

Macroeconomic Situation and Outlook

In 2001, in spite of the 6.9 percent contraction in export revenues, the Thai economy expanded at a rate of 1.8 percent, mainly due to the expansion of private consumption (3.4 percent) and private investment (5.1 percent). There was a recovery in the construction sector. A recovery of the U.S. economy in the second half of 2002 was expected to contribute to a better growth rate of 2-3 percent for Thai economy in 2002.

In 2002, exports, private investment, and consumption are the main factors for better growth. Export revenues are expected to grow at 2.3 percent due to the better U.S. and EU economies. The United States accounted for 20 percent in Thai export revenues, while the European Union accounted for 16 percent. Private consumption is expected to grow at 3.6 percent, which is slightly higher than in 2001. The low interest rate will induce greater consumption of durable goods, including automobiles and electrical appliances. Higher export revenue will enhance the increase in private sector consumption. A credit expansion by commercial banks and packages offered by the government is expected to lead to an increase of 5.0 percent in private investment, mainly in construction and maintenance. It also is anticipated that there will be an expansion in investment in machinery and equipment after last year's slowdown. The inflation rate is expected to be as low as 1.6 percent due to surplus current account and capital inflow in the securities market.

Nevertheless, negative factors for growth in 2002 are drought, non-performing loans (NPLs), the contraction of the Japanese economy, and competition from China in Thai export markets. Drought in 2002 may adversely affect agriculture, especially second-crop rice, maize, bean, pineapple, and livestock, and thus lower farmer income and their expenditures, further slowing down the Thai economy. Delay of Thai Asset Management Corporation (TAMC) operation may hinder economic growth and induce more NPLs, thus negatively affecting the efficacy of monetary policy aimed at credit expansion to stimulate growth in domestic investment and consumption. Usually, the Thai economy follows Japanese economic cycles with a lag of one quarter. The contraction in Japan's economy will adversely affect Thailand's economy. When China becomes a WTO member, Thailand has to face higher competition in neighboring export markets, contrary to the improvement in the global market.

Macroeconomic policy management measures in 2002 are alleviating drought, limiting the increase in NPLs, promoting exports, and strengthening the local economy. Drought alleviation includes better water resource management and an early warning system for drought prevention. In preventing the increase in NPLs, the TAMC operation will be accelerated, especially for high-value debts plus the law will be amended for improving the liquidation process as well as achieving better transparency of accounting. Export promotion, especially in automobiles, electronic products, and agricultural products, are planned to extract more benefits from the world economy's recovery and to be ready for the challenge from China. The Village Fund Project, One

Tambon (sub-district) – One Product Project, and 58,000 million baht in government spending are measures for strengthening local economy.

Food Prices and Consumption

The food price index in 2001 was 136.2, a slight increase from last year and still lower than in 1999. The consumer price index was 132.2, which, while lower than the food price index, increased more from a relative viewpoint. The greater increase in the consumer price index indicated a larger increase in nonfood items, which demonstrates higher spending in private sector consumption.

Per capita income decreased significantly from US\$1,958 in 2000 to \$1,824 in 2001 due to the depressed economy. Nevertheless, according to the National Social and Economic Development Board (NESDB), it was expected to rise again to \$1,894 by the end of 2002 due to a recovery resulting from the better world economy. Because of lower incomes, the share of disposable income spent on food in 2001 was higher than in 2000 (33.9 percent in 2001 compared to 32.2 percent in 2000). In 2002, when per capita income increases, though slightly, the share of income spent on food will decrease to 33.6 percent. Nevertheless, it is expected that the share of income spent on eating out will increase from 7.4 percent in 2001 to 7.7 percent in 2002 due to the change in eating habit of the Thais.

In 2002, while per capita income will increase to \$1,894, the food price index and consumer price index are expected to continue to increase to 137.9 and 134.5, respectively, with further increases in 2003.

