Note: The pricing methodology set out in this paper was subsequently revised in a DMO press notice of 16 November 1998.

Also, the restriction on conversion candidates with less than 5 years to maturity was removed on 21 December 2004.

UK DEBT MANAGEMENT OFFICE

GILT-EDGED STOCK CONVERSION OFFERS: RATIONALE AND METHODOLOGY

Following the successful completion of the first gilt conversion offer since 1996 in July, the DMO believes that it would be helpful to the market to clarify its approach to any such offers in the future. The DMO will judge conversion candidates on their merits on a case-by-case basis and gives no commitment that, even if a candidate stock meets the various criteria set out below, an offer will be made.

Any comments on the questions about conversion methodology set out below should be sent, by September 30th 1998 to: *Paul Mills, UK Debt Management Office, 1st Floor, Cheapside House, 138 Cheapside, LONDON, EC2V 6BB; Telephone 0171 862 6521; Fax 0171 862 6509.*

Rationale for Conversion Offers

The aim of conversions generally is to:

- build-up the size of new gilt benchmark stocks more quickly than can be achieved through auctions alone. This has become more important in the current low-issuance environment;

- increase the size and proportion of strippable issues faster than otherwise. (This may become more of an issue in the future if the DMO were to issue strippable gilts with a second set of coupon dates that needed to be built up rapidly);

- concentrate liquidity across the gilt yield curve by reducing the number of high coupon, small issues, and converting them into current coupon, larger stocks of roughly similar maturity. (Source stocks of the conversion offers in 1996 and 1998 have been relatively small, double-dated issues. However, these features are not automatic prerequisites, and conventional coupon gilts could be candidates for conversion).

Conversion Candidates

The current aim of the UK authorities is to maintain liquid benchmarks in the 5-, 10- and long areas of the gilt yield curve. Conversions contribute to achieving this in a period of a low issuance. However, processing a conversion offer incurs administration costs. **As a result of these factors, no consideration is currently given to conversions of stock with less than around 5 years to maturity.** ***Note: this restriction was removed on 21 December 2004 – see "A Guide to the Roles of the DMO and Primary Dealers in the UK Government Bond Market".***

Given the aims of trying to convert as much of the source stock as possible, with a view to reducing an existing smaller stock to a 'rump' issue, the choice of candidates will also be influenced by the size and current distribution of the source stock. The larger the size and the more widely held it is, particularly by retail investors, the less likely an offer will succeed in achieving a high take-up. Hence, both factors will be taken into account by the authorities when making their choice of candidates. **No consideration is currently given to candidate stocks with £5 billion (nominal) or more in issue (but see Switch Auctions below).**

On the existing conversion timetable, the authorities hold the conversion terms (in the form of a fixed price ration of the two stocks) open for three weeks. As a result, the conversion offer grants a three-week option to holders of the source stock. If the terms move in the holders' favour, they can convert at the fixed terms whereas, if the terms move sufficiently against them, they can exercise their option not to convert and hold the gilt to maturity or trade it in the market subsequently.

The authorities can do various things to reduce the value of this option against the Exchequer and so the risks involved in making an offer. The risk is reduced by minimising the duration gap between conversion stocks and limiting the size of the source stock involved in the offer. However, given that the conversion is likely to involve stocks of different coupons, minimising the duration gaps between the stocks entails a gap between the maturities of the stocks involved. This can result in unwelcome disruption to some investors' portfolios managed on a cashflow matching basis, particularly at shorter maturities. Hence, the choice of conversion candidates often needs to trade-off the gap in duration with that of maturity.

Similarly, the larger the conversion offer, the greater in absolute amount the exposure of the Exchequer to curve movement risk. In order to minimise the risks involved, **the DMO will aim to schedule offers so that the fixed conversion terms on any two offers will not run concurrently and that a conversion offer will not coincide with a gilts auction in the same maturity area.**

Pricing Methodology

The goal of a conversion offer is to make an offer to holders of the source stock such that a large proportion of the stock is converted at fair value, so having regard to value for money for the Exchequer in the pricing of the offer.

The DMO prices the offer using its yield curve model as the yardstick. It cannot commit to the set terms equal to the ratio of the forward prices of the two stocks in the market at the time of the offer being made. This should help ensure that there is less of an incentive to corner an issue in the run-up to the offer in order to raise the relative price of the source stock artificially.

The conversion ratio (a 'dirty price' ratio) is calculated by valuing both the source and destination stocks by discounting each of the cashflows to the conversion date using the forward yield curve on the date of announcement of the conversion terms. This approach takes account of the differential 'pull-to-par' effects of the two stocks for the period until the conversion is effected. The DMO approaches setting the conversion terms from the perspective of the longer-term holders of the source stock. The cost of financing a position in the stock until the offer closes is not taken into account.

