Q&A: The ECB and tiering

Our Thoughts About Monetary Policy’s Future Steps in an Environment of Negative Interest Rates

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Key points

- Eurozone heterogeneity remains an important constraint for the European Central Bank’s (ECB) transmission mechanism
- Significant regional differences in central bank liquidity provision/absorption and commercial bank liquidity utilisation make the implementation of a “one-size-fits-all” tiering-policy strategy challenging
- The introduction of a tiered reserve system is not part of our baseline, we would need to witness a significant deterioration in the outlook to see the ECB follow this course
- The ECB certainly has other options with regard to its standard instruments. But policy choices are again constrained by the Eurozone’s fragmentation
- A combination of fundamental, regulatory and technical factors could result in Bund yields reaching new lows and staying lower-for-longer than the median forecasts suggest

1. What is “tiering”?

When a tiering system is imposed on central bank deposits, it reduces the amount of excess liquidity subject to a negative interest rate, without moving the headline deposit rate. In other words, part of banks’ excess reserves could be allowed to earn the Main Refinancing Operation rate (MRO, 0.0%) rather than the Deposit Facility Rate (-0.4%).

The rationale for a tiering system is to reduce the adverse effect of negative interest rates on banks’ net interest income. The European Central Banks’s (ECB) deposit facility interest rate of -0.4% is applied to reserve holdings in excess of minimum requirements since March 2016, creating an incremental cost on banks.

Exhibit 1: Stickiness of deposit rates

<table>
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<tr>
<th>Euro area deposit rates</th>
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<tbody>
<tr>
<td>Household deposit rate</td>
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<tr>
<td>NFCs deposit rate</td>
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<td>ECB deposit facility rate</td>
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Source: Datastream and AXA IM Research

But negative interest rates have an adverse effect on net interest income beyond the direct impact on excess reserves, by reducing banks’ assets more than their liabilities. Many banks’ assets – such as mortgages in Spain, Italy and Portugal – have a floating rate and are typically priced off Euribor, which has largely mirrored the decline in policy rates. Conversely, many liabilities – and most notably deposits – have not repriced lower to the same extent (Exhibit 1). Banks have not passed on negative rates to most customers, putting part of their balance sheets in negative carry. The
cost for individual banks depends on their funding structure, with deposit-funded retail banks being the most affected. Tiering would not directly solve this second aspect.

2. How does it work elsewhere?

Other central banks with negative interest rates include the Bank of Japan (BoJ), the Swiss National Bank (SNB), the Swedish National Bank (Riksbank) and Denmark’s Nationalbanken (DNB) – and all have adopted a tiered system. The aim is to protect commercial banks from the impact of negative rates, while pushing short rates low, to provide more economic stimulus, including through weaker currencies – indeed, heightened exchange rates pressures pushed most of these central banks to implement negative deposit rates in the first place. But the approaches have differed. The DNB and Riksbank, for example, have used an existing instrument (certificate of deposit), while the SNB and the BoJ have introduced a multi-tier system.

In Denmark, the main policy rate is the rate on the certificate of deposit. Since the introduction of negative interest rates in July 2012, the central bank has allowed banks to park part of their excess liquidity in “current accounts” at zero charge, versus a headline deposit rate of -0.65%. The current account limits, with thresholds at both banks’ individual and aggregate levels, have been actively managed and are evaluated on an annual basis. Deposit rate exemptions, which change over time, have thus become a monetary policy tool. Overall approximately 86% of total reserves are charged a negative rate (Exhibit 2).

Exhibit 2: Tiering systems abroad: Various approaches and various consequences

Source: ECB, BOJ, SNB, DNB, DataStream and AXA IM Research

In Sweden, the main policy rate is the one-week repo rate, which stands at -0.25 basis points (bps), while the deposit rate is -100bps. The Riksbank has used existing instruments to mitigate the side effects of negative rates on banks – in addition to the deposit account, it issues one-week debt certificates. It also implements daily fine-tuning operations to drain any remaining reserves prior to the close of business. Hence banks hold less than 1% of overnight deposits with the central bank.

In Japan, the BoJ introduced negative policy rates in January 2016, cutting the current account rate to -10bps. Simultaneously it introduced a three-tier system on central bank deposits. The first tier is the basic balance which is the average balance of current account deposits between January and December 2015, net of the reserve requirement, and is remunerated at +0.1%. The second tier is the macro add-on balance which corresponds to the required reserves, lending support programmes and the basic balance multiplied by a periodically adjusted benchmark ratio; it is remunerated at 0%. The third tier is the policy-rate balance, it consists of the remaining amount of deposits held at the BoJ and incurs a rate of -0.1%. Overall, only a small proportion, at 5%, of total deposits are subject to negative rates.

