GLOBAL POLICY WATCH

8th Mar. 2016

Are negative policy rates a plus for the world economy?

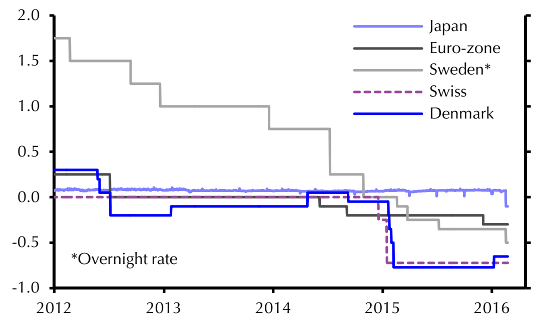
- ***Negative policy rates have worked quite well where they have been adopted***
- ***They have not imposed huge costs on the banks or relied solely on currency depreciation***
- ***And there is little evidence that negative rates are pushing up the cost of borrowing***

Negative interest rates have come under attack recently, but in our view most of the criticisms are over-stated. In particular, the costs of negative rates for commercial banks appear to be very small, and, despite the recent comments by the Bank for International Settlements, there is little evidence that they are having the perverse effect of pushing up borrowing costs. What's more, it is not the case that negative rates work solely by encouraging exchange rate depreciation.

The story so far

We have written a lot on the effects of, and prospects for, negative interest rates over the past few months in both our global and individual country services. (See the appendix on page 5 for links to these publications.) In this note, we summarise the current state of play and address the main concerns which have been raised about negative rates during the past few weeks.

CHART 1: INTEREST RATE ON EXCESS RESERVES (%)

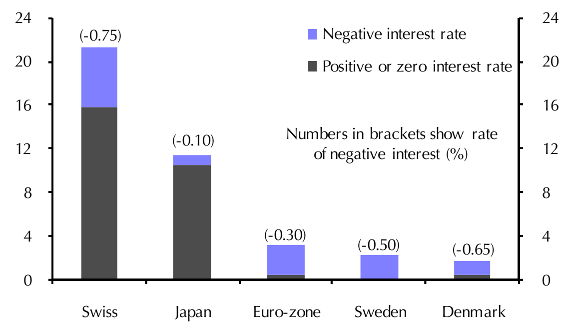


Sources – Thomson Datastream, Bloomberg

To recap, five central banks have set policy rates below zero during the past few years: the Danish National Bank, ECB, Swiss National Bank, Sweden's Riksbank, and the Bank of Japan. (See Chart 1.) Each has done so for slightly different reasons and in slightly different ways. In Denmark and Switzerland, the immediate goal was to counter upward pressure on currencies, whereas in the euro-zone, Japan and Sweden the objective was to encourage commercial banks to step up their lending rather than hoarding cash with the central bank. The details for each central bank are set out in Table 1 on page 2.

With the exception of the Riksbank, the central banks which have adopted negative rates apply them to only a *portion* of commercial banks' reserves which typically only represents a small share of banks' overall assets. (See Chart 2.) The aim is to reduce market interest rates while limiting the direct cost to the banking sector.

CHART 2: BANK RESERVES HELD AT CENTRAL BANK (% OF BANKS' TOTAL ASSETS)



Sources – Thomson Datastream, Central Banks, Capital Economics

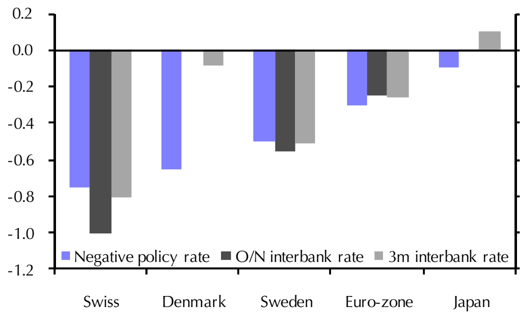
In the euro-zone, Sweden and Switzerland, market interest rates have fallen close to the deposit rate since negative policy rates were introduced. This suggests, at face value, that the policy is having its intended effect. (See Chart 3 on page 3.) In Japan, meanwhile, although overnight interbank rates have declined they have not yet turned negative. Moreover, the volume of interbank loans in Japan has collapsed. Time will tell whether Japan's interbank market will adjust to the negative rate environment, but interest rates on longer maturity

