1.18	1.16	1.16	1.15	1.13	1.13	1.11	1.10	1.07	1.06	1.04	1.04	
034	6.80	1.41	1.37	1.36	1.27	1.26	1.26	1.18	1.16	1.15	1.15	1.13	1.12	1.11	1.10	1.07	1.06	1.04	1.03	
036	6.76	1.40	1.36	1.35	1.26	1.25	1.25	1.17	1.15	1.14	1.14	1.12	1.12	1.10	1.09	1.06	1.05	1.03	1.03	
014	6.75	1.40	1.36	1.35	1.26	1.25	1.25	1.17	1.15	1.14	1.14	1.12	1.11	1.10	1.09	1.06	1.05	1.03	1.03	
027	6.71	1.39	1.35	1.35	1.25	1.25	1.24	1.16	1.14	1.14	1.13	1.11	1.11	1.10	1.08	1.06	1.04	1.02	1.02	
023	6.71	1.39	1.35	1.35	1.25	1.25	1.24	1.16	1.14	1.14	1.13	1.11	1.11	1.10	1.08	1.06	1.04	1.02	1.02	
049	6.59	1.37	1.33	1.32	1.23	1.22	1.22	1.14	1.12	1.12	1.11	1.09	1.09	1.08	1.06	1.04	1.02	1.01	1.00	
048	6.59	1.37	1.33	1.32	1.23	1.22	1.22	1.14	1.12	1.12	1.11	1.09	1.09	1.08	1.06	1.04	1.02	1.01	1.00	
043	6.58	1.36	1.33	1.32	1.23	1.22	1.22	1.14	1.12	1.11	1.11	1.09	1.09	1.07	1.06	1.03	1.02	1.00	1.00	
050	6.57	1.36	1.32	1.32	1.23	1.22	1.22	1.14	1.12	1.11	1.11	1.09	1.09	1.07	1.06	1.03	1.02	1.00	1.00	
058	6.56	1.36	1.32	1.31	1.22	1.22	1.21	1.14	1.12	1.11	1.11	1.08	1.08	1.07	1.06	1.03	1.02	1.00	1.00	
015	6.45	1.34	1.30	1.29	1.20	1.20	1.19	1.12	1.10	1.09	1.09	1.07	1.06	1.05	1.04	1.01	1.00	0.98	0.98	
003	6.38	1.32	1.28	1.27	1.19	1.18	1.18	1.10	1.08	1.08	1.07	1.05	1.05	1.04	1.02	1.00	0.99	0.97	0.97	
046	6.21	1.29	1.25	1.24	1.16	1.15	1.15	1.08	1.06	1.05	1.05	1.03	1.03	1.01	1.00	0.98	0.96	0.95	0.94	
001	6.13	1.27	1.23	1.23	1.14	1.14	1.13	1.06	1.04	1.04	1.03	1.01	1.01	1.00	0.99	0.98	0.95	0.94	0.93	
059	6.05	1.25	1.22	1.21	1.13	1.12	1.12	1.05	1.03	1.03	1.02	1.00	1.00	0.99	0.97	0.95	0.94	0.92	0.92	
004	6.04	1.25	1.22	1.21	1.13	1.12	1.12	1.05	1.03	1.02	1.02	1.00	1.00	0.99	0.97	0.95	0.94	0.92	0.92	
011	5.93	1.23	1.19	1.19	1.11	1.10	1.10	1.03	1.01	1.00	1.00	0.98	0.98	0.97	0.96	0.93	0.92	0.90	0.90	
029	5.90	1.22	1.19	1.18	1.10	1.10	1.09	1.02	1.00	1.00	0.98	0.98	0.96	0.95	0.93	0.92	0.90	0.88	0.88	
028	5.88	1.22	1.18	1.18	1.10	1.09	1.09	1.02	1.00	1.00	0.99	0.97	0.97	0.96	0.95	0.92	0.91	0.90	0.89	
013	5.77	1.20	1.16	1.16	1.08	1.07	1.07	1.00	0.98	0.98	0.97	0.95	0.95	0.94	0.93	0.91	0.90	0.88	0.88	
044	5.41	1.12	1.09	1.08	1.01	1.00	1.00	0.94	0.92	0.92	0.91	0.89	0.89	0.88	0.87	0.85	0.84	0.82	0.82	
005	5.39	1.12	1.08	1.08	1.00	1.00	1.00	0.93	0.92	0.91	0.91	0.89	0.89	0.88	0.87	0.85	0.84	0.82	0.82	
002	5.36	1.11	1.08	1.07	1.00	1.00	0.99	0.93	0.91	0.91	0.90	0.89	0.89	0.87	0.86	0.84	0.83	0.82	0.82	
010	4.99	1.03	1.01	1.00	0.93	0.93	0.92	0.87	0.85	0.85	0.84	0.83	0.82	0.81	0.80	0.78	0.77	0.76	0.76	
007	4.97	1.03	1.00	0.99	0.93	0.92	0.92	0.86	0.85	0.84	0.84	0.82	0.82	0.81	0.80	0.78	0.77	0.76	0.76	
006	4.83	1.00	0.97	0.97	0.90	0.90	0.89	0.84	0.82	0.82	0.81	0.80	0.80	0.79	0.78	0.76	0.75	0.74	0.73	
026	1.00	0.21	0.20	0.20	0.19	0.19	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.15	0.15	

Indonesia Export													(Japan Import)						
057	042	041	062	030	035	037	054	064	018	025	019	063	039	040	017	021	047	033	016
1.87	1.86	1.83	1.81	1.80	1.80	1.79	1.78	1.78	1.76	1.76	1.73	1.71	1.68	1.68	1.65	1.64	1.56	1.46	1.34
1.40	1.39	1.37	1.35	1.35	1.34	1.34	1.33	1.33	1.32	1.32	1.29	1.28	1.25	1.25	1.23	1.22	1.17	1.09	1.00
1.28	1.28	1.26	1.25	1.24	1.24	1.23	1.22	1.22	1.21	1.21	1.19	1.18	1.15	1.15	1.13	1.13	1.07	1.00	0.92
1.20	1.19	1.17	1.16	1.15	1.15	1.14	1.14	1.13	1.13	1.13	1.11	1.10	1.07	1.07	1.05	1.05	1.00	0.93	0.86
1.14	1.14	1.12	1.11	1.10	1.10	1.09	1.09	1.08	1.08	1.08	1.07	1.06	1.05	1.02	1.02	1.01	1.00	0.95	0.89
1.13	1.13	1.11	1.10	1.09	1.09	1.08	1.08	1.08	1.07	1.07	1.05	1.04	1.02	1.02	1.00	0.99	0.95	0.88	0.81
1.12	1.11	1.09	1.08	1.07	1.07	1.07	1.06	1.06	1.05	1.05	1.03	1.02	1.00	1.00	0.98	0.98	0.93	0.87	0.80
1.12	1.11	1.09	1.08	1.07	1.07	1.07	1.06	1.06	1.05	1.05	1.03	1.02	1.00	1.00	0.98	0.98	0.93	0.87	0.80
1.09	1.09	1.07	1.06	1.05	1.05	1.04	1.04	1.04	1.03	1.03	1.01	1.00	0.98	0.98	0.96	0.96	0.91	0.85	0.78
1.08	1.08	1.06	1.05	1.04	1.04	1.03	1.03	1.03	1.02	1.02	1.00	0.99	0.97	0.97	0.95	0.95	0.90	0.84	0.77
1.06	1.06	1.04	1.03	1.02	1.02	1.01	1.01	1.01	1.00	1.00	0.98	0.97	0.95	0.95	0.94	0.93	0.89	0.83	0.76