Food Processing and Marketing

Food export represents more than three-quarters of Thai agricultural and food export value or about 17.2 percent of the total export value from Thailand. The export value has been increasing at an average rate of 9.2 percent annually despite the baht devaluation in the managed float exchange rate regime. The most important food export is fishery products with the major share of 43 percent in total food export. At 20 percent, rice and grains are the second largest food export, followed by fruits and vegetables at 10 percent, meat products, mainly poultry, at 8 percent, sugar and confectionaries at 7 percent, animal feedstuffs at 5 percent, and other food products (beverages, spices, dairy products, coffee, tea and cocoa, fats and oils) at 7 percent.

Recently, Thailand ranked as the world's 15th largest food exporter. Its share in global food trade was only 0.2 percent in term of value (only 1/7th of the United States, the world leading food exporter). However, in terms of fishery products, Thailand is the leading exporter of frozen shrimp, and canned tuna; one of the top five sugar exporters; and the main exporter for tropical fruits and baby corn. In Asia, Thailand is the second food exporter next to China while being the top exporter of processed food. The main importing countries of agro-industrial products

from Thailand are the United States (37 percent) and Japan (28 percent). Other importing countries are Indonesia, Australia, Canada, and Singapore with a share of 5 percent each, followed by Germany, Hong Kong, and the Netherlands at 4 percent each and Myanmar at 3 percent.

For agricultural products, the main importing countries are also Japan (32 percent) and the United States (19 percent) followed by China (9 percent), the Netherlands (8 percent), Singapore (7 percent), Hong Kong (7 percent), Malaysia (6 percent), Taiwan (5 percent), Nigeria (4 percent) and Korea (3 percent). (Subhapholsiri, 2000)

Agricultural Production and Trade

In 2001, the agricultural sector expanded by 2.1 percent with the highest increase in livestock (4.3 percent), followed by processing (2.7 percent), service (2.3 percent), crop (2.1 percent) and fishery (0.5 percent); there was a decrease of 7.4 percent in forestry. Export value in 2001 decreased by 1.2 percent in term of U.S. dollars due to decreasing baht value, but in terms of baht, it increased by 9.6 percent. There were increases in both export volume and value for cassava, maize, oil seed, frozen and chilled vegetables, poultry, fish, shellfish, dairy, and canned and processed seafood. Increasing in export volume and baht export revenue, but decreasing in terms of U.S. dollar export revenue because of decreasing baht value, were rice, pararubber, and canned and processed vegetables. Chilled and frozen fruit and shrimp increased in export volume but decrease in export revenue due to lower export prices. Sugar and molasses decreased in export volume but increased in export revenue due to better world prices. Cuttlefish and canned and processed fruit decreased in export volume with increasing baht revenue but a decrease in U.S. dollar revenue.

In 2001-2002, it is expected that there will be increases in production of rice, maize, sugar, oil palm, shallots, pepper, broilers, and swine while production of second-crop rice, soybean, peanuts, cassava, pineapple, coffee, garlic, onions, and beef will decrease.

RICE. Due to a continuous decrease in paddy price, non-irrigated planting areas have been decreasing in northeastern regions. Nevertheless, irrigated areas increased. Total production in 2000-2001 was 25.51 million tons, a small increase of 0.6 percent from last year. In 2001-2002, production was 25.30 million tons, a decrease of 0.1 percent, due to a decrease in planting area (0.3 percent) and a low increase in yield (0.9 percent for first-crop and 0.6 percent for second-crop).

In 2001-2002, because of drought and continuous decrease in paddy price, planting area for first-crop will be reduced by 0.6 percent with a 0.02 percent increase in production due to increased yield (0.9 percent). For second-crop rice planting, the area will decrease by 5.7 percent due to low paddy price, leading to a decrease of 5.1 percent in production while yield is expected to increase by 0.6 percent.

MAIZE. Production from the 2000-2001 crop year was 4.46 million tons, an increase of 4.1 percent from last year. In 2001-2002, total production will be 4.47 million tons, an increase of only 0.2 percent from last year due to irregular rain in the northeast during June and July and heavy rain in the north from August to September.