In Switzerland, the SNB cut the rate on sights deposits to –75bps in January 2015 – the same time it stopped the euro/Swiss Franc peg. From the start, it put in place a two-tier system where only banks’ deposits in excess of 20 times the minimum reserve requirement¹ are subjected to the negative policy rate. Excess reserves below this exemption threshold are remunerated at 0%.

Such tiering structures could be a reference model in the event of ECB tiering. However, the complexity of the Eurosystem in terms of geographical fragmentation and heterogeneity of its banks would likely require an ad hoc solution for the region.

3. Why implement it?

Tiering is not a true monetary policy instrument, rather a way to enhance other monetary policy tools via signalling, namely forward guidance and rate cuts. At the ECB’s April press conference, President Mario Draghi repeatedly said that markets understood the bank’s reaction function, following its ECB Watchers conference. In our view, President Draghi endorsed the recent fall in rates as markets interpreting that the implementation of tiering was consistent with a further delay in future interest rate hikes (Exhibit 3).

Moreover, President Draghi was asked in April whether the implementation of a tiering system would allow the ECB to consider further rate cuts – not only negative rates for longer, but even more negative rates. Here, President Draghi just reiterated that markets understood the ECB reaction function, leaving the door open to potential rate cuts. The implementation of tiering could thus also revive one of the ECB’s monetary policy tools.

¹ More precisely, the threshold exemption has two components: 1) a static one: 20 times the minimum reserve requirement for the reporting period 20 October 2014-19 November 2014; 2) a dynamic component: minus any increase/plus any decrease in the amount of cash held
4. What can we say about the regional distribution of ECB liquidity?

The ECB's balance sheet expanded aggressively due to Quantitative Easing (QE), leading to a sizeable increase in Eurosystem excess liquidity (Exhibit 4). Deposits at the ECB amount to circa €1.9 trillion and given 94% of these deposits are subject to a negative rate (Exhibit 2), implementing a tiering system would generate significant gains for banking system in aggregate.

But such “reduced costs” would not be shared evenly. This is because the distribution of excess reserves and deposit facility is very heterogeneous among euro area countries (Exhibit 5). The liquidity surplus is concentrated in the core countries, for a myriad of reasons including risk aversion and regulation e.g. Basel III’s liquidity rules\(^2\) have created an incentive to hold reserves.

\(^2\) Basel III’s liquidity rules apply of course to all euro area banks but due to their risk aversion, core banks have been more incentivized to hold reserves.

In particular, German bank deposits amount to about €169bn, 27% of the total deposit facility. In France, they stand at €237bn (37%) and in Belgium around €70bn (11%). Deposits are much lower in the peripheral countries, with about €23bn in Spain (4%) and €13bn in Italy (2%). In addition, excess reserves are heavily concentrated in core countries, with Germany, France, Netherlands, Belgium, Austria and Luxembourg accounting for 87% of euro area excess reserves. Meanwhile, Italy and Spain constitute 10% of total excess reserves.

The heterogeneous regional distribution of the ECB’s liquidity can also be seen through the use of the Target Long Term Refinancing Operations (TLTROs). Large core countries like France and Germany have together absorbed 29% of ECB’s TLTROs, while large non-core countries like Italy and Spain amount to almost double that (Exhibit 6). The ultimate destination of this liquidity is also important. For example, Italian banks carry €396bn of domestic government bonds, which is about 37% of the total sovereign risk held by the European Monetary Union’s banking sector. By contrast, German banks hold 16% (€169bn) of domestic government bonds.
5. What are the consequences of tiering on Eurosystem liquidity?

The introduction of a tiering system would likely have two main effects on the setup described above.

1. **Core banks**: An immediate reduction in the cost of the negative deposit rate suffered by core banks on their disproportionate recourse to the ECB’s deposit facility and excess reserves. As noted previously, the uneven distribution of Eurosystem liquidity surplus means that core banks bear the bulk of the cost of the negative deposit rate. We estimate that the annual cost of negative deposit rates for German banks amounts to about €3bn, with the “bill” amounting to €2.8bn and €0.9bn for French and Dutch banks, respectively (Exhibit 7).

2. **Non-core banks**: At the margin, a very gradual (if any) reduction of the profit of carry accrued through holdings of higher-yielding domestic government bonds should be expected. The combination of tiering and TLTROs (at less favourable conditions) is likely to marginally increase the effective cost of funding of banks’ liquidity buffer, thus slightly reducing the attractiveness of term arbitrage.