1.06	1.06	1.04	1.03	1.02	1.02	1.01	1.01	1.01	1.00	1.00	0.98	0.97	0.95	0.95	0.94	0.93	0.89	0.83	0.76
1.05	1.05	1.03	1.02	1.02	1.01	1.01	1.00	1.00	0.99	0.99	0.97	0.97	0.94	0.94	0.93	0.92	0.88	0.82	0.75
1.05	1.05	1.03	1.02	1.01	1.01	1.00	1.00	1.00	0.99	0.99	0.97	0.96	0.94	0.94	0.93	0.92	0.88	0.82	0.75
1.05	1.04	1.03	1.01	1.01	1.01	1.00	1.00	0.99	0.99	0.99	0.97	0.96	0.94	0.94	0.92	0.92	0.88	0.81	0.75
1.04	1.03	1.02	1.01	1.00	1.00	0.99	0.99	0.99	0.98	0.98	0.96	0.95	0.93	0.93	0.92	0.91	0.87	0.81	0.74
1.04	1.03	1.02	1.01	1.00	1.00	0.99	0.99	0.99	0.98	0.98	0.96	0.95	0.93	0.93	0.92	0.91	0.87	0.81	0.74
1.03	1.03	1.01	1.00	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.95	0.95	0.92	0.92	0.91	0.89	0.86	0.80	0.74
1.02	1.02	1.00	0.99	0.98	0.98	0.97	0.97	0.97	0.96	0.96	0.94	0.93	0.91	0.91	0.90	0.89	0.85	0.79	0.73
1.00	1.00	0.98	0.97	0.97	0.97	0.96	0.96	0.95	0.95	0.95	0.93	0.92	0.90	0.90	0.89	0.88	0.84	0.78	0.72
1.00	1.00	0.98	0.97	0.96	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.92	0.90	0.90	0.89	0.88	0.84	0.78	0.72
0.99	0.99	0.97	0.96	0.96	0.95	0.95	0.94	0.94	0.94	0.93	0.92	0.91	0.89	0.89	0.87	0.87	0.83	0.77	0.71
0.99	0.98	0.97	0.96	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.91	0.90	0.88	0.88	0.87	0.86	0.82	0.77	0.71
0.99	0.98	0.97	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.93	0.91	0.90	0.88	0.88	0.87	0.86	0.82	0.77	0.71
0.98	0.98	0.96	0.95	0.95	0.94	0.94	0.93	0.93	0.93	0.92	0.91	0.90	0.88	0.88	0.87	0.86	0.82	0.76	0.70
0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.90	0.89	0.88	0.88	0.86	0.86	0.82	0.76	0.70
0.97	0.97	0.96	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.90	0.89	0.87	0.87	0.86	0.85	0.82	0.76	0.70
0.97	0.97	0.95	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.90	0.89	0.87	0.87	0.86	0.85	0.81	0.76	0.70
0.97	0.96	0.95	0.94	0.93	0.93	0.93	0.92	0.92	0.91	0.91	0.89	0.89	0.87	0.87	0.85	0.85	0.81	0.75	0.69
0.96	0.96	0.94	0.93	0.93	0.93	0.92	0.92	0.91	0.91	0.91	0.89	0.88	0.86	0.86	0.85	0.84	0.80	0.75	0.69
0.96	0.95	0.94	0.93	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.88	0.88	0.86	0.86	0.84	0.84	0.80	0.74	0.68
0.95	0.95	0.94	0.93	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.88	0.88	0.86	0.86	0.84	0.84	0.80	0.74	0.68
0.95	0.95	0.93	0.92	0.92	0.91	0.91	0.90	0.90	0.90	0.89	0.88	0.87	0.85	0.85	0.84	0.83	0.79	0.74	0.68
0.94	0.94	0.93	0.91	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.87	0.86	0.85	0.85	0.83	0.83	0.79	0.73	0.68
0.94	0.94	0.92	0.91	0.91	0.91	0.90	0.90	0.89	0.89	0.89	0.87	0.86	0.84	0.84	0.83	0.82	0.79	0.73	0.67
0.93	0.93	0.92	0.91	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.86	0.86	0.84	0.84	0.82	0.82	0.78	0.73	0.67
0.93	0.93	0.91	0.90	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.86	0.86	0.84	0.84	0.82	0.82	0.78	0.73	0.67
0.93	0.92	0.91	0.90	0.89	0.89	0.89	0.88	0.88	0.87	0.87	0.86	0.85	0.83	0.83	0.82	0.81	0.78	0.72	0.66
0.93	0.92	0.91	0.90	0.89	0.89	0.89	0.88	0.88	0.87	0.87	0.86	0.85	0.83	0.83	0.82	0.81	0.78	0.72	0.66
0.91	0.91	0.89	0.88	0.88	0.88	0.87	0.87	0.87	0.86	0.86	0.84	0.84	0.82	0.82	0.80	0.80	0.76	0.71	0.65
0.91	0.91	0.89	0.88	0.88	0.88	0.87	0.87	0.87	0.86	0.86	0.84	0.84	0.82	0.82	0.80	0.80	0.76	0.71	0.65
0.91	0.91	0.89	0.88	0.88	0.88	0.87	0.87	0.86	0.86	0.86	0.84	0.83	0.82	0.82	0.80	0.80	0.76	0.71	0.65
0.91	0.90	0.89	0.88	0.88	0.88	0.87	0.87	0.87	0.86	0.86	0.84	0.83	0.81	0.81	0.80	0.79	0.76	0.71	0.65
0.91	0.90	0.89	0.88	0.87	0.87	0.86	0.86	0.86	0.85	0.85	0.84	0.83	0.81	0.81	0.80	0.79	0.76	0.71	0.65
0.89	0.89	0.87	0.86	0.86	0.86	0.85	0.85	0.85	0.84	0.84	0.82	0.82	0.80	0.80	0.79	0.78	0.75	0.69	0.64
0.88	0.88	0.86	0.85	0.85	0.85	0.84	0.84	0.83	0.83	0.83	0.81	0.81	0.79	0.79	0.78	0.77	0.74	0.68	0.63
0.86	0.85	0.84	0.83	0.83	0.83	0.82	0.82	0.81	0.81	0.81	0.79	0.79	0.77	0.77	0.76	0.75	0.72	0.67	0.61
0.85	0.84	0.83	0.82	0.82	0.82	0.81	0.81	0.80	0.80	0.80	0.78	0.78	0.76	0.76	0.75	0.74	0.71	0.66	0.61
0.84	0.83	0.82	0.81	0.81	0.81	0.80	0.80	0.79	0.79	0.79	0.77	0.77	0.75	0.75	0.74	0.73	0.70	0.65	0.60