In 2001-2002, maize planting area was increased by 0.4 percent but production is expected to increase by only 0.2 percent due to decreased yield (0.2 percent).

SOYBEAN. Planting is expected to decrease by 4.3 percent in 2001-2002 due to low price relative to the cost of production. Yield will decrease by 1.3 percent, thus production will decrease by 5.5 percent.

MUNGBEAN. Planting will increase by 2.7 percent in 2001-2002 due to better price and increasing domestic demand. Yield will increase by 1.6 percent, thus production will increase by 4.3 percent to be 0.243 million tons in 2002.

PEANUTS. Planting will decrease by 2.3 percent in 2001-2002. Production will decrease by the same rate. Tariff reduction among the ASEAN Free Trade Area (AFTA) partners allows more import to meet higher domestic demand. Production is estimated to be 0.134 million tons in 2002.

SUGAR CANE. Production in the 2000-2001 crop year was 51.48 million tons. In 2001-2002, production will increase to 54.11 million tons, an increase of 5.1 percent due to higher price and increased planting area (4.4 percent).

In 2001-2002, the planting area increased by 4.4 percent while yield will increase by 0.7 percent, leading to an increase of 6.11 percent, or production of 51.11 million tons in 2002.

CASSAVA. 2000-2001 production was 18.27 million tons and will decrease to 17.33 million tons in 2001-2002, a decrease of 5.1 percent due to a continuous decline in farm price. Farmers turned to other crops, including maize and sugar, leading to a decrease of 7.0 percent in planting area.

In 2001-2002, the planting area decreased by 7.0 percent, with farmers switching to sugar cane and maize. Yield is expected to increase by 2.0 percent. Production will decrease by 5.1 percent.

PINEAPPLE. In 2001-2002, the planting area will decrease by 9.2 percent together with a 4.8 percent decrease in yield; production will decrease by 13.5 percent. Decreasing export to the United States as a result of an anti-dumping duty led to a lower farm price and reduction in planting area.

COFFEE. In 2001-2002, the planting area will increase by 1.6 percent, but yield will decrease by 13.8 percent, thus production will decrease by 12.4 percent. Production is expected to be 0.75 million tons in 2002.

OIL PALM. In 2001-2002, the planting area will increase by 7.2 percent together with an increase in yield of 11.2 percent. Production is expected to increase by 19.3 percent, reaching 3.883 million tons in 2002.

GARLIC. In 2001-2002, the planting area will decrease by 2.6 percent due to low return. Yield will decrease by 0.5 percent, thus production will decrease by 3.1 percent. Production will be 0.12 million tons in 2002.

SHALLOTS. In 2001-2002, despite a decrease in planting area (1.9 percent) due to heavy rain in some planting areas but boosted by a 7.8 percent increase in yield, production is expected to increase by 5.8 percent, reaching 0.20 million tons in 2002.

ONIONS. The planting area will decrease by 2.8 percent due to low price. Yield will increase by 0.5 percent. Production will decrease by 2.6 percent to 0.08 million tons in 2002.

PEPPER. The planting area will increase by 12.3 percent with an increase in yield of 0.6 percent. Production will increase by 13.0 percent, reaching 0.01 million tons in 2002.

BROILERS. In 2001, production increased by 6.9 percent due to increasing demand on the world market as a result of foot-and-mouth disease in the European Union, mad cow disease, and the bird flu in Hong Kong. Total export in 2001 was around 0.38 million tons. The price is increasing at 11.5 percent. Broiler production continuously increased due to increasing demand for export. The export value increased by 28.5 percent.

SWINE. Swine production increased due to better prices. Pork consumption increased due to substitution of pork for beef. Swine production increased by 1.8 percent.

BEEF. The price is increasing but smuggling from neighboring countries resulted in low purchasing of domestic production. Production decreased 0.6 percent in 2001.

