Box 2.1

Inflation expectations in major economies

Inflation expectations in major economies are worth monitoring for at least two important reasons. As a small and open economy, Hong Kong is highly dependent on imports, particularly for foodstuffs and consumer goods. As such, inflation in major economies, which are also Hong Kong's key import sources, has strong bearing on the external price pressures faced by Hong Kong. Moreover, major central banks would play close attention to inflation expectations to decide the future path of their monetary policy. This box article summarises the various measures of inflation expectation in these economies.

There are two broad types of gauge of inflation expectation. The first type is the survey-based measures, under which professional forecasters, enterprises or other individuals are enquired about their expected inflation rates in an upcoming period. The second type is the market-based measures, under which the expected level of inflation is derived from the breakeven inflation rate implied by the transactions of various financial instruments, such as inflation-indexed bond(1) or inflation swap(2). The two different gauges have their own strengths and limitations. For instance, while survey-based gauges are more direct measures of inflation expectation, they are usually published at a lower frequency and only of relatively short horizon. On the other hand, market-based gauges can provide high-frequency information, but such information can be obscured by other factors such as varying conditions of trading liquidity or inflation risk premium of the financial instruments concerned. While these measures need to be interpreted with caution, they can nonetheless provide valuable information about the prevailing inflation expectation of an economy.

In the US, inflation climbed up in 2018 on the back of the strong economy, but remained close to the Federal Reserve's (Fed) 2% target. Core personal consumption expenditure (PCE) inflation edged up from 1.6% in 2017 to an average of 1.9% in the first eleven months of 2018, and core CPI inflation from 1.8% in 2017 to 2.1% in 2018. Looking ahead into 2019, survey-based gauges showed that respondents expected inflation to remain at a largely steady and moderate level. For instance, according to the Fourth Quarter 2018 Survey of Professional Forecasters conducted by the Federal Reserve Bank of Philadelphia, core PCE inflation and core CPI inflation were expected to be 2.1% and 2.4% respectively in 2019 (***Chart 1a***). Beyond the short term, results from the same survey suggested that PCE inflation over the next 5 years was expected to average around 2%, which is the Fed's target. For market-based gauges, breakeven inflation rates implied by the US Treasury Inflation Protected Securities (TIPS) and inflation swap suggested that the average inflation would stay in the vicinity of the Fed's target in the upcoming 5-year period (2019-2023) (***Chart 1b***).

In the euro area, inflation was modest in 2018, with core CPI inflation averaging 1.0%. According to the European Central Bank's (ECB) Survey of Professional Forecasters for the first quarter of 2019, respondents, on average, expected that core CPI inflation would go up

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(1) For an inflation-indexed bond, the principal and coupon payments are linked to the actual inflation rate over a specified period. In contrast, payments of a non-inflation-indexed bond are not affected by inflation, yet investors will price in a premium that compensates for their expected level of inflation. The difference in yield of these bonds of the same maturity would be the "breakeven inflation rate" that can be taken as a measure of inflation expectation for a specified period.

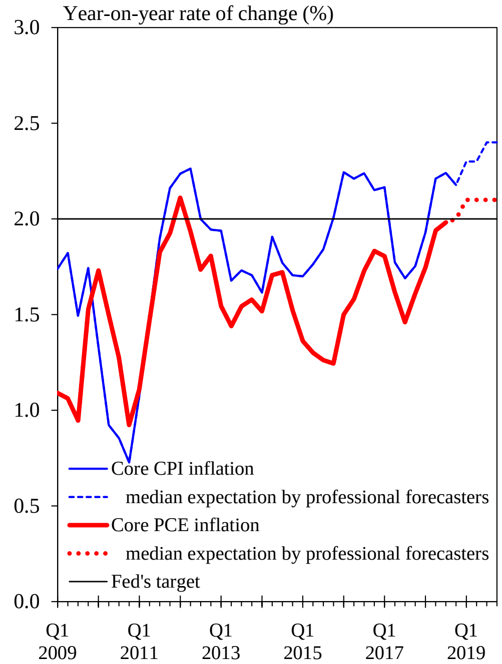
(2) Inflation swaps are contracts in which future cash flows would be exchanged between two investors. In a typical inflation swap, one investor would pay a pre-defined amount, usually a fixed percentage of the notional amount of the swap, while the other investor would pay a variable amount, usually depending on the realised inflation rate before the day of exchange. The fixed rate of the swap would be a proxy of the expected inflation rate.