0.84	0.83	0.82	0.81	0.81	0.80	0.80	0.80	0.79	0.79	0.79	0.77	0.77	0.75	0.75	0.74	0.73	0.70	0.65	0.60
0.82	0.82	0.80	0.79	0.79	0.79	0.78	0.78	0.78	0.77	0.77	0.76	0.75	0.74	0.73	0.72	0.72	0.69	0.64	0.59
0.82	0.81	0.80	0.79	0.79	0.79	0.78	0.78	0.77	0.77	0.77	0.76	0.75	0.73	0.73	0.72	0.72	0.68	0.64	0.58
0.81	0.81	0.80	0.79	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.75	0.74	0.73	0.73	0.72	0.71	0.68	0.63	0.58
0.80	0.79	0.78	0.77	0.77	0.77	0.76	0.76	0.76	0.75	0.75	0.74	0.73	0.72	0.71	0.70	0.70	0.67	0.62	0.57
0.75	0.74	0.73	0.72	0.72	0.72	0.71	0.71	0.71	0.70	0.70	0.69	0.69	0.67	0.67	0.66	0.66	0.63	0.58	0.54
0.74	0.74	0.73	0.72	0.72	0.72	0.71	0.71	0.71	0.70	0.70	0.69	0.68	0.67	0.67	0.66	0.65	0.62	0.58	0.53
0.74	0.74	0.73	0.72	0.71	0.71	0.71	0.71	0.70	0.70	0.70	0.69	0.68	0.67	0.66	0.65	0.65	0.62	0.58	0.53
0.69	0.69	0.68	0.67	0.66	0.66	0.66	0.65	0.65	0.65	0.65	0.64	0.63	0.62	0.61	0.60	0.60	0.58	0.54	0.49
0.69	0.68	0.67	0.67	0.66	0.66	0.66	0.65	0.65	0.65	0.65	0.64	0.63	0.62	0.61	0.60	0.57	0.53	0.49	0.44
0.67	0.66	0.65	0.65	0.64	0.64	0.64	0.63	0.63	0.63	0.63	0.62	0.61	0.60	0.60	0.59	0.58	0.56	0.52	0.48
0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.11	0.11	0.10

TABLE3. Comparative Advantage between Thailand and Japan

Sector	Thailand Export (Japan Import)																																		
	029	030	003	041	055	008	065	060	002	004	046	040	088	027	071	005	082	050	013	008	090	001	072	042	089	018	059	081	011	007	039	044	081		
038	8.17	1.98	1.92	1.91	1.88	1.87	1.79	1.79	1.78	1.72	1.66	1.66	1.64	1.63	1.63	1.62	1.61	1.59	1.59	1.58	1.57	1.57	1.55	1.55	1.55	1.55	1.54	1.54	1.53	1.52	1.52	1.50	1.50		
017	7.43	1.80	1.74	1.73	1.71	1.70	1.63	1.62	1.61	1.56	1.51	1.51	1.49	1.49	1.48	1.47	1.47	1.45	1.45	1.44	1.43	1.43	1.41	1.41	1.41	1.41	1.40	1.40	1.40	1.38	1.38	1.37	1.37		
014	7.25	1.75	1.70	1.69	1.66	1.66	1.59	1.58	1.57	1.52	1.47	1.47	1.45	1.45	1.44	1.43	1.43	1.41	1.41	1.40	1.40	1.40	1.38	1.37	1.37	1.37	1.36	1.36	1.35	1.34	1.33	1.33			
015	7.12	1.72	1.67	1.66	1.63	1.63	1.56	1.56	1.55	1.50	1.45	1.44	1.43	1.42	1.42	1.41	1.40	1.39	1.38	1.38	1.37	1.37	1.35	1.35	1.35	1.35	1.34	1.34	1.32	1.32	1.31	1.31			
019	6.08	1.71	1.68	1.65	1.63	1.62	1.55	1.55	1.54	1.49	1.44	1.44	1.42	1.42	1.41	1.40	1.40	1.38	1.38	1.37	1.36	1.36	1.34	1.34	1.34	1.34	1.33	1.33	1.31	1.31	1.30	1.30			
036	6.93	1.68	1.62	1.62	1.59	1.59	1.52	1.51	1.51	1.46	1.41	1.41	1.39	1.38	1.38	1.37	1.37	1.35	1.35	1.34	1.34	1.33	1.32	1.31	1.31	1.31	1.31	1.30	1.30	1.29	1.29	1.28	1.27		
065	6.74	1.63	1.58	1.57	1.55	1.55	1.48	1.47	1.46	1.41	1.37	1.37	1.35	1.35	1.34	1.33	1.33	1.31	1.31	1.30	1.30	1.30	1.28	1.28	1.28	1.28	1.27	1.27	1.27	1.25	1.25	1.24	1.24		
060	6.72	1.63	1.58	1.57	1.54	1.54	1.48	1.47	1.46	1.41	1.37	1.36	1.35	1.34	1.34	1.33	1.33	1.31	1.31	1.30	1.29	1.29	1.27	1.27	1.26	1.26	1.24	1.24	1.24	1.23	1.23	1.21	1.21		
062	6.53	1.58	1.53	1.52	1.50	1.50	1.43	1.43	1.42	1.41	1.40	1.39	1.31	1.31	1.29	1.29	1.28	1.27	1.26	1.26	1.25	1.24	1.24	1.23	1.23	1.23	1.22	1.21	1.21	1.20	1.20	1.19	1.18		
063	6.45	1.56	1.51	1.51	1.48	1.48	1.42	1.41	1.41	1.40	1.39	1.34	1.30	1.30	1.28	1.28	1.27	1.26	1.26	1.25	1.24	1.23	1.23	1.22	1.22	1.20	1.20	1.20	1.19	1.19	1.18	1.18	1.17	1.17	
045	6.43	1.56	1.51	1.50	1.48	1.48	1.41	1.41	1.41	1.40	1.39	1.34	1.30	1.30	1.28	1.28	1.27	1.26	1.26	1.25	1.24	1.23	1.23	1.22	1.22	1.20	1.20	1.20	1.19	1.19	1.18	1.18	1.17	1.17	
021	6.39	1.55	1.50	1.49	1.47	1.46	1.40	1.40	1.39	1.34	1.30	1.30	1.28	1.28	1.27	1.27	1.26	1.26	1.25	1.24	1.23	1.23	1.22	1.22	1.20	1.20	1.20	1.19	1.19	1.18	1.18	1.17	1.17		
034	6.35	1.54	1.49	1.48	1.46	1.46	1.39	1.39	1.38	1.34	1.29	1.29	1.27	1.27	1.26	1.26	1.25	1.24	1.23	1.23	1.22	1.22	1.20	1.20	1.20	1.20	1.19	1.19	1.18	1.18	1.17	1.17			
012	6.34	1.54	1.49	1.48	1.46	1.46	1.39	1.39	1.38	1.33	1.28	1.29	1.27	1.27	1.26	1.26	1.25	1.24	1.23	1.23	1.22	1.22	1.21	1.21	1.19	1.19	1.19	1.18	1.18	1.18	1.16	1.16	1.15	1.15	
092	6.27	1.52	1.47	1.46	1.44	1.44	1.38	1.37	1.36	1.32	1.27	1.27	1.26	1.25	1.25	1.24	1.23	1.22	1.22	1.20	1.20	1.19	1.19	1.19	1.19	1.18	1.18	1.18	1.16	1.16	1.15	1.15	1.15	1.15	