FISHERY. Production increased slightly due to increasing demand for export. Shrimp culture continued to expand; export in the fourth quarter increased by 78.9 percent compared to same quarter of the last year. A higher export price led to an increase in production from this sector.

In 2002, agricultural production is expected to increase due to favorable weather conditions, sufficient water supplies, and better prices due to improvement in the world economy. Agricultural exports are likely to rebound with the world market.

Food and Agricultural Policy

PRODUCTION. The emphasis of food and agricultural policy has been on strengthening competitiveness of food and agricultural commodities in the world market on a basis of efficient and sustainable natural resource utilization and strengthening the capability of farmers as well as farmers' organizations in response to dynamic changes. Strategies are as follows.

1. Increasing efficiency in input utilization to reduce the cost of production through application of appropriate technology, research, and development in agriculture as well as agro-industry.
2. Promoting production according to market demand.
Improving agricultural market infrastructure at all levels.
3. Increasing capability in decision making among farmers and farmers' organizations.
Increasing farmers' participation in agricultural policy planning.
4. Promoting sustainable agriculture through support of farmer mutual learning processes.
5. Strengthening capacity in increasing yield, sustainable agriculture, networking on sustainable agriculture, and stronger community economy.
6. Establishing sustainable agricultural product standards.

7. Increasing farm credit and developing credit networking among farmers' organizations and entrepreneurs.

WTO AGRICULTURAL NEGOTIATION. Thailand, as a member of the Cairns Group, requested increasing market access for agricultural products, reduction in market-distorting domestic subsidy, final abolition of export subsidy, and a bonus for developing countries in conformance with the binding agreement. Thailand put forth in negotiations on geographical indications a request for the inclusion of fragrant rice and Thai silk in the list. Thailand requested for amendment an anti-dumping agreement and subsidies agreement to reduce trade distortion and inclusion of fishery subsidy in the subsidy agreement. Thailand and the Philippines negotiated with the European Union on exemption of the tariff on canned tuna under the Coton Agreement for 78 countries in Africa, the Caribbean, and the Pacific, which is discriminatory and adversely affects Thai and Philippine exports to the EU. Latin American countries including Ecuador, Guatemala, and Honduras joined the negotiation due to the loss in banana export. The European Union finally agreed to compensate the loss.

Food Safety

There are over 10,000 food manufacturing companies in Thailand but most (85 percent) are small enterprises and cottage industries. Among the 15 percent that are medium and large enterprises (listed as 1,234 companies), most are cold storage plants (20.8 percent) followed by producers of grain and tube¹ (17.8 percent), frozen meat including poultry meat (10.9 percent), starch (10.0 percent), canned fruit and vegetables (7.4 percent), fat and oil (7.3 percent), sugar and honey (5.9 percent), coffee and tea (4.9 percent), canned meat and seafood (3.9 percent), snacks (3.2 percent), and others (8.3 percent).

In Thailand, there are various agencies responsible for food quality control, including the Office of Food and Drug Administration (FDA) in the Ministry of Public Health, the Department of Medical Sciences in the same ministry, and the Fish Inspection and Quality Control Division in the Department of Fisheries, Ministry of Agriculture and Cooperatives.

The FDA is concerned with pre-marketing control of health products and household hazardous substances, post-marketing monitoring, surveillance of health products and consumption behavior, provision of public education and information services, and quality improvement through cooperation with other entities. The FDA is responsible for legal food control operations with the support of food analytical services from Department of Medical Sciences.

Food Act B.E.2522 (1979) divides food into three categories: specific controlled, standardized, and general. Specific controlled food requires manufacturing and product registration. There are 37 food items listed as specific controlled food, including canned food. Standardized food includes certain types of food mainly produced by

¹ Grains are mainly rice and maize while tube are mainly cassava.

small-scale/household industry. The purpose of quality control for this category is to maintain and encourage quality improvement as well as ensure safety for consumers. Requirements for standardized food include labeling registration, which has to be in accordance with the standard requirement as specified by the Ministry of Public Health. General food includes cooked or raw, preserved or not preserved, processed or not processed food. Frozen food, if not included in the first two categories, is in this category. In this last group, there are foods notified to be labeled and other general food.