TABLE 1: OVERVIEW OF NEGATIVE POLICY RATES CURRENTLY IN PLACE

Central Bank & Date Introduced	Denmark National Bank (Jun. 2012)	ECB (Jun. 2014)	Swiss National Bank (Jan. 2015)	Sweden Riksbank (Feb. 2015)	Bank of Japan (Feb. 2016)
Key negative policy rate	-0.65% (certificate of deposit rate)	-0.30% (deposit rate)	-0.75% (overnight rate)	-0.50% (main repo rate)	-0.10% (rate on excess reserves)
Reserves subject to negative rates	DKK 96 bn (1.3% of banks' assets)	€ 650 bn (2.7% of banks' assets)	CHF 104 bn (5.5% of banks' assets)	SEK 226 bn (2.2% of banks' assets)	¥ 23 trn (1.1% of banks' assets)
Tiered structure	The certificate of deposit rate is levied on deposits above an upper limit on "current account" holdings. The DNB can adjust this limit in order to reduce the impact on banks' profits.	The deposit rate is charged on banks' reserves that exceed a minimum requirement. The ECB is reportedly considering whether to introduce a three-tier system similar to that in Japan.	Negative interest is charged on domestic banks' sight deposits that are more than 20 times larger than required reserves, minus any rise in their cash holdings since negative rates were introduced.	The repo rate is charged on "debt certificates" (SEK 176bn) and the repo rate minus 10bp to "fine tuning operations" (SEK 60bn). The deposit facility (on which the Riksbank charges interest of 1.25%) is rarely used.	The BoJ pays different interest rates on three tiers of reserves. Banks *receive* 0.1% interest on reserves up to the amount they held in 2015. Any additional reserves, up to a limit set by the BoJ, are paid zero interest. Negative rates apply to balances beyond this threshold.
Other policies	As well as lowering interest rates in 2015, the bank bought foreign exchange worth 10% of GDP to reduce the upward pressure on the krone. In addition, the government suspended its bond issuance during speculative attacks on its currency peg.	The ECB introduced negative rates alongside targeted long-term re-financing operations (TLTROs). This was followed by an asset purchase programme that began in October 2014 and was expanded to include government bonds in March 2015.	Negative rates were imposed in January 2015 at the same time that the CHF1.20 per euro currency ceiling was abandoned. The SNB still intervenes in the currency market, albeit on a much smaller scale, keeping the franc broadly stable around CHF1.09/€.	The Riksbank also implemented an asset purchase programme under which it plans to buy SEK200bn of government debt, equivalent to around 5% of GDP. The Governor and Deputy Governor also have authority to intervene in the foreign exchange market when needed.	The Bank of Japan currently purchases assets under its QE programme at a pace of ¥80 trn per year. This will raise commercial banks' reserves, which is why the BoJ has pledged to review, at its discretion, the threshold beyond which negative interest is charged.
What next?	The latest move was to *raise* rates by 10bp as upward pressure on the krone eased. Cuts would come back on the agenda if the currency began to appreciate, perhaps as a result of further ECB easing.	We expect the ECB to cut the deposit rate by 20bp on 10th March and step up its monthly asset purchases to €80bn. It may also introduce a tiered deposit rate at that time.	The Swiss National Bank will, in our view, need to cut its policy rate a little further, to -1%. We suspect it will also continue intervening in the FX market to prevent the franc from strengthening.	The Riksbank has said it could cut rates again or boost its QE programme. Given these policies' limited success so far, however, we suspect it will first try other policies, including buying foreign assets.	We expect the BoJ to cut its negative policy rate by another 20bp in March and step up the pace of its asset purchases. We anticipate that this policy rate will be cut to -0.9% by January 2017.

Sources – Central Banks, Capital Economics

CHART 3: POLICY RATES & INTERBANK RATES (%, AVERAGE IN WEEK ENDING 28TH FEB.)



