

## Assessing risk of deflation in Thailand

The severe COVID-19 pandemic during the first half of 2020 prompted governments in many countries, including Thailand, to implement containment measures, which led to unprecedented disruptions of global economic activities. Moreover, the changing global and Thai economic environment substantially affected Thailand's inflation in the recent periods, and partly explained the negative inflation which averaged at -1.04 percent during the first five months of 2020. Inflation has remained in the negative territory since March and reached the lowest level in a decade at -3.44 percent in May. This led to the question of whether Thailand would experience deflation. The Committee thus saw the need to develop a better understanding among the public regarding the definition, the causes, and impacts of deflation, as well as to assess whether Thailand is currently experiencing deflation.

### Definition, Causes, and Impacts of Deflation

**Inflation is narrowly defined as a situation when overall price levels of goods and services experience a persistent contraction.** For this narrow definition, however, the assessment criteria adopted by each international organization varies. For instance, the ECB<sup>11/</sup> set the criteria at three consecutive months of negative inflation, while the IMF<sup>12/</sup> used the criteria of 3 - 6 consecutive months. Deflation could arise as a result of **supply-side factors**, when price levels of goods and services fell as a result of lower costs of production thanks to higher labor productivity, better production technology, or cheaper raw materials. Lower prices as a result of these supply-side factors help stimulate consumer demand and will, in turn, benefit the overall economy. On the other hand, deflation could be caused by **demand-side factors**, whereby prices of goods and services fall as a result of subdued demand. This typically occurs during a prolonged economic recession where consumers lack purchasing power, or expect prices to fall further in the future and therefore postpone their spending. Producers then need to cut prices in order to stimulate sales, as well as reduce both production and investment. This consequently affects employment and labor income, which will further depress the economy and drive down prices, resulting in a deflationary spiral.

However, the assessment of deflation according to the narrow definition above only takes into account the period of time that overall prices of goods and services experience a contraction. **An appropriate assessment of deflation should instead follow a broader definition which takes into consideration the causes and impacts of deflation in a comprehensive manner.** Deflation, in its broad definition, occurs when prices of goods and services experience a persistent contraction that are broad-based across most categories, and the central bank is unable to anchor inflation expectations of the public, which mostly occurs when demand and employment face a prolonged contraction. According to this broad definition, countries that used to experience deflation include the U.S., many countries in the euro area. Deflation was also observed in Japan during the 1930s, and from the end of 1990s until the beginning of 2000s.

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<sup>11/</sup> European Central Bank (2014), "Risk of Deflation." Monthly Bulletin, June.

<sup>12/</sup> Kumar et al. ((2003, "Deflation: Determinants, Risks, and Policy Options." IMF Occasional Paper No 221

## Current risk of deflation in Thailand

Negative headline inflation that occurred in Thailand for three consecutive months since March 2020 was not a sign of deflation, as the situation did not meet all four criteria according to a broad definition of deflation. (Chart 1) Details are as follows.

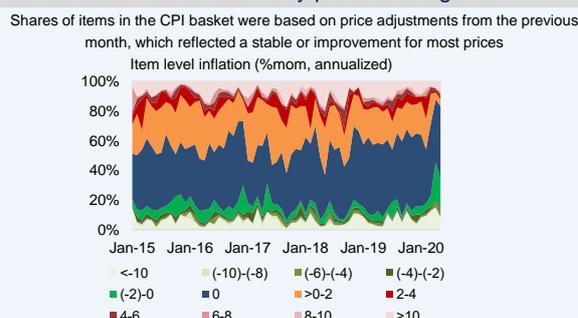
**Chart 1** Headline inflation that had been in the negative territory for many months was not a sign of delation, as the situation did not meet all four criteria according to a broad definition

**Criteria 1:** Overall prices of good and services decline continuously



Note: Shaded area show the highest and lowest outcome among different measures of underlying inflation. The measure included are as follows.  
(1) **Asymmetric trim** excluding goods and services with most volatile price changes, removing the bottom 15 percentile and the top 10 percentile  
(2) **Principal component model** and  
(3) **Core inflation** excluding rents and government measures

**Criteria 2:** The decline in prices of goods and services can be observed across many product categories



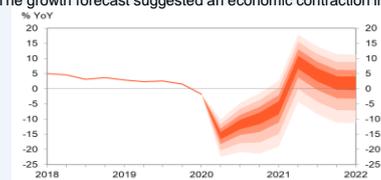
**Criteria 3:** Inflation expectations fall below the monetary policy target



Note: <sup>1/</sup>Calculations based on macro-finance term structure using bond yield and macroeconomic data