024	6.26	1.52	1.47	1.46	1.44	1.44	1.37	1.37	1.36	1.32	1.27	1.27	1.26	1.25	1.25	1.24	1.23	1.22	1.22	1.21	1.21	1.19	1.19	1.19	1.19	1.18	1.18	1.18	1.16	1.16	1.15	1.15	1.15	1.15	
083	6.18	1.50	1.45	1.44	1.42	1.42	1.36	1.35	1.34	1.30	1.26	1.25	1.24	1.23	1.23	1.22	1.22	1.20	1.20	1.19	1.19	1.19	1.17	1.17	1.17	1.17	1.16	1.16	1.16	1.15	1.15	1.14	1.13	1.13	
048	6.14	1.49	1.44	1.43	1.41	1.41	1.35	1.34	1.33	1.29	1.25	1.25	1.23	1.23	1.22	1.22	1.21	1.20	1.20	1.19	1.18	1.18	1.17	1.17	1.17	1.16	1.16	1.15	1.15	1.14	1.14	1.13	1.13	1.13	
093	6.09	1.47	1.43	1.42	1.40	1.40	1.34	1.33	1.32	1.28	1.24	1.23	1.22	1.22	1.21	1.21	1.20	1.19	1.18	1.18	1.17	1.17	1.16	1.15	1.15	1.15	1.14	1.14	1.13	1.13	1.12	1.12	1.11	1.11	
079	6.03	1.46	1.41	1.41	1.39	1.38	1.32	1.32	1.31	1.27	1.23	1.22	1.21	1.21	1.20	1.19	1.19	1.17	1.17	1.17	1.16	1.16	1.14	1.14	1.14	1.14	1.14	1.13	1.13	1.12	1.12	1.11	1.11	1.11	
066	6.03	1.46	1.41	1.41	1.39	1.38	1.32	1.32	1.31	1.27	1.23	1.22	1.21	1.21	1.20	1.19	1.19	1.17	1.17	1.17	1.16	1.16	1.14	1.14	1.14	1.14	1.14	1.13	1.13	1.12	1.12	1.11	1.11	1.11	
028	6.02	1.46	1.41	1.40	1.38	1.38	1.32	1.32	1.31	1.27	1.22	1.22	1.21	1.20	1.20	1.19	1.19	1.17	1.17	1.16	1.16	1.14	1.14	1.14	1.14	1.14	1.13	1.13	1.12	1.12	1.11	1.11	1.11	1.11	
087	5.99	1.45	1.40	1.40	1.38	1.37	1.32	1.31	1.30	1.26	1.22	1.22	1.20	1.20	1.19	1.19	1.18	1.17	1.17	1.16	1.15	1.15	1.14	1.14	1.14	1.14	1.13	1.13	1.13	1.11	1.11	1.10	1.10	1.10	
053	5.95	1.44	1.40	1.39	1.37	1.37	1.31	1.30	1.29	1.25	1.21	1.21	1.20	1.19	1.19	1.19	1.18	1.17	1.16	1.16	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.14	1.14	1.13	1.13	1.12	1.12	1.10	1.10
094	5.95	1.44	1.40	1.39	1.37	1.37	1.31	1.30	1.29	1.25	1.21	1.21	1.20	1.19	1.19	1.19	1.18	1.17	1.16	1.16	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.14	1.14	1.13	1.13	1.12	1.12	1.10	1.10
047	5.94	1.44	1.39	1.39	1.36	1.36	1.30	1.30	1.29	1.25	1.21	1.20	1.19	1.19	1.19	1.18	1.18	1.17	1.16	1.15	1.15	1.14	1.14	1.13	1.13	1.13	1.12	1.12	1.11	1.11	1.10	1.10	1.10	1.10	
057	5.93	1.44	1.39	1.38	1.36	1.36	1.30	1.30	1.29	1.25	1.21	1.20	1.19	1.19	1.19	1.18	1.17	1.17	1.15	1.15	1.15	1.14	1.14	1.13	1.12	1.12	1.12	1.12	1.11	1.11	1.10	1.10	1.10	1.10	
054	5.92	1.43	1.39	1.38	1.36	1.36	1.30	1.29	1.29	1.25	1.20	1.20	1.19	1.18	1.18	1.17	1.17	1.15	1.15	1.15	1.14	1.14	1.14	1.12	1.12	1.12	1.12	1.12	1.11	1.11	1.10	1.10	1.10	1.10	
049	5.91	1.43	1.39	1.38	1.36	1.36	1.30	1.29	1.29	1.24	1.20	1.20	1.19	1.18	1.18	1.17	1.17	1.15	1.15	1.15	1.14	1.14	1.14	1.12	1.12	1.12	1.12	1.12	1.11	1.11	1.10	1.10	1.10	1.10	
073	5.90	1.43	1.38	1.38	1.36	1.35	1.30	1.29	1.28	1.24	1.20	1.20	1.18	1.18	1.18	1.17	1.16	1.15	1.15	1.15	1.14	1.14	1.14	1.12	1.12	1.12	1.12	1.11	1.11	1.11	1.10	1.10	1.10	1.10	
052	5.89	1.43	1.38	1.38	1.35	1.35	1.29	1.29	1.28	1.24	1.20	1.20	1.18	1.18	1.17	1.17	1.16	1.15	1.15	1.15	1.14	1.14	1.14	1.12	1.12	1.12	1.12	1.11	1.11	1.11	1.10	1.10	1.10	1.10	
064	5.87	1.42	1.38	1.37	1.35	1.35	1.29	1.28	1.28	1.24	1.19	1.19	1.18	1.17	1.17	1.16	1.16	1.14	1.14	1.13	1.13	1.13	1.11	1.11	1.11	1.11	1.11	1.11	1.10	1.10	1.10	1.10	1.10	1.10	
025	5.87	1.42	1.38	1.37	1.35	1.35	1.29	1.28	1.28	1.24	1.19	1.19	1.18	1.17	1.17	1.16	1.16	1.14	1.14	1.13	1.13	1.13	1.11	1.11	1.11	1.11	1.11	1.11	1.10	1.10	1.10	1.10	1.10	1.10	
016	5.87	1.42	1.38	1.37	1.35	1.35	1.29	1.28	1.28	1.24	1.19	1.19	1.18	1.17	1.17	1.16	1.16	1.14	1.14	1.13	1.13	1.13	1.11	1.11	1.11	1.11	1.11	1.11	1.10	1.10	1.10	1.10	1.10	1.10	
080	5.86	1.42	1.37	1.37	1.35	1.34	1.29	1.28	1.27	1.23	1.19	1.19	1.17	1.17	1.17	1.16	1.15	1.14	1.14	1.13	1.13	1.13	1.11	1.11	1.11	1.11	1.11	1.11	1.10	1.10	1.10	1.10	1.10	1.10	
023	5.84	1.41	1.37	1.36	1.34	1.34	1.28	1.28	1.27	1.23	1.19	1.18	1.17	1.17	1.16	1.16	1.15	1.14	1.14	1.13	1.12	1.12	1.11	1.11	1.11	1.11	1.11	1.11	1.10	1.10	1.10	1.10	1.10	1.10	
035	5.83	1.41	1.37	1.36	1.34	1.34	1.28	1.27	1.27	1.23	1.19	1.18	1.17	1.17	1.16	1.15	1.15	1.14	1.13	1.13	1.12	1.12	1.11	1.11	1.11	1.11	1.11	1.10	1.10	1.10	1.10	1.10	1.10	1.10	
067	5.83	1.41	1.37	1.36	1.34	1.34	1.28	1.27	1.27	1.23	1.19	1.18	1.17	1.17	1.16	1.15	1.15	1.14	1.13	1.13	1.12	1.12	1.												