Exhibit 7: The “bill” is higher for core banks

The Eurozone’s heterogeneity is not only confined to the distribution of excess liquidity. Lending to non-financials is equally important in terms of assessing the ECB’s transmission mechanism. Core banks total about 66% (€7.3 trillion) of total Eurozone lending to non-financials. In particular, France and Germany together make up more than 50% of the total. As mentioned above, banks in these countries absorb a relatively modest amount of LTROs and carry only 30% of all bonds. The reverse is true for non-core banks: they lend a relatively modest amount of cash to non-financials, while assuming a very large government bond exposure (i.e. lending to the sovereign). Hence, there seems to be a problem of crowding out of private investments, especially in Italy.

While the net effect of tiering might somewhat reduce crowding-out in non-core countries (very gradually) and improve the prospective net interest margin in the core, it is unclear whether this benefit will come at the cost of increased financial stability risks in the Eurozone’s periphery.

Furthermore, tiering is also likely to bear a signalling effect on the term-premium, in the sense that markets might be led to believe that a normalization of rates has shifted far into the future. As a consequence, this might further depress the profitability of the broader financial sector, which is already operating in a challenging environment of extremely low bond yields. In this sense, alleviating the “cost” of negative rates on the banking system might “incur” a cost on the broader financial system.

6. What are the consequences of tiering on money markets?

Evidence from both the Japanese and Swiss money markets does not support the thesis that euro interest rates would immediately drift away from the deposit rate, were the ECB to introduce tiering. Even in the presence of a substantial negative rate exemption, money market interest rates appear to be driven mainly by excess liquidity and the floor rate of the corridor system (rather than the average effective rate on excess reserves).

However, the ECB faces a complex decision, considering the Eurozone’s heterogeneity, which is also reflected in a dispersion of regional repo rates (Exhibit 8). Without going into the details of Eurozone government bond (EGB) collateral markets, differences in the regional liquidity distribution, as well as in the scarcity of regional collateral, impose an additional layer of complexity. For example, German General Collateral (GC) rates are expected to continue to trade below the ECB’s deposit rate in the case of tiering, as German banks’ effective rate on reserves would still be very low and Bunds’ scarcity would continue to keep downward pressure on repo rates.

Exhibit 8: Heterogeneous financing markets in the Eurozone

The Eurozone’s funding markets

Source: ECB, RepoFunds and AXA IM Research
Of course, the situation might be very different in Italy, for example, where banks tend to underutilize the ECB’s deposit facility, where BTP collateral is not scarce – at least not yet – and where extra cash is reinvested in the domestic repo market as domestic term-repo rates trade at or above the deposit rate (Exhibit 8). In case of tiering, Italian and Spanish banks could deposit at the ECB at a rate higher than the deposit rate, this would lead them to shift the extra cash from the domestic repo market to central bank deposits. Lower demand for domestic GC would then likely cause a significant increase in peripheral GC rates, towards the level of the tiered deposit rate applied to the amount of exempt excess reserves – in effect tightening policy in these countries.

7. When to implement it?

We do not consider tiering as part of our baseline for now. The latest comments from Governing Council members signal that there is no clear consensus on the topic, and the complexities described above reinforce that view.

At its April meeting, the ECB made explicit the conditions under which the analysis on the potential side effects of negative rates, and possible mitigating measures, will be conducted:

1. A thorough assessment of the bank-based transmission channel for monetary policy
2. Further developments in the economic outlook.

The latest lending data and ECB Bank Lending Survey both suggest that there are currently not obvious side effects on bank intermediation. On the second condition, we think we would need a severe shock – for instance, if the US introduces auto tariffs, we could potentially see tiering come in as early as June.

Otherwise, we believe the September meeting will be key. By then the assumptions underpinning the ECB, the consensus view and our own growth projections will be validated, or not. Indeed, by then we will know if the external environment is turning more positive, with Chinese growth rebounding and US economy holding up. If this proves wrong, and the euro outlook deteriorates significantly, we believe the ECB would have to aggressively extend its forward guidance (beyond what is priced by markets), while revising its GDP and inflation forecasts lower. To strengthen its credibility and alleviate financial stability concerns from some Governing Council members (mainly Villeroy de Galhau), the ECB might thus have to implement some form of tiering.