There are legal provisions regarding labeling requirements, food additives, food contaminants, poisoning substance residues, packaging material, food coloring, and flavoring.

The Food Control Division, Inspection Division, and Consumer Protection Task Group undertake the role on food regulation.

Before entering into the market, FDA plant inspection is required for a manufacturing licensing, which has to be renewed every 3 years. For food import, FDA inspection of storage and warehouse is required for import licensing, which has to be renewed every 3 years as well. The FDA requires product registration, labeling approval, and advertising approval for food products. After entering the market, there will be regulatory and petitioned inspection, and food surveillance to ensure safety and quality for food in the market is conducted.

There are 12 restrictions on food additives: brominated vegetable oil, salicylic acid, boric acid, borax, calcium iodinate and potassium iodated, nitrofurazone, potassium chlorate, formaldehyde including formaldehyde solution and Para formaldehyde, coumarone or 1,2-benzopyrone or 2,6-benzo-a-pyrone or cis-o-coumarone acid or O-hydro xycinnamic acid lactones, dihydrocoumarone or benzodihydropyrone or 3,4-dihydrocoumarin or hydrocoumarone, methyl alcohol or methanol, and diethyl glycol or dihydroxydiethyl ether or diglycol or 2,2'-oxybis-ethanol or 2,2'-oxydiethanol.

The Department of Medical Sciences provides services on genetically modified food inspection. Priorities are for nine soybean products, corn and five corn products, and chocolate.

Besides regulatory inspection, the Food Control Division of the FDA has a role in setting up GMP and gives guidance for food plants' GMP and HACCP practices.

The Department of Medical Sciences provides food analytical services for food control activities. The Food-for-Export Analysis Division has been established. Pre-export food inspection is performed upon request. The Department of Medical Sciences also issues certificates for food export in relevance to food safety and health standards according to the requirement of importing countries.

Besides the Thai Food and Drug Administration and the Department of Medical Sciences in the Ministry of Public Health, due to the importance of export earning from fishery products, the Fish Inspection Quality Control Division in the Department of Fisheries (DoF) plays a role in quality control for fishery products. The Fish Inspection Quality Control Division issues certificates to the approved processors whose product quality meets international requirements. Promotion of HACCP preventive measures is included in the

Division's tasks. Certificates issued by the Division include sanitary certificates, health certificates, and certificates of analysis of various fishery products, frozen as well as canned. Countries accepting certificates issued by the Department of Fisheries include the European Union, Argentina, Australia, Brazil, Canada, Czech Republic, Japan, New Zealand, Poland, Russia, and Slovakia.

The DoF offers plant inspection services and issues HACCP certificates to the plants that meet DoF criteria. Recently, HACCP certificates were issued to nearly 300 fish processing plants. Laboratory services provided include chemical laboratories, microbiological laboratories, and physical and sensory laboratories. Chemical laboratories include quality index (total volatile basic-nitrogen, trim ethylamine, histamine putrescence, and cadavarine), proximate analysis (moisture, protein, fat, salt, potassium, and ash), food additive (sulphite, sulphur dioxide, phosphate, EDTA, and benzoic acid/benzoate), toxin (PSP, DSP, and demonic acid), antibiotics (ox tetracycline and oxolinic acid), and contaminants (mainly heavy metals). Microbiological laboratories provide inspection services in total viable plate count, *Escherichia coli*, *Staphylococcus aureus*, *Vibrio cholerae*, *Vibrio parahaemolyticus*, *Salmonella*, *Shigella*, *Listeria monocytogenes*, Enterococci, sterility test, and antibiotics. Physical and sensory laboratories include weight determination for container integrity, seam teardown, filth, and sensory quality.