	029	030	003	041	055	006	065	060	002	004	046	040	088	027	071	005	082	058	013	008	090	001	072	042	089	018	059	061	011	007	039	044	081	
076	5.73	1.39	1.34	1.34	1.32	1.31	1.26	1.25	1.24	1.20	1.16	1.16	1.15	1.14	1.14	1.13	1.13	1.12	1.11	1.11	1.10	1.10	1.09	1.09	1.09	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
031	5.67	1.37	1.33	1.32	1.30	1.30	1.24	1.24	1.23	1.19	1.15	1.15	1.14	1.13	1.13	1.12	1.12	1.11	1.10	1.10	1.09	1.09	1.09	1.08	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
096	5.66	1.37	1.33	1.32	1.30	1.30	1.24	1.24	1.23	1.19	1.15	1.15	1.13	1.13	1.13	1.12	1.12	1.11	1.10	1.10	1.09	1.09	1.09	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
020	5.64	1.37	1.32	1.32	1.30	1.29	1.24	1.23	1.23	1.19	1.15	1.14	1.13	1.13	1.12	1.12	1.11	1.10	1.10	1.09	1.09	1.09	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
078	5.64	1.37	1.32	1.32	1.30	1.29	1.24	1.23	1.23	1.19	1.15	1.14	1.13	1.13	1.12	1.12	1.11	1.10	1.10	1.09	1.09	1.09	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
050	5.63	1.36	1.32	1.31	1.29	1.29	1.23	1.23	1.22	1.19	1.14	1.14	1.13	1.13	1.12	1.12	1.11	1.10	1.10	1.09	1.09	1.08	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
056	5.63	1.36	1.32	1.31	1.29	1.29	1.23	1.23	1.22	1.18	1.14	1.14	1.13	1.12	1.12	1.11	1.11	1.10	1.09	1.09	1.08	1.08	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
095	5.61	1.36	1.31	1.31	1.29	1.29	1.23	1.23	1.22	1.18	1.14	1.14	1.12	1.12	1.12	1.11	1.11	1.09	1.09	1.08	1.08	1.08	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
033	5.56	1.35	1.30	1.30	1.28	1.28	1.22	1.21	1.21	1.17	1.13	1.13	1.12	1.11	1.11	1.10	1.10	1.08	1.08	1.08	1.07	1.07	1.07	1.07	1.07	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
043	5.55	1.34	1.30	1.29	1.27	1.27	1.22	1.21	1.20	1.17	1.13	1.12	1.11	1.11	1.10	1.10	1.09	1.08	1.08	1.07	1.07	1.07	1.07	1.07	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
091	5.54	1.34	1.30	1.29	1.27	1.27	1.22	1.21	1.20	1.16	1.12	1.12	1.11	1.11	1.10	1.10	1.09	1.08	1.08	1.07	1.07	1.07	1.07	1.07	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
074	5.53	1.34	1.30	1.29	1.27	1.27	1.21	1.21	1.20	1.16	1.12	1.12	1.11	1.11	1.10	1.10	1.09	1.08	1.08	1.07	1.07	1.07	1.07	1.07	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
037	5.51	1.33	1.29	1.29	1.27	1.26	1.21	1.20	1.20	1.16	1.12	1.12	1.11	1.10	1.10	1.09	1.09	1.07	1.07	1.07	1.07	1.07	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
069	5.51	1.33	1.29	1.28	1.26	1.26	1.21	1.20	1.20	1.16	1.12	1.12	1.10	1.10	1.10	1.09	1.09	1.07	1.07	1.07	1.07	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
075	5.47	1.32	1.28	1.28	1.26	1.25	1.20	1.19	1.19	1.15	1.11	1.11	1.10	1.09	1.09	1.08	1.08	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	
009	5.44	1.32	1.28	1.27	1.25	1.25	1.20	1.19	1.18	1.15	1.11	1.10	1.09	1.09	1.08	1.08	1.07	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
081	5.44	1.32	1.28	1.27	1.25	1.25	1.19	1.19	1.18	1.15	1.11	1.10	1.09	1.09	1.08	1.08	1.07	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
044	5.43	1.31	1.27	1.27	1.25	1.25	1.19	1.19	1.18	1.14	1.10	1.10	1.09	1.09	1.08	1.08	1.07	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
039	5.39	1.30	1.26	1.26	1.24	1.24	1.18	1.18	1.17	1.13	1.10	1.09	1.08	1.08	1.07	1.07	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
077	5.38	1.30	1.26	1.26	1.24	1.24	1.18	1.18	1.17	1.13	1.09	1.09	1.08	1.08	1.07	1.07	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
011	5.33	1.29	1.25	1.24	1.22	1.22	1.17	1.16	1.16	1.12	1.08	1.08	1.07	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
061	5.32	1.29	1.25	1.24	1.22	1.22	1.17	1.16	1.16	1.12	1.08	1.08	1.07	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
059	5.30	1.28	1.24	1.24	1.22	1.22	1.16	1.16	1.15	1.12	1.08	1.08	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
018	5.28	1.28	1.24	1.23	1.21	1.21	1.16	1.15	1.15	1.11	1.07	1.07	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
089	5.28	1.28	1.24	1.23	1.21	1.21	1.16	1.15	1.15	1.11	1.07	1.07	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
042	5.27	1.28	1.24	1.23	1.21	1.21	1.16	1.15	1.15	1.11	1.07	1.07	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
072	5.27	1.28	1.24	1.23	1.21	1.21	1.16	1.15	1.14	1.11	1.07	1.07	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
051	5.19	1.26	1.22	1.21	1.19	1.19	1.14	1.13	1.13	1.09	1.06	1.05	1.04	1.04	1.03	1.03	1.02	1.01	1.01	1.01	1.00	1.00	1.00	1.00	0.99	0.98	0.98	0.98	0.98	0.97	0.96	0.96	0.96	0.95
090	5.19	1.26	1.22	1.21	1.19	1.19	1.14	1.13	1.13	1.09	1.05	1.05	1.04	1.04	1.03	1.03	1.02	1.02	1.01	1.01	1.00	1.00	1.00	1.00	0.98	0.98	0.98	0.98	0.98	0.97	0.96	0.96	0.96	0.95
008	5.18	1.25	1.21	1.21	1.19	1.19	1.14	1.13	1.12	1.09	1.05	1.05	1.04	1.03	1.03	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00	1.00	0.98	0.98	0.98	0.98	0.97	0.96	0.96	0.95	0.95	0.95
013	5.14	1.24	1.20	1.20	1.18	1.18	1.13	1.12	1.12	1.08	1.04	1.04	1.03	1.03	1.02	1.02	1.01	1.00	1.00	1.00	0.99	0.99	0.99	0.98	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.95	0.95	0.94