Source – Thomson Datastream

loans, as well as bond yields, have dropped below zero, so the policy does seem to be working to some degree even in Japan. Meanwhile, in Denmark, market interest rates at a range of maturities have turned negative, but they remain above the deposit rate.

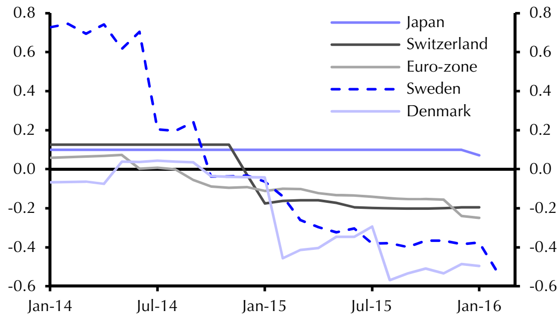
In short, cutting rates below zero has generally had similar effects to monetary policy loosening in more normal circumstances. The main difference is that commercial banks have been reluctant to pass on negative interest rates to retail depositors. This in turn has contributed to fears that banks will be significantly less profitable in a negative interest rate environment. Indeed, the Bank for International Settlements (BIS) suggested in its latest Quarterly Review that the policy may have "a debilitating impact on banks' resilience through undermining profitability".

Consequences for the banking sector

In our view, however, the impact on bank finances is likely to be very small. This is largely because what matters for banks' profitability is not the marginal, or "headline", rate charged on excess reserves but the *average* interest rate charged on all reserves. The negative rate applies to only a fraction of banks' reserves held at the central bank, other than in Sweden, where the total value of reserves held at the Riksbank is in any case quite low.

Chart 4 shows that the average interest rate charged on banks' reserves is in most cases quite a lot higher than the headline rate. Indeed, in Japan the average interest rate paid on reserves is still *positive* because a large proportion of reserves is remunerated at +0.1%. As things stand, the Bank of Japan could cut the interest rate on excess reserves as far as minus 0.9% without banks paying negative interest in aggregate.

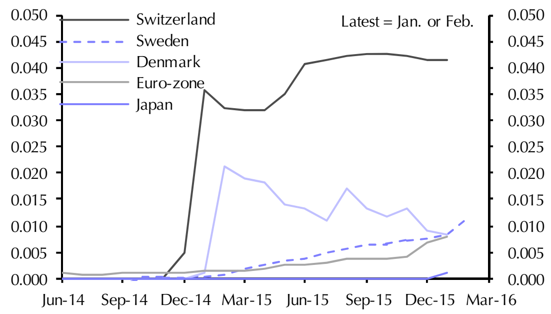
CHART 4: AVERAGE INTEREST RATE ON COMMERCIAL BANKS' RESERVES AT THE CENTRAL BANK (%)



Sources – Central banks, Thomson Datastream, Capital Economics

The total cost to the banking sector depends not only on the negative interest rate charged but also on the amount of reserves on which this rate is payable. With this in mind, the highest total cost is in Switzerland, as shown in Chart 5, largely because the size of excess reserves is greater there.

CHART 5: ANNUAL COST OF NEGATIVE INTEREST (% OF BANKS' ASSETS)



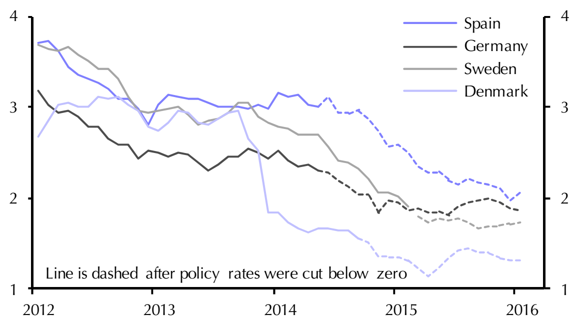
Sources – Thomson Datastream, Central Banks, Capital Economics

Even in Switzerland, the cost of negative interest rates to the banking sector is equivalent to just 0.04% of banks' assets annually. In the other economies with negative policy rates, the cost is less than one third of this level. Given that European banks' net interest income is typically equivalent to around 1-1.5% of their assets, the cost of negative rates appears to be negligible.