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THAILAND

	Units	1998	1999	2000	2001	2002 ^E	2003 ^F
FOOD CONSUMPTION PATTERNS							
Per capita caloric intake	Cal/day	1,751	1,751	1,751	1,751	1,751	na
Protein (% of calories)	%	13.2	13.2	13.2	13.2	13.2	na
Fat (% of calories)	%	22.2	22.2	22.2	22.2	22.2	na
Carbohydrates (% of calories)	%	64.3	64.3	64.3	64.3	64.3	na
INCOME AND FOOD PRICE							
Per capita income	US\$/capita	1,835	1,986	1,958	1,824	1,894	na
% of disposable income spent on food	%	35.1	33.3	32.2	33.9	33.6	na
% spent eating out	%	6.3	6.3	7	7.4	7.7	na
Food price index	1994=100	139.2	136.7	135.2	136.2	137.9	138.7
General Price index (CPI)	1994=100	129	128.2	130.2	132.2	134.5	136.5
POPULATION							
Total population	Million	61.9	62.4	62.4	62.9	63.4	63.9
Urban	Million	25	25.7	19.4	19.6	19.8	na
Nonurban	Million	36.9	36.7	43	43.3	43.6	na
Share of population in the following age groups							
0-4 years	%	8.7	8.5	7.3	7.1e	na	na
5-14 years	%	17.6	17.4	20.3	20.1e	na	na
15-19 years	%	9.4	9.3	10.4	10.2e	na	na
20-44 years	%	41.7	41.7	36.8	36.8e	na	na
45-64 years	%	17	17.4	16.2	16.6e	na	na
65-74 years	%	3.8	4	4.3	4.4e	na	na
75+ years	%	1.7	1.7	4.8	4.8e	na	na
Median age of population	Years	26.9	27.4	29.4	29.8e	na	na
Female labor force participation	%	70.9	70.8	70.8	70.7e	na	na
LIFE EXPECTANCY							
Males	Years	67.4	67.4	68.2	68.2	68.2	na
Females	Years	71.7	71.7	72.4	72.4	72.4	na
FOOD INFRASTRUCTURE							
Trade capacity	1,000 tons	6880	7768	7223	7009	na	na
Grain exports	1,000 tons	5956	6927	6186	6176	na	na
Grain imports	1,000 tons	924	841	1031	833	na	na
Total food and agricultural trade	Million US\$	13592	15326	16489	16197	na	na
Total food and agricultural exports	Million US\$	9252	12258	13204	12977	na	na
Perishable products	Million US\$	1968	2884	3146	2933	na	na
Fishery exports	Million US\$	3595	4476	4629	4651	na	na
Total food and agricultural imports	Million US\$	4297	3068	3285	3220	na	na
Perishable products	Million US\$	225	246	311	392	na	na
Fishery imports	Million US\$	825	900	848	953	na	na
Road access	Kms	57233	59306	60788	62781	na	na
Rail access	Kms	4120	4120	4179	4179	na	na
Power generation	Gigawatts	96330	96000	103165	110945	na	na
Percent of population with refrigerators	%	59.2	59.5	73.5	na	na	na
FOREIGN INVESTMENT IN THE FOOD SECTOR							
Net FDI in food sector	Million US\$	74	93	94	105	na	na
ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY							
Agriculture as a share of GNP (Real)	%	9	9	10	10.1	na	na
Self sufficiency in grains	%	64.8	72.8	72	72.7	na	na
Self sufficiency in horticulture products	%	92	90	92.6	92.1	na	na
MACROECONOMICS INDICATORS							
GDP growth	%	-10.5	4.4	4.5	2.2	2.0-3.0	na
Interest rate	%	15.25-15.50	9.00-10.50	7.75-8.13	7.20-7.40	na	na
Exchange rate	Baht/US\$	39.33	37	40.11	44.48	43.92	na

na = not available E = estimate F = forecast