058	5.14	1.24	1.20	1.20	1.18	1.18	1.13	1.12	1.12	1.08	1.04	1.04	1.03	1.03	1.02	1.02	1.01	1.00	1.00	1.00	0.99	0.99	0.99	0.98	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.95	0.95	0.94
082	5.07	1.23	1.19	1.18	1.17	1.16	1.11	1.10	1.10	1.07	1.03	1.03	1.02	1.01	1.01	1.01	1.00	0.99	0.99	0.98	0.98	0.98	0.98	0.96	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.94	0.94	0.93
005	5.05	1.22	1.18	1.18	1.16	1.16	1.11	1.10	1.10	1.06	1.03	1.02	1.01	1.01	1.01	1.00	1.00	0.98	0.98	0.98	0.97	0.97	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.93
071	5.02	1.22	1.18	1.17	1.15	1.15	1.10	1.10	1.09	1.06	1.02	1.02	1.01	1.00	1.00	0.99	0.99	0.98	0.98	0.97	0.97	0.97	0.97	0.95	0.95	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.92	0.92
027	5.00	1.21	1.17	1.17	1.15	1.15	1.10	1.09	1.09	1.05	1.02	1.01	1.00	1.00	1.00	0.99	0.99	0.97	0.97	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.92	0.92	0.92
088	4.98	1.21	1.17	1.16	1.14	1.14	1.09	1.09	1.08	1.05	1.01	1.01	1.00	1.00	0.99	0.99	0.98	0.97	0.97	0.96	0.96	0.96	0.96	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.92	0.92	0.92	0.92
040	4.93	1.19	1.16	1.15	1.13	1.13	1.08	1.08	1.07	1.04	1.00	1.00	0.99	0.99	0.98	0.98	0.97	0.96	0.96	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.93	0.93	0.92	0.91	0.91	0.91	0.91	
046	4.92	1.19	1.15	1.1																														

	Thailand Export (Japan Import)																												
	057	047	094	053	087	028	068	079	093	048	083	024	092	012	034	021	045	063	032	062	086	085	036	019	015	014	017	038	
038	1.38	1.38	1.37	1.37	1.36	1.36	1.35	1.35	1.34	1.33	1.32	1.30	1.30	1.29	1.29	1.28	1.27	1.27	1.26	1.25	1.22	1.21	1.18	1.15	1.13	1.10	1.00	1.00	
017	1.25	1.25	1.25	1.25	1.24	1.24	1.23	1.23	1.22	1.21	1.20	1.19	1.19	1.17	1.17	1.16	1.16	1.15	1.14	1.14	1.11	1.10	1.07	1.05	1.04	1.03	1.00	0.91	
014	1.22	1.22	1.22	1.22	1.21	1.20	1.20	1.20	1.19	1.18	1.17	1.16	1.16	1.14	1.14	1.13	1.13	1.12	1.11	1.11	1.08	1.07	1.05	1.02	1.02	1.00	0.98	0.89	
015	1.20	1.20	1.20	1.20	1.19	1.18	1.18	1.18	1.17	1.16	1.15	1.14	1.14	1.12	1.12	1.11	1.11	1.10	1.09	1.09	1.06	1.06	1.03	1.01	1.00	0.98	0.96	0.87	
019	1.19	1.19	1.19	1.19	1.18	1.18	1.17	1.17	1.16	1.15	1.15	1.13	1.13	1.12	1.12	1.11	1.10	1.10	1.09	1.08	1.05	1.05	1.02	1.00	0.99	0.98	0.95	0.87	
036	1.17	1.17	1.16	1.16	1.16	1.15	1.15	1.15	1.14	1.13	1.12	1.11	1.11	1.09	1.09	1.09	1.08	1.07	1.06	1.06	1.03	1.03	1.00	0.98	0.97	0.96	0.93	0.85	
085	1.14	1.14	1.13	1.13	1.13	1.12	1.12	1.12	1.11	1.10	1.09	1.08	1.08	1.06	1.06	1.06	1.05	1.05	1.04	1.03	1.00	1.00	0.97	0.95	0.95	0.93	0.91	0.83	
086	1.13	1.13	1.13	1.13	1.12	1.12	1.11	1.11	1.10	1.09	1.09	1.07	1.07	1.06	1.06	1.05	1.05	1.04	1.03	1.03	1.00	1.00	0.97	0.95	0.94	0.93	0.90	0.82	
062	1.10	1.10	1.10	1.10	1.09	1.09	1.08	1.08	1.07	1.06	1.06	1.04	1.04	1.03	1.03	1.02	1.02	1.01	1.00	1.00	0.97	0.97	0.94	0.92	0.92	0.90	0.88	0.80	
063	1.09	1.09	1.08	1.08	1.08	1.07	1.07	1.07	1.06	1.05	1.04	1.03	1.03	1.02	1.02	1.01	1.00	1.00	0.99	0.99	0.96	0.96	0.93	0.91	0.91	0.89	0.87	0.79	
045	1.08	1.08	1.08	1.08	1.07	1.07	1.07	1.07	1.06	1.05	1.04	1.03	1.03	1.01	1.01	1.01	1.00	1.00	0.99	0.98	0.96	0.95	0.93	0.91	0.90	0.89	0.87	0.79	
021	1.08	1.08	1.07	1.07	1.07	1.06	1.06	1.06	1.05	1.04	1.03	1.02	1.02	1.01	1.01	1.00	0.99	0.99	0.98	0.98	0.95	0.95	0.92	0.90	0.90	0.88	0.86	0.78	
034	1.07	1.07	1.07	1.07	1.06	1.05	1.05	1.05	1.04	1.03	1.03	1.01	1.01	1.00	1.00	0.99	0.99	0.98	0.98	0.97	0.94	0.94	0.92	0.90	0.89	0.88	0.85	0.78	
012	1.07	1.07	1.07	1.07	1.06	1.05	1.05	1.05	1.04	1.03	1.03	1.01	1.01	1.00	1.00	0.99	0.99	0.98	0.97	0.97	0.94	0.94	0.92	0.90	0.89	0.88	0.85	0.78	
092	1.06	1.06	1.05	1.05	1.05	1.04	1.04	1.04	1.03	1.02	1.01	1.00	1.00	0.99	0.99	0.98	0.97	0.97	0.96	0.96	0.93	0.93	0.90	0.89	0.88	0.87	0.84	0.77	
024	1.06	1.05	1.05	1.05	1.04	1.04	1.04	1.03	1.02	1.01	1.01	1.00	1.00	0.99	0.99	0.98	0.97	0.97	0.96	0.96	0.93	0.93	0.90	0.88	0.88	0.86	0.84	0.77	
083	1.04	1.04	1.04	1.04	1.03	1.03	1.02	1.02	1.01	1.01	1.00	0.99	0.99	0.97	0.97	0.96	0.96	0.95	0.95	0.92	0.92	0.89	0.87	0.87	0.85	0.83	0.76		
048	1.04	1.04	1.03	1.03	1.03	1.02	1.02	1.02	1.01	1.00	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95	0.94	0.94	0.91	0.91	0.89	0.87	0.86	0.85	0.83	0.75	
093	1.03	1.03	1.02	1.02	1.02	1.01	1.01	1.01	1.00	0.99	0.99	0.97	0.97	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.91	0.91	0.90	0.88	0.86	0.84	0.82	0.75	
079	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00	0.99	0.98	0.98	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.93	0.92	0.90	0.89	0.87	0.85	0.85	0.83	0.81	0.74	
066	1.02	1.02	1.01	1.01	1.01	1.00	1.00	1.00	0.99	0.98	0.98	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.93	0.92	0.90	0.89	0.87	0.85	0.85	0.83	0.81	0.74	
028	1.01	1.01	1.01	1.01	1.00	1.00	1.00	1.00	0.99	0.98	0.98	0.97	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.92	0.92	0.90	0.89	0.87	0.85	0.83	0.81	0.74	
087	1.01	1.01	1.01	1.01	1.00	1.00	0.99	0.99	0.98	0.98	0.97	0.96	0.96	0.94	0.94	0.94	0.93	0.93	0.92	0.92	0.89	0.89	0.86	0.85	0.84	0.83	0.81	0.73	
053	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	0.97	0.96	0.95	0.95	0.94	0.94	0.93	0.93	0.92	0.91	0.91	0.89	0.88	0.86	0.84	0.84	0.82	0.80	0.73	