Conversion Timetable

Since 1996, conversion offers have settled on a coupon date of the source stock. The timetable has been approximately:

- **C-35 days:** announce intention to offer conversion terms and the two stocks concerned;
- **C-21 days:** announce terms and open offer;
- **'C'-day** (ex-dividend date of source stock): offer closes, preliminary result announced and DMO states whether source stock is to be treated as a 'rump'
- **C+7** working days: coupon date of the source stock; creation of further amount of destination stock; settlement.

The two weeks' notice of a conversion offer is designed to allow the market time to unwind positions in the source stock and for the yield curve to reflect the extra intended supply of the destination stock. The three-week period for which the offer is open is designed to allow for smaller holders of the issue to be informed of that offer and to assent by post, as well as have the opportunity to seek financial advice as to whether to accept the offer.

The DMO has stated that holding conversion offers so that they settle on the dividend date of the source stock is no longer an operational necessity[1]. If an offer were not to settle on the coupon date of the source stock, an offer would be made for forward settlement three weeks in the future. This would then become C-day and the conversion ratio would reflect accrued interest in both stocks.

There are various aspects of this timetable on which the DMO would welcome market participants views. In particular:

- Is the initial two-week period necessary for the unwinding of positions in the source stock? Some participants have stated that this period is

[1] 'Gilt-edged Auctions: April-June 1998', *Bank of England Press Notice*, 31st March 1998.

counterproductive because it is difficult for GEMMs to quote spreads in the source stock not knowing the conversion terms.

- Can the three-week offer period be truncated for the holders of the majority of the source stock to reduce the risk to the Exchequer? A format might be devised whereby the option is open for three weeks only to retail holders. This, however, would entail two settlement dates.

- If the three-week period is shortened for the holders of the majority of the source stock, does this impinge on whether the initial two-week notice period can be dispensed with?

- Do market participants prefer the greater certainty of conversion offers generally being for settlement on the date of the source stock or would settlement off-coupon date be preferable?

The DMO is interested in market views on these timing and process questions. However, until further notice, the DMO will aim to follow the existing conversion timetable, as set out above, for future offers.

Interaction of Conversions with Deliverability into Futures Contracts

In the three gilt conversion offers held since 1996, there has been no interaction with deliverability into gilt futures contracts as the source stock has been double-dated and so excluded from the deliverable basket by definition. However, this may not be the case in future. LIFFE and MATIF have confirmed that holding a conversion offer in which the source stock is in the deliverable basket for a futures contract does not cause a problem in principle. However, there would be a risk of serious market disruption if an offer was made for a stock that was cheapest-to-deliver for a forthcoming contract. Hence, **the DMO commits not to make a conversion offer for a stock that is cheapest-to-deliver, or has a reasonable likelihood of becoming cheapest-to-deliver, for any of the listed gilt futures contracts on LIFFE or MATIF.**

Deliverability into gilt futures contracts also imposes a constraint on the timing of a conversion offer if the source stock is in the deliverable basket. The LIFFE gilt futures contract specifications require the exchange to publish a definitive 'List of Deliverable Gilts' on or before the tenth business day prior to the 'First Notice Day' for delivery. (In practice, this date falls approximately just before the middle of the month prior to the delivery month of the respective futures contract.) The amount converted in an offer cannot be guaranteed and so there would be uncertainty during the offer whether the gilt would fall out of the deliverable basket on grounds of amount in issue. Hence, if a conversion offer for a deliverable stock were to be open over this date, the exchange would be unable to publish a definitive list of deliverable stocks without a risk that this would change in the light of the conversion result.

The MATIF gilt futures specifications require the exchange to publish its definitive list of gilts eligible for delivery fifteen business days prior to the last trading day of the respective futures contract. In practice, this date falls towards the end of the month preceding the delivery month.

In order to reduce any uncertainty over the definitive lists of deliverable gilts on LIFFE and MATIF, **the DMO will aim not to make a conversion offer involving a deliverable gilt whose terms are open between the dates on which LIFFE publish the List of Deliverable Gilts and MATIF publish their official list of gilts eligible for delivery, and the relevant delivery day or month.**

Switch Auctions

An alternative to holding a conversion offer for the whole of the source stock would be to hold a switch auction whereby the GEMMs could bid competitively to effect a switch of part of an issue on behalf of clients or themselves.

The DMO will consider further how such an auction might be conducted and would welcome the views of market participants. Before such an auction is scheduled, the authorities envisage details being included in the annual debt management report, discussed with market participants at the annual and quarterly consultation meetings and scheduled in the published quarterly auction calendar. Hence, **there is no intention on the part of the DMO to conduct such an operation in the 1998-99 financial year.** Prior to any such auction, the DMO would amend its operational market notice to outline how such an auction would be conducted.

4th August 1998