**Criteria 4:** Demand and employment become persistently subdued.

The growth forecast suggested an economic contraction in 2020



In May, the number of jobless claims accelerated



Source: The Ministry of Commerce, Social Security Office, Consensus Economics, calculations by BOT

### Criteria 1: a persistent contraction in the prices of goods and services

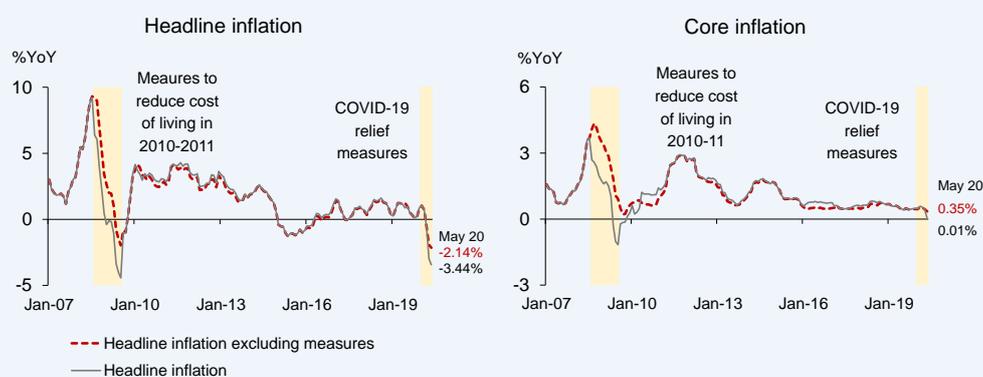
Persistent negative headline inflation in Thailand during the first half of 2020 was mainly a result of supply-side factors. These included, in particular, a sharp fall in energy prices. This was as domestic retail oil prices fell in line with global crude oil prices and the government measures to reduce electricity charges to alleviate the impact of the COVID-19 outbreak. However, considering the underlying inflation which is used to assess future's inflation suggested that **headline inflation would rise in the period ahead, in line with the BOT's latest projection which expected headline inflation to turn positive in 2021.**

### Criteria 2: a broad-based contraction in the prices of goods and services in the inflation basket

**The prices of goods and services in Thailand's inflation basket contracted only in some categories.** Prices of around 70 percent of goods and services in the inflation basket increased or remained stable. Meanwhile, the number of goods which experienced falling prices increased somewhat in recent periods. However, this was, in part, the result of government

measures to alleviate the impact of the COVID-19 (Chart 2), such as reducing electricity and water bills for three months. In addition, the government has also requested cooperation from businesses to reduce costs of living for households, thereby leading businesses to launch more promotions.

**Chart 2** Government measures to mitigate impacts of the COVID-19 partly led to a decline in inflation



Note: Government measures include measures to reduce expenses related to electricity, LPG, water supply, transportation, education and taxes.

Source: The Ministry of Commerce, calculations by BOT

### Criteria 3: the central bank is unable to anchor inflation expectations

Long-term headline inflation expectations remained within the monetary policy target. According to the most recent survey of professional forecasters in April 2020, long-term (five-year ahead) headline inflation expectation was at 1.8 percent and therefore remained within the target range of 1.0 – 3.0 percent. This reflected the ability to **anchor inflation expectations, although headline inflation** continues to decline and has been below the lower bound of the target during the past months.

### Criteria 4: Persistent decline in demand and employment

Following the COVID-19 outbreak, **economic activities in Thailand dampened significantly due to the implementation of containment measures and a slowdown in trading partner economies.** This directly weighed on employment and household income, which then translated to deteriorating purchasing power and a contraction in domestic demand. Coupled with the outlook of a slowly recovering global economy, this then led to excess production capacity in many industries, and therefore resulted in low price levels of goods and services. **Nonetheless, the Committee saw a need to monitor and assess whether demand and employment would become persistently subdued** after the relaxation of the containment measures.

In summary, the current economic development in Thailand did not exhibit signs of deflation according to its broad definition. **Going forward, deflation risk could rise, should the global as well as the Thai economies face a more-severe contraction or a much slower recovery than expected. The Committee would thus monitor developments of the economy and inflation closely,** particularly factors which could affect consumption and private investment. These include both income and employment, as well as household and

business confidence. Moreover, the inflation outlook in the period ahead would be highly uncertain due to structural changes in the global economy after the COVID-19 outbreak, trade tensions and geopolitical risks in many parts of the world. These could potentially lead to deglobalization, which could have significant impacts on the global supply chains and prices of goods. The Committee therefore placed importance on clear and continuous communication with the public regarding the outlook of inflation and risk of deflation.