

# UK DEBT MANAGEMENT OFFICE

## Response to DMO Consultation Document on Switch Auctions and 'Cash-plus' Conversion Offers

*(Paragraph 8 and Annex A Bullet 3 revised on 28 November 2000)*

### Introduction

The DMO received 17 responses to the consultation document on switch auctions and 'cash-plus' conversions. Eight GEMMs, 8 investment funds or brokers and one individual responded. The DMO is grateful for the constructive feedback received from gilt market participants.

2. Respondents generally welcomed the concept of switch auctions as a portfolio and market management tool. There were no dissenting opinions on proceeding along roughly the lines outlined in the original consultation document of 7 July 1999, but some of the details of the proposals prompted debate. The DMO has adapted some of the features of switch auctions in the light of those comments. A summary of the final framework for the conduct of switch auctions and cash-plus conversion offers is given at Annex A.

3. In addition, the DMO has decided to introduce the parallel mechanism of a switch 'tap' to address smaller scale and shorter term demands for switches for which a full-scale switch auction is not appropriate (see paragraph 20 and Annex C).

4. Market reaction to the possibility of 'cash-plus' conversion offers was more mixed with some investors signalling their reluctance to accept cash in a conversion offer. Hence, the DMO has decided that it would hold a 'cash-plus' conversion offer only in exceptional circumstances when there was no other viable alternative (see paragraphs 21-23).



## Switch Auctions

### Discussion of Specific Proposals – Candidate Stocks

5. **Initial Proposal:** The DMO would not reduce stocks below £5bn (nominal) through a switch auction process. Some respondents agreed with the principle that stocks would remain above a fixed