Box 2.1

Negative interest rates in the eurozone and Japan

The global monetary environment has become more complicated against the background of the protracted slow growth of the global economy. Several central banks in Europe, led by the European Central Bank (ECB), have set policy rates at negative levels since mid-2014. In January 2016, the Bank of Japan (BOJ) also followed suit and announced to cut its policy rate below zero (***Table 1***). This note briefly reviews the effectiveness of this unconventional monetary policy tool in the eurozone and Japan, based on the evidence available so far, as well as its possible side-effects.

Economic recoveries in the eurozone and Japan remained fragile after the 2008 Global Financial Crisis, and inflation was persistently below their central banks' targets. Given limited fiscal space and political resistance to expansionary fiscal policy, the burden of bolstering economic growth has increasingly shifted to monetary policy. By early 2014, the eurozone's policy interest rates had already fallen to levels close to zero. In June 2014, the ECB began to cut the interest rate on the deposit facility into the negative territory, and further cuts were made in September 2014, December 2015 and March 2016. In parallel, additional easing measures, including targeted longer-term refinancing operations (TLTROs) and the expanded asset purchase programmes and subsequent enhancements, were introduced to reinforce the accommodative monetary policy stance. In Japan, the BOJ embarked on a new phase of monetary easing in April 2013, aiming to double the monetary base in order to achieve its 2% inflation target in two years' time. A number of monetary easing measures had since been added, with the latest move being the introduction of the negative interest rate in January 2016.

Table 1: Timing of policy rate cuts of central banks in Europe and Japan

Central banks	**Policy rate**	**Timing of announcement**	**Level**
European Central Bank	Interest rate on the deposit facility	June 2014	-0.10%
		September 2014	-0.20%
		December 2015	-0.30%
		March 2016	-0.40%
Central bank in Denmark	Certificates of deposit rate	September 2014	-0.05%
		January - February 2015	-0.20%, -0.35%, -0.50% and -0.75%
		January 2016	-0.65%
Central bank in Switzerland	Interest rate on sight deposit account balances	December 2014	-0.25%
		January 2015	-0.75%
Central bank in Sweden	Repo rate	February 2015	-0.10%
		March 2015	-0.25%
		July 2015	-0.35%
		February 2016	-0.50%
Bank of Japan	Interest rate on balances in current accounts	January 2016	-0.10%
Central bank in Hungary	Overnight deposit rate	March 2016	-0.05%

Theoretically, negative policy rates could help boost activity in the real economy through various channels. *First*, by lowering the relevant policy rate below zero, the central bank would be charging, instead of paying, commercial banks for holding excess reserves. This could discourage commercial banks from holding idle cash, but rather, to look for alternative assets, including making loans, and there could be an easing of credit conditions in the

Box 2.1 (Cont'd)

economy. *Second*, when the policy rate cut is translated into lower lending and deposit rates of commercial banks, this could reduce borrowing costs and returns on savings, helping to boost investment and consumption demand. *Third*, the introduction of the TLTROs in the eurozone aimed at providing liquidity to banks at a low cost, as the interest rate applied could be as low as the prevailing deposit facility rate. Thus, the ECB is incentivising banks to lend to the real economy by subsidising their lending to households and non-financial corporations and strengthening the transmission of monetary policy. *Fourth*, lower interest rate could add depreciation pressure on a country's currency, which could help boost the price competitiveness of exports. The consequential increases in import prices could also help mitigate disinflationary forces, facilitating the return of inflation to the central bank's target.

At present, the debate about the effectiveness of negative policy rates on real economic activity is far from conclusive. With negative interest rate policy being carried out in the eurozone for only some 20 months and just implemented in Japan early this year, it is premature to draw a definite conclusion. Moreover, it is difficult to distinguish the standalone influence of the negative interest rate in achieving the central banks' objectives, as it was rolled out alongside other monetary policy measures. Simultaneous developments in the international macroeconomic environment, such as global demand conditions, movements in oil prices and US interest rate normalisation, might also blur the picture.

While the evidence is still tentative at best and the eurozone's overall growth remained slow, it appears that there are some positive developments in the region since mid-2014. By comparing the six quarters after the adoption of negative interest rates (i.e. 2014Q3-2015Q4) with the preceding four quarters (i.e. 2013Q3-2014Q2), seasonally adjusted real GDP growth expanded at a slightly faster quarter-to-quarter pace of 0.4% on average, up from 0.2%, amid some pick-up in the growth of private consumption expenditure, investment spending and exports. The preliminary flash estimate for the eurozone's real GDP growth in the first quarter of 2016 further accelerated to 0.6% quarter-to-quarter. Loans to the private sector reverted to growth since January 2015, and showed a slight year-on-year increase of 1.0% in March 2016 (***Chart 1***). Consumer price inflation, however, remained well below the ECB's 2% target, plagued by further declines in commodity and energy prices, with the latest flash reading at -0.2% in April 2016, as compared to 0.5% in June 2014. Core inflation, excluding food, alcohol and tobacco, and energy, was 0.7% in April 2016, as compared to 0.8% in June 2014 (***Chart 2***).