Box 2.1 (Cont'd)

somewhat to 1.3% in 2019. As for the longer term, the same survey suggested that core CPI inflation was expected to be 1.7% in 2023 (***Chart 2***). Separately, latest information from inflation swap suggested an expected level of inflation of slightly above 1.0% in the coming 5 years (***Chart 3***). These indicators showed that inflation in the euro area should stay either modest or moderate in the years ahead, being somewhat below or close to the ECB's inflation target (i.e. below but close to 2%).

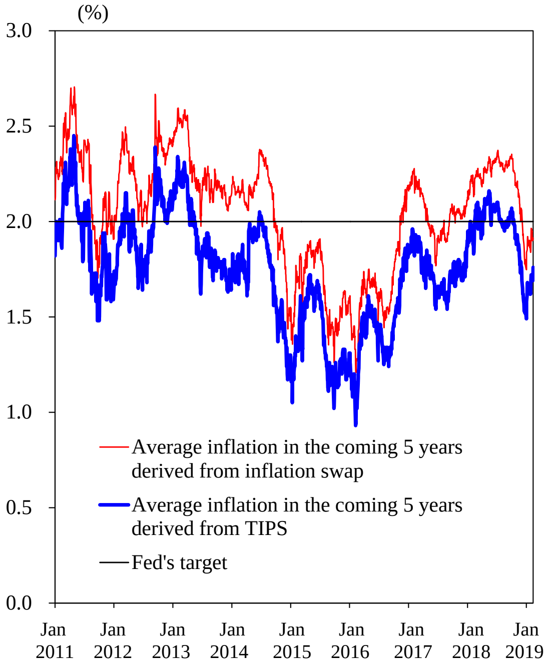
Chart 1: Both survey-based and market-based gauges suggested short- and medium-term inflation expectations in the US near the Fed's 2% target

(a) Survey-based indicators



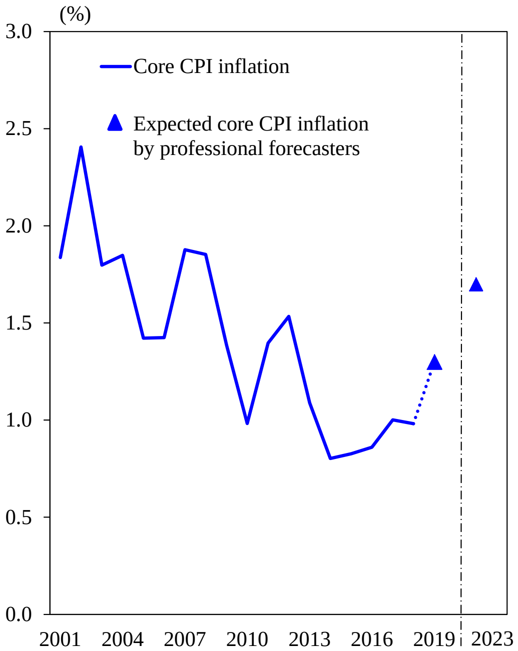
Sources: US Bureau of Labor Statistics, US Bureau of Economic Analysis, Federal Reserve Bank of Philadelphia.

(b) Market-based indicators



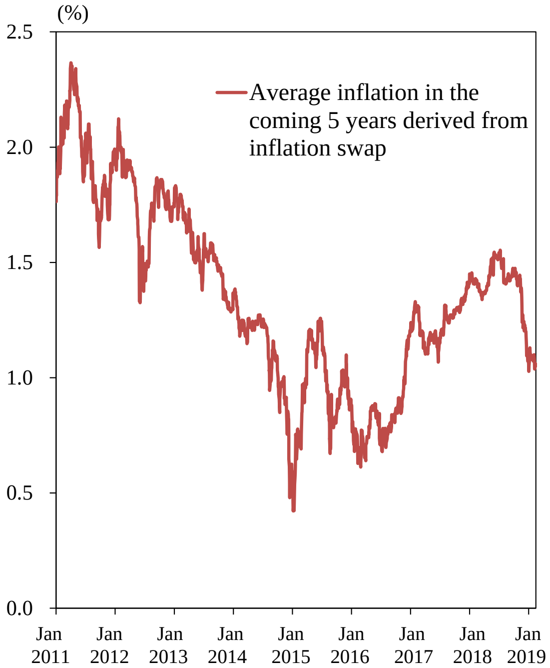
Sources: Federal Reserve Bank of St. Louis, Bloomberg.

Chart 2: Surveyed views suggested that inflation in the euro area was expected to stay moderate in the next few years



Sources: Eurostat, European Central Bank.