Admittedly, asset purchase programmes by the ECB and the Bank of Japan will raise the amount of reserves in the banking system, which means that banks could end up being forced to pay negative rates on a growing stock of reserves. But the Bank of Japan plans to raise the amount of reserves that are exempt from negative interest in order to prevent the cost to banks from escalating. The ECB may well introduce a similar system in the near future. (See our *ECB Watch*, "The ECB can't afford to disappoint again", published on 3rd March.)

The BIS also suggested that negative rates could have the perverse effect of prompting banks to increase the interest rates which they charge on some loans. In support of this, they point out that there was an increase in mortgage rates in Switzerland when negative rates were introduced. However, mortgage rates in other economies have been stable or continued falling after negative rates were introduced, as shown in Chart 6.

CHART 6: 1-5 YEAR MORTGAGE RATES BEFORE AND AFTER THE INTRODUCTION OF NEGATIVE POLICY RATES (%)



Sources – Central banks, Thomson Datastream

A beggar-thy-neighbour policy?

The other major criticism of negative interest rates which has been made recently is that they work primarily via encouraging exchange rate depreciation. For example, the Governor of the Bank of England, Mark Carney, noted that "when negative rates are implemented in ways that insulate retail customers...their main effect is through the exchange rate channel." The implication of this view is that any benefit from negative rates for domestic economy would come primarily at the expense of a loss of market share to other economies, whose exchange rates would appreciate. In Mr Carney's words, the policy would ultimately be "a zero sum game" for the world as a whole.

We do not think this criticism is entirely justified. For a start, negative policy rates seem to have contributed to falling interbank rates, bond yields and (with the exception of Swiss mortgages) lending rates. Second, to the extent that negative rates do work through weakening the currency, they are no different from more conventional monetary policy or quantitative easing: the exchange rate is one of the channels through which monetary policy operates. And third, the end result of several central banks simultaneously implementing negative rates would be looser global monetary conditions regardless of the significant implications for the currency markets.

Conclusion

Investors have been concerned that the introduction of negative rates shows that policymakers are running out of ammunition. But the evidence so far suggests that they are working broadly as intended. Admittedly, rate cuts below zero may be less powerful than rate cuts above zero, because banks are reluctant to impose negative rates on retail deposits. But otherwise, the main drawback of negative interest rates is simply the existence of cash, which means that there is a limit to how far they can be cut. In brief, we still think negative rates offer policymakers a little extra firepower, though not much more.

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Appendix: Capital Economics research on negative rates

Date	Publication	Title
25th February	Global Central Bank Watch	Have central banks run out of ammunition?
23rd February	Japan Economics Update	Will negative JGB yields result in an operating loss for the BoJ?
17th February	UK Economics Update	No need for the UK to join the negative rate club
15th February	US Economics Update	Fed unlikely to follow others in adopting negative rates
12th February	Global Economics Update	Are negative rates doing more harm than good?
11th February	European Economics Update	Sweden's Riksbank cuts rates, but more work is needed
10th February	European Economics Update	Bank troubles intensify downside risks to growth
8th February	European Economics Update	Current account surplus will keep Danish krone strong
5th February	Canada Economics Weekly	Negative interest rates unlikely in Canada
3rd February	Japan Economics Update	Will negative rates hamper the BOJ's ability to buy JGBs?
2nd February	Global Markets Update	We think sub-zero long-term JGB yields lie ahead
2nd February	Global Economics Update	How low can policy rates go?
1st February	Japan Economics Update	Bank of Japan to cut rates to -1.0%
29th January	Capital Daily	The market implications of negative interest rates in Japan
29th January	Japan Economics Update	Further cuts in interest rates likely to be required
18th January	European Economics Update	One year on from the Swiss franc shock
23rd Oct. 2015	Global Economics Focus	Are negative interest rates effective?
25th Jun. 2015	Global Central Bank Watch	Are negative policy rates here to stay?
26th Feb. 2015	Global Central Bank Watch	How negative can interest rates go?

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