8. Are there alternative measures to reduce the cost of negative interest rates on banks?

In principle, the ECB has two levers to work on – either the interest rate applied to excess reserves or the minimum reserve threshold (i.e. excess liquidity), or both. Conceptually, this is what tiering is all about. However, the Eurozone’s heterogeneous liquidity distribution again poses a source of complexity. Applying a one-size-fits-all filter on required reserves might create all sorts of political implications for certain regions or individual banks. Furthermore, we cannot ignore the side-effects of tweaking the minimum reserve requirement, in particular with regards to financial stability (Exhibit 9).

Currently, minimum reserves are set at 1% of certain bank liabilities (mainly customers’ deposits), thus amounting to roughly €128bn. They are supposed to serve as a backstop in the fractional banking model. All being equal (i.e. the level of the deposit and marginal lending facilities, as well as current accounts at the ECB), increasing minimum reserves by one euro would immediately lower excess liquidity by the same amount. Therefore, a large enough increase in minimum reserves – especially in an environment of a decreasing central bank’s balance sheet (not currently considered) – might shift the Eurosystem in a very different excess liquidity situation, with obvious consequences for the volatility of overnight rates, monetary conditions and the stability of the banking sector.

Again, we stress that any Governing Council decision in this respect is only likely to be preceded by a necessary and complex cost/benefit analysis.

9. What’s next? What’s left in the ECB toolbox?

A combination of state-and time-contingent forward guidance in an environment of excess liquidity seems to be the primary policy instrument for the ECB’s Governing Council. In our view, any future policy innovation will have to
be fine-tuned with respect to the main instrument. In particular, trading-off the stability of money market rates against the interbank market turnover is of utmost importance when deciding the corridor width.

At a later stage – perhaps prior to venturing into asset classes other than fixed income – the Governing Council might want to consider controlling the bond term premium via some sort of Yield Curve Control (YCC) mechanism, or a European version of “operation twist”. The goal is to prevent long-term real rates from rising too much, thus tightening financial conditions. Eventually, we would not exclude a re-start of net asset purchases, perhaps only on specific market segments, in case of an “unwarranted tightening” of monetary conditions. However, this measure has at least two main drawbacks in our view.

1. While the ECB can directly influence the supply and the price of credit and liquidity, steering the demand for credit and liquidity from the non-financial sector is less straightforward.

2. Even if the ECB’s asset purchase programme (APP) i.e. QE was not constrained by the 33% issue/issuer limit, the marginal benefit of re-starting the APP might be much lower than in 2015, and is likely to decrease as the ECB expands its balance sheet.

10. Putting all the pieces together: What can we say about the level of Bund yields in the medium/long-term?

From their 2018 highs, Bund yields have dropped by 72bp with a low at -0.09% at the end of March (all time low at -0.2% in July 2016). The question we’re asking ourselves today is not so much about the average yield in the medium/long term, but rather whether Bund yields can reach new lows and stay depressed for a very long period of time. Such a scenario would have several undesirable side-effects for the asset-liability management business, from banks to pension funds.

In principle, we can decompose any bond’s nominal yield into its building blocks: the natural interest rate, interest rate expectations, inflation expectations as well as a vector of risk premia e.g. inflation, term, credit and liquidity premia (Exhibit 10). These are priced as certainty equivalents, i.e. such that the bondholder is indifferent between holding cash and the security. The natural interest rate cannot be observed directly, its estimate for the Eurozone is around -0.25% using the Laubach/Williams model. We can extract interest rate and inflation expectations from the Eonia swap and the Bundei markets, respectively. Estimating risk premia is more challenging, though. For Bunds, we can keep estimates of inflation and credit risk almost flat. On the other hand, the liquidity premium is key in a heavily regulated liquidity environment, in which safe collateral is king and in which the central bank has already extracted 36% of the total dollar duration from the government bond market. Furthermore, we can approximate the 10-year term premium by means of the swaption volatility market and the forward premium. From the US Treasury market data, we know that the term premium can be as low as -1% during periods of QE activity, hence we do not find a rough estimate of liquidity and term premium for the German Bund around -1.2% particularly disturbing. Putting the pieces together, we arrive at an equilibrium level of -0.25%/-0.30% for Bunds. However, we need to bear in mind that this level might be lower should the ECB’s policy strategy change again. For example, we should expect Bund yields to dip even lower in the event of an “operation twist” or an exemption of the self-imposed 33% limit. In a nutshell, there is a substantial risk that Bund yield might trade deeper into negative territory and stay low for longer than the analysts’ consensus is currently forecasting.

Exhibit 10: Several factors pointing to “lower-for-longer”
Bund: Decomposition into Main Factors

Source: Datastream and AXA IM Research
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