Chart 3: Market-based gauge suggested modest inflation expectation in the euro area in the coming five years

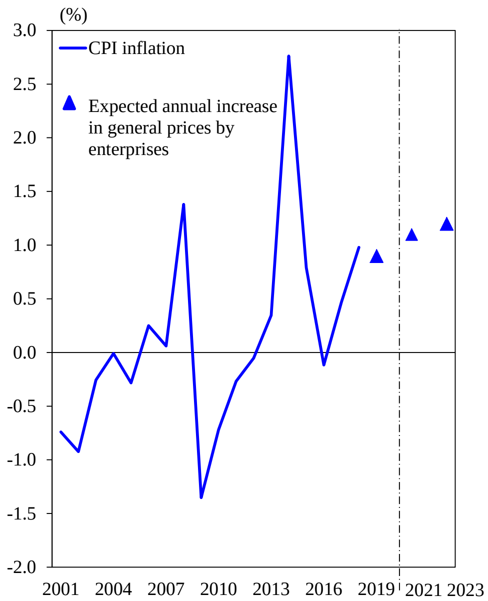


Source: Bloomberg.

Box 2.1 (Cont'd)

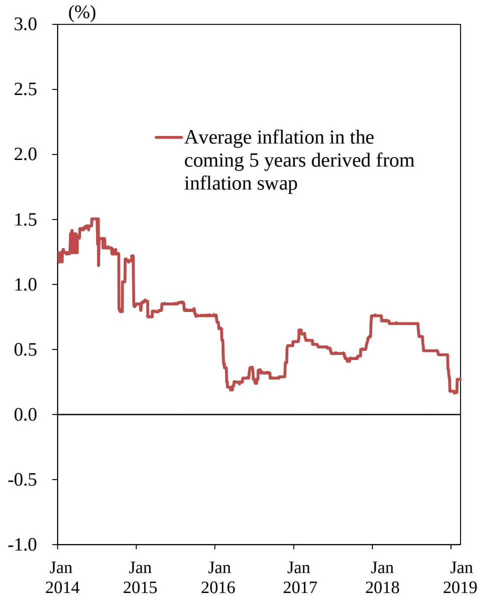
In Japan, core CPI inflation averaged 0.4% in 2018. Overall CPI inflation was also modest at 1.0%. According to the Tankan survey conducted by the Bank of Japan in December 2018, enterprises generally envisaged only mild inflationary pressures in 2019 and beyond. Their expected annual increase in general prices[(3)] in 2019, 2021 and 2023 only averaged 0.9%, 1.1% and 1.2% respectively (***Chart 4***). Meanwhile, market-based measures suggested that price pressures were expected to be rather subdued in the upcoming 5-year period from 2019 to 2023 (***Chart 5***).

Chart 4: Japan's enterprises saw only mild inflation in the years to come



Sources: Bank of Japan, Japan Statistics Bureau.

Chart 5: Market-based gauge suggested Japan's inflation expectation in the coming five years was subdued



Source: Bloomberg.

In the Mainland, CPI inflation stood at a moderate level of 2.1% in 2018. While information on inflation expectation in the Mainland is relatively scanty, the Urban Depositor Survey conducted by the People's Bank of China, which collects depositors' views on the economic performance in the coming quarter, could provide some hints on the near-term inflation outlook. In the latest survey for the fourth quarter of 2018, the Price Expectation Index[(4)] for the next quarter (i.e. the first quarter of 2019) was 64.3%, only slightly higher than the 63.7% in the preceding quarter, signalling that the urban depositors surveyed generally expected inflation in the Mainland to stay moderate in early 2019.

In sum, the various gauges of inflation expectation in the US, the euro area and Japan showed that inflation rates in these economies are generally expected to stay at some modest-to-moderate levels in the short to medium term. If materialised, these should be a stabilising factor for the external price pressures faced by Hong Kong going forward. That said, there are other factors that could also affect Hong Kong's imported inflation, such as exchange rates and global food and commodity prices. Separately, while the prevailing inflation expectations in these economies may suggest that the central banks concerned are not under notable pressure to tighten significantly their monetary policy in the period ahead, their policy decisions would still be much affected by the upcoming economic data given the heightened uncertainty surrounding the global outlook.

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(3) According to the Tankan survey, the annual rate of change in general prices is measured by the annual rate of change in CPI after netting out the effects of changes due to institutional factors such as the consumption tax.

(4) Price Expectation Index is a diffusion index reflecting respondents' judgment on prices in the next quarter. A reading above 50% means the respondents expect an increase in prices, while a reading below 50% means the contrary.