094	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99	0.98	0.98	0.97	0.96	0.95	0.95	0.94	0.94	0.93	0.93	0.92	0.91	0.91	0.89	0.88	0.86	0.84	0.84	0.82	0.80	0.73
047	1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.95	0.95	0.94	0.94	0.93	0.92	0.92	0.91	0.91	0.88	0.88	0.86	0.84	0.83	0.82	0.80	0.73	
057	1.00	1.00	1.00	1.00	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.95	0.95	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.88	0.88	0.86	0.84	0.83	0.82	0.80	0.73	
054	1.00	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.96	0.95	0.94	0.93	0.93	0.93	0.92	0.92	0.91	0.91	0.88	0.88	0.85	0.84	0.83	0.82	0.80	0.72	
049	1.00	1.00	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.96	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.91	0.91	0.88	0.88	0.85	0.84	0.83	0.82	0.80	0.72	
073	1.00	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.96	0.96	0.94	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.88	0.88	0.85	0.83	0.83	0.81	0.79	0.72	
052	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.98	0.97	0.96	0.95	0.94	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.88	0.87	0.85	0.83	0.83	0.81	0.79	0.72	
064	0.99	0.99	0.99	0.99	0.98	0.98	0.98	0.97	0.97	0.96	0.95	0.94	0.94	0.93	0.93	0.92	0.91	0.91	0.90	0.90	0.87	0.87	0.85	0.83	0.83	0.81	0.79	0.72	
025	0.99	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95	0.94	0.94	0.93	0.93	0.92	0.91	0.91	0.90	0.90	0.87	0.87	0.85	0.83	0.83	0.81	0.79	0.72	
016	0.99	0.99	0.99	0.99	0.98	0.98	0.97	0.97	0.96	0.96	0.95	0.94	0.94	0.92	0.92	0.92	0.91	0.91	0.90	0.90	0.87	0.87	0.85	0.83	0.82	0.81	0.79	0.72	
080	0.99	0.99	0.98	0.98	0.98	0.97	0.97	0.97	0.96	0.95	0.95	0.94	0.93	0.92	0.92	0.92	0.91	0.91	0.90	0.90	0.87	0.87	0.85	0.83	0.82	0.81	0.79	0.72	
023	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.90	0.89	0.87	0.87	0.84	0.82	0.82	0.81	0.79	0.71	
035	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.90	0.89	0.87	0.87	0.84	0.82	0.82	0.80	0.78	0.71	
067	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.90	0.89	0.87	0.87	0.84	0.82	0.82	0.80	0.78	0.71	
077	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.90	0.89	0.87	0.86	0.84	0.82	0.82	0.80	0.78	0.71	
010	0.98	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.96	0.95	0.94	0.93	0.93	0.92	0.92	0.91	0.91	0.90	0.89	0.89	0.87	0.86	0.84	0.82	0.82	0.80	0.78	0.71	
084	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.96	0.95	0.94	0.94	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.89	0.88	0.86	0.86	0.83	0.82	0.81	0.80	0.78	0.71	
026	0.97	0.97	0.97	0.97	0.96	0.96	0.96	0.96	0.95	0.94	0.93	0.92	0.92	0.91	0.91	0.90	0.90	0.89	0.89	0.88	0.86	0.85	0.83	0.81	0.81	0.80	0.78	0.71	
070	0.97	0.97	0.97	0.97	0.96	0.96	0.95	0.95	0.95	0.94	0.93	0.92	0.92	0.91	0.91	0.90	0.90	0.89	0.88	0.88	0.86	0.85	0.83	0.81	0.81	0.79	0.78	0.70	
051	0.97	0.97	0.97	0.97	0.96	0.96	0.95	0.95	0.94	0.94	0.93	0.92	0.92	0.91	0.91	0.90	0.89	0.89	0.88	0.88	0.86	0.85	0.83	0.81	0.81	0.79	0.77	0.70	
032	0.97	0.97	0.96	0.96	0.96	0.95	0.95	0.95	0.94	0.93	0.93	0.92	0.91	0.91	0.90	0.90	0.89	0.89	0.88	0.88	0.85	0.85	0.83	0.81	0.81	0.79	0.77	0.70	
068	0.97	0.97	0.96	0.96	0.96	0.95	0.95	0.95	0.94	0.93	0.93	0.91	0.91	0.90	0.90	0.													

	057	047	094	053	087	028	066	079	083	048	083	024	092	012	034	021	045	063	032	062	086	085	036	019	015	014	017	030	
076	0.97	0.96	0.96	0.96	0.95	0.95	0.95	0.94	0.93	0.93	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.88	0.88	0.88	0.85	0.85	0.83	0.81	0.80	0.79	0.77	0.70	
031	0.96	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.92	0.92	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.87	0.87	0.84	0.84	0.82	0.80	0.80	0.78	0.76	0.69		
096	0.95	0.95	0.95	0.95	0.94	0.94	0.94	0.93	0.92	0.92	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.87	0.87	0.84	0.84	0.82	0.80	0.79	0.78	0.76	0.69		
020	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.89	0.88	0.88	0.87	0.87	0.86	0.84	0.84	0.81	0.80	0.79	0.78	0.76	0.69		
078	0.95	0.95	0.95	0.94	0.94	0.94	0.94	0.93	0.92	0.91	0.90	0.90	0.89	0.89	0.88	0.88	0.87	0.87	0.86	0.84	0.84	0.81	0.80	0.79	0.78	0.76	0.69		
050	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.93	0.92	0.91	0.90	0.90	0.89	0.89	0.88	0.88	0.87	0.87	0.86	0.86	0.84	0.83	0.81	0.79	0.79	0.78	0.76	0.69	
056	0.95	0.95	0.95	0.94	0.94	0.93	0.93	0.93	0.92	0.91	0.90	0.90	0.89	0.89	0.88	0.88	0.87	0.87	0.86	0.86	0.83	0.83	0.81	0.79	0.79	0.77	0.75	0.69	
095	0.95	0.94	0.94	0.94	0.93	0.93	0.93	0.92	0.91	0.91	0.90	0.89	0.89	0.88	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.83	0.82	0.80	0.79	0.78	0.77	0.75	0.69
033	0.94	0.94	0.93	0.93	0.93	0.92	0.92	0.92	0.91	0.90	0.90	0.89	0.89	0.88	0.88	0.87	0.86	0.86	0.85	0.85	0.83	0.82	0.80	0.79	0.78	0.77	0.75	0.68	
043	0.94	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.91	0.90	0.90	0.89	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.82	0.82	0.80	0.78	0.78	0.77	0.75	0.68		
091	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.91	0.90	0.90	0.88	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.82	0.82	0.80	0.78	0.78	0.76	0.74	0.68		