Chart 1 : Loans to the private sector in the eurozone reverted to growth

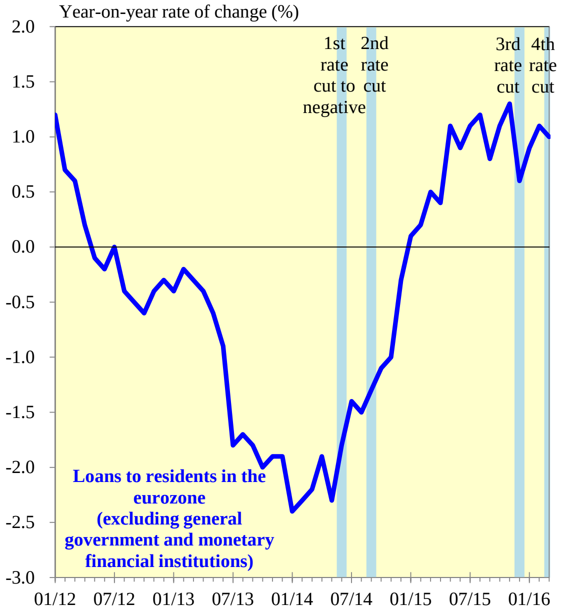
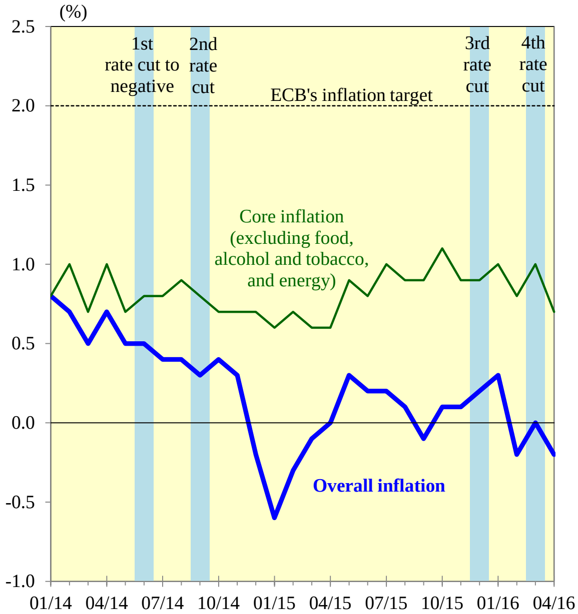


Chart 2 : Inflation in the eurozone remained well below the ECB's target



Box 2.1 (Cont'd)

Nonetheless, there are also widespread concerns about the possible side-effects of negative interest rates. First of all, negative interest rates would squeeze the profitability of banks, as they might not be able to pass these rates to their depositors or augment lending. Banks with weaker capital base could become more vulnerable. Indeed, the recent ECB survey on bank lending in the eurozone(1) indicated that while the negative policy rate so far had a positive impact on banks' lending volume, their interest income and loan margins had been somewhat adversely affected.

Secondly, banks with squeezed margins might undertake excessive risks, if they lend too aggressively to maintain their profit levels. Likewise, some banks may rely more on wholesale funding, the cost of which had fallen alongside lower interest rates. Given the more volatile nature of wholesale funding, this could add risks to the financial system. These potential risks require close monitoring by regulatory bodies.

Also, non-bank financial institutions, such as pension providers and life insurance companies, might find it increasingly difficult to meet their investment return targets, as negative interest rate policy lowers yields on bonds through portfolio rebalancing effects. Besides, if the investment incomes of pensioners' savings are impaired, they may, in turn, cut back consumption.

Apart from the above concerns, the negative interest rate policy may have consequences that are hard to predict. For instance, the movements of the euro and Japanese yen against the US dollar in early 2016 after the recent rate cuts were counter-intuitive. Both the euro and the Japanese yen actually strengthened against the US dollar by around 4% and 7% respectively one month after their recent rate cut announcements in 2016. The surprise movements highlighted the uncertainty associated with exchange rate movements and also cast doubt about the transmission mechanism of this new policy tool in an increasingly complicated global monetary environment.

Thus far, the positive impacts of negative interest rates in the eurozone and Japan on Asia's trade and our exports through the trade channel have been absent amid the still-weak import demand in the two places. The increasing uses of negative interest rate policy have deepened the monetary policy divergence among major central banks, given the US Federal Reserve's normalisation of monetary policy. Under the weak global economic landscape, abrupt changes in investors' risk appetite, interest rate expectations and capital flows could stir up jitters in global financial and foreign exchange markets again, with potential destabilising impacts on the global economy.

Also, with interest rates already at historically low levels in the advanced economies, the International Monetary Fund in April reiterated the need for a more comprehensive strategy to buttress growth. Concerted efforts of structural reforms and stronger fiscal support, subject to the availability of fiscal space, with emphasis on enhancing productive capacity and boosting demand, could complement the highly accommodative monetary policies and help bolster growth.

In the near term, the headwinds arising from a complicated monetary environment will likely persist. Hong Kong, with strong economic fundamentals and a sound and resilient financial system, is capable to sail through sudden changes in financial conditions and handle massive capital inflows and outflows. The Government will stay vigilant and closely monitor the developments on the monetary front and their possible impacts on the Hong Kong economy.

(1) "The euro area bank lending survey for the first quarter of 2016" published by the ECB in April 2016.