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Outlook for new 40-year JGB

Nomura Research Institute, Ltd.

The first-ever 40-year JGB auction was held last November. The 40-year bonds were issued in anticipation of demand from domestic insurers and pension funds and foreign investors, but the short-term demand outlook is murky. Longer term, however, we see favorable prospects for demand growth in response to pending change in accounting standards and growth in LDI's prevalence.

On 6 November 2007, Japan's Ministry of Finance (MOF) auctioned 40-year JGBs for the first time ever. The ¥100bn issue was oversubscribed by a factor of 5.012, with ¥99.9bn worth of bids ultimately accepted. The issue was sold to yield 2.435%, a 10.5 basis point (bp) premium to the 30-year JGB yield. Although this yield premium was slightly wider than the consensus forecast of 8-9bp, the 40-year JGB nonetheless made a successful debut. It joins a product line of nine existing government securities[1] issued by the MOF. The MOF aims to maintain stable borrowing costs by offering a diverse mix of securities to attract a wide range of investors.

40-year JGB auction method

For the first 40-year JGB auction, the MOF imposed a minimum price threshold derived from a quantitative model. Fair-value issuance prices are normally estimated based on the yield curve for outstanding JGBs, but because no JGB with a maturity longer than 30 years had ever been issued before, the MOF needed to somehow extrapolate the JGB yield curve to 40 years. To compensate for the lack of a secondary market, the MOF devised an academic interest rate model to ensure that the initial 40-year JGB issue was auctioned on terms that did not disadvantage investors or taxpayers.

This model is based on the fact that the JGB yield curve (T-curve) can be deconstructed into a swap curve (L-curve) and swap spread (T-L spread). It models the L-curve and T-L spread to derive an implicit T-curve. According to a report by the working group that developed the model[2], the T-curve was not modeled directly for two main reasons. First, there was concern that the shape of the T-curve may be distorted by factors such as JGB investor preferences. In such an event, the 40-year JGB issue might not be auctioned at a fair price disadvantageous to neither investors nor taxpayers. Second, the L-curve reflects trading activity in a relatively highly liquid market.

The "fair-value" 40-year yield estimated by the model was used by the MOF as a threshold for bids[3]. The 40-year JGB auction was conducted as a yield-based Dutch auction[4]. If the yield bids submitted by securities dealers were above this threshold, the MOF reserved the right to cancel or scale down the issue. Although 30-year JGBs were likewise initially issued by Dutch auction, the recent 40-year auction was the first time that the MOF imposed a maximum yield predetermined by a model. Use of this auction method was intended to ensure fair pricing.

Demand for 40-year JGB issuance

Now that the new 40-year JGB has been successfully issued, how will investors benefit? And what investment needs is the MOF targeting with 40-year JGB issuance? According to the minutes of various meetings[5] at which 40-year JGB issuance was discussed, the MOF anticipates both domestic and foreign demand for the new maturity.

Domestically, pension funds and insurers are a potential source of demand for long-term assets that match the duration of their liabilities to rectify asset-liability mismatches from the standpoint of ALM or LDI[6]. Insurers in particular, even in Japan, are expected to adopt accounting standards requiring strict mark-to-market valuation of liabilities after the International Accounting Standards Board announced last May that it intends

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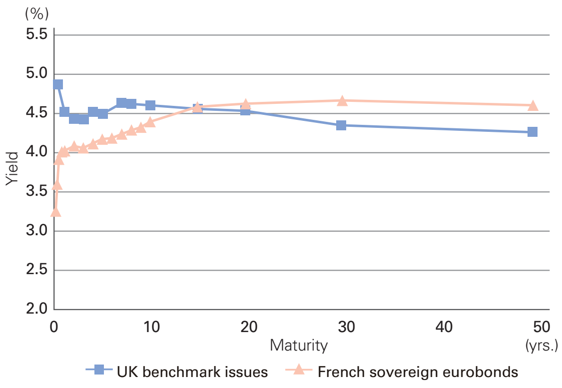
to introduce uniform international rules for valuation of insurers' liabilities from 2010. These new rules are likely to spur growth in aggregate demand for ultra-long-term bonds. The 40-year JGB is expected to meet a portion of insurers' demand for assets to fund particularly long-term liabilities such as whole life insurance policies[7].

The MOF anticipates demand from foreign investors also. In Europe, 40- and 50-year UK government bonds and 50-year French government bonds are reportedly in demand among global investors[8]. When these bonds debuted on the market, liquidity was initially a concern, but they are currently issued at regular intervals. The French and UK yield curves are currently inverted at the long end, with 50-year bonds yielding less than 30-year issues, reflecting demand growth (Exhibit 1).

Even in Japan, 40-year bonds have been issued by the Japan Expressway Holding and Debt Repayment Agency and Development Bank of Japan. These bonds have apparently garnered buying interest from bargain-hunting foreign investors. Issuance of 40-year JGBs should expand the market for ultra-long-term bonds and stimulate more foreign interest.

Exhibit 1. UK and French government bond yield curves



Source: NRI with Bloomberg data

Future issues and outlook

Some market participants are pessimistic about 40-year JGBs' prospects. One concern is insufficient investment demand at present. With the average duration of domestic life insurers' liabilities estimated at around 10-15 years, demand for existing JGBs with a remaining maturity of over 10 years is presumably concentrated around the 20-year zone. In fact, outstanding issuance of JGBs with a remaining maturity of 10-20 years is about nine times larger than outstanding issuance with a remaining maturity of over 20 years (¥73.2 trillion vs. ¥8.5 trillion (face-value basis) as of end-March 2007).

Another concern is liquidity. While 30-year JGBs, which are issued in lots of ¥500 billion, have decent liquidity prospects, 40-year JGBs, issuance of which was limited to ¥100bn in FY07 and slated to increase to only ¥400 billion in FY08, are unlikely have much liquidity initially. We expect the market for 40-year JGBs to take shape slowly.

From a long-term perspective, however, we see several prospective catalysts (e.g., adoption of the aforementioned accounting standard, rising interest rates, growth in LDI's prevalence) that could trigger rapid growth in investment demand for JGBs with maturities in excess of 20 years. Such demand growth could prompt increased issuance of 40-year JGBs, leading to improved liquidity. We look forward to the development of a market for the new 40-year JGB.

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Note

1) The nine are 2-, 5-, 10-, 20-, and 30-year fixed-coupon bonds, 6-month and 1-year discount bills, floating-rate bonds, and inflation-indexed bonds.

2) Available at http://www.mof.go.jp/jouhou/soken/kenkyu/zk080/zk080_e_hyousi.pdf

3) The MOF did not publicly disclose the fair-value yield calculated by the model.

4) Unlike in a conventional auction where bidders make price bids, bidders in a yield-based Dutch auction bid on a yield basis, specifying how much of the issue they wish to purchase. The bids are filled in ascending order of yield until the entire issue is allocated. The final yield level at which bonds are allocated is the yield at which the bonds are issued.

5) Meetings of the Advisory Council on Government Debt Management, JGB Market Special Participants, and JGB Investors

6) ALM: Asset-Liability Management; LDI: Liability Driven Investment

7) The 5 November 2007 edition of the Nikkei Kinyu Shimbun quoted representatives of major life insurers as saying, "We will of course be interested in buying [40-year JGBs] to lengthen our bond holdings' average remaining maturities;" and "We will be active buyers [of 40-year JGBs], depending on the shape of the yield curve."

8) According to the MOF's Advisory Council on Government Debt Management.

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