074	0.93	0.93	0.93	0.93	0.92	0.92	0.92	0.92	0.91	0.90	0.90	0.88	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.82	0.82	0.80	0.78	0.78	0.76	0.74	0.68		
037	0.93	0.93	0.93	0.93	0.92	0.92	0.91	0.91	0.91	0.90	0.89	0.88	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.84	0.82	0.82	0.80	0.78	0.77	0.76	0.74	0.67	
069	0.93	0.93	0.93	0.92	0.92	0.92	0.91	0.91	0.90	0.90	0.89	0.88	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.84	0.82	0.82	0.80	0.78	0.77	0.76	0.74	0.67	
075	0.92	0.92	0.92	0.92	0.91	0.91	0.91	0.91	0.90	0.89	0.88	0.87	0.87	0.86	0.86	0.86	0.85	0.85	0.84	0.84	0.81	0.81	0.79	0.77	0.77	0.75	0.74	0.67	
009	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.83	0.81	0.81	0.79	0.77	0.76	0.75	0.73	0.67	
081	0.92	0.92	0.91	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.83	0.81	0.81	0.79	0.77	0.76	0.75	0.73	0.67	
044	0.92	0.91	0.91	0.91	0.91	0.90	0.90	0.90	0.89	0.88	0.87	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.83	0.83	0.81	0.81	0.79	0.77	0.76	0.75	0.73	0.66	
039	0.91	0.91	0.91	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.84	0.83	0.83	0.80	0.80	0.78	0.76	0.76	0.74	0.73	0.66	
007	0.91	0.91	0.90	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.83	0.83	0.82	0.80	0.80	0.78	0.76	0.76	0.74	0.72	0.66	
011	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.88	0.87	0.87	0.86	0.85	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.79	0.79	0.77	0.75	0.75	0.74	0.72	0.65	
061	0.90	0.90	0.89	0.89	0.89	0.88	0.88	0.88	0.87	0.87	0.86	0.85	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.81	0.79	0.79	0.77	0.75	0.75	0.73	0.65	
059	0.89	0.89	0.89	0.89	0.88	0.88	0.88	0.88	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.79	0.79	0.77	0.75	0.75	0.73	0.65	
018	0.89	0.89	0.89	0.89	0.88	0.88	0.88	0.88	0.87	0.86	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.81	0.81	0.79	0.79	0.78	0.76	0.75	0.74	0.73	0.65	
089	0.89	0.89	0.89	0.89	0.88	0.88	0.88	0.87	0.87	0.86	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.81	0.81	0.78	0.78	0.76	0.75	0.74	0.73	0.65		
042	0.89	0.89	0.89	0.89	0.88	0.88	0.88	0.87	0.87	0.86	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.81	0.81	0.78	0.78	0.76	0.74	0.74	0.73	0.65		
072	0.89	0.89	0.89	0.88	0.88	0.88	0.87	0.87	0.86	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.81	0.81	0.78	0.78	0.76	0.74	0.74	0.73	0.71	0.64		
001	0.88	0.87	0.87	0.87	0.86	0.86	0.86	0.85	0.85	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.80	0.77	0.77	0.75	0.73	0.73	0.72	0.70	0.64		
090	0.87	0.87	0.87	0.87	0.86	0.86	0.86	0.85	0.84	0.84	0.83	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.80	0.79	0.77	0.77	0.75	0.73	0.73	0.72	0.70	0.64	
008	0.87	0.87	0.87	0.87	0.86	0.86	0.86	0.85	0.84	0.84	0.83	0.83	0.82	0.82	0.81	0.80	0.80	0.80	0.79	0.77	0.77	0.75	0.73	0.73	0.71	0.70	0.63		
013	0.87	0.87	0.86	0.86	0.85	0.85	0.85	0.84	0.84	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.80	0.79	0.79	0.76	0.76	0.74	0.73	0.72	0.71	0.69	0.63		
058	0.87	0.87	0.86	0.86	0.85	0.85	0.84	0.84	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.80	0.79	0.79	0.76	0.76	0.74	0.73	0.72	0.71	0.69	0.63			
082	0.86	0.85	0.85	0.85	0.84	0.84	0.84	0.83	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.78	0.78	0.75	0.75	0.73	0.72	0.71	0.70	0.68	0.62			
005	0.85	0.85	0.85	0.85	0.84	0.84	0.84	0.83	0.82	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.78	0.78	0.77	0.75	0.75	0.73	0.71	0.71	0.70	0.68	0.62		
071	0.85	0.85	0.84	0.84	0.83	0.83	0.83	0.82	0.82	0.81	0.80	0.80	0.79	0.79	0.78	0.78	0.77	0.77	0.75	0.74	0.72	0.71	0.71	0.69	0.68	0.61			
027	0.84	0.84	0.84	0.84	0.83	0.83	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.78	0.78	0.77	0.77	0.74	0.74	0.72	0.71	0.70	0.69	0.67	0.61			
088	0.84	0.84	0.84	0.83	0.83	0.83	0.83	0.82	0.81	0.81	0.80	0.80	0.79	0.79	0.78	0.78	0.77	0.77	0.76	0.74	0.74	0.72	0.71	0.70	0.69	0.67	0.61		
040	0.83	0.83	0.83	0.83	0.82	0.82	0.82	0.81	0.81	0.80	0.79	0.79	0.78	0.78	0.77	0.77	0.76	0.76	0.75	0.73	0.73	0.71	0.70	0.69	0.68	0.66	0.60		
046	0.83	0.83	0.83	0.83	0.82	0.82	0.82	0.81	0.80	0.80	0.79	0.78	0.78	0.77	0.77	0.76	0.76	0.75	0.73	0.73	0.71	0.70	0.69	0.68	0.66	0.60			
004	0.80	0.80	0.80	0.80	0.79	0.79	0.79	0.78	0.77	0.77	0.76	0.75	0.75	0.74	0.74	0.73	0.73	0.73	0.71	0.71	0.69	0.67	0.67	0.66	0.64	0.64	0.58		
002	0.78	0.78	0.77	0.77	0.77	0.76	0.76	0.75	0.75	0.74	0.73	0.73	0.73	0.72	0.72	0.71	0.71	0.70	0.68	0.68	0.66	0.65	0.65	0.64	0.62	0.56			
060	0.77	0.77	0.77	0.77	0.76	0.76	0.76	0.75	0.74	0.74	0.73	0.73	0.72	0.72	0.71	0.71	0.70	0.68	0.68	0.66	0.65	0.64	0.63	0.62	0.61	0.56			
065	0.77	0.77	0.77	0.77	0.76	0.76	0.76	0.75	0.74	0.74	0.73	0.73	0.72	0.72	0.71	0.71	0.70	0.68	0.68	0.66	0.64	0.64	0.63	0.61	0.61	0.56			
006	0.73	0.73	0.73	0.73	0.72	0.72	0.72	0.72	0.71	0.71	0.70	0.70	0.69	0.69	0.68	0.68	0.68	0.67	0.67	0.65	0.65	0.63	0.62	0.61	0.60	0.59	0.53		
055	0.73	0.73	0.73	0.73	0.72	0.72	0.72	0.72	0.71	0.71	0.70	0.69	0.69	0.68	0.68	0.67	0.67	0.66	0.65	0.63	0.61	0.61	0.60	0.59	0.58	0.53			
041	0.72	0.72	0.72	0.72	0.71	0.71	0.71	0.70	0.70	0.69	0.68	0.68	0.68	0.67	0.67	0.66	0.66	0.66	0.64	0.64	0.62	0.61	0.60	0.59	0.58	0.52			
003	0.72	0.72	0.72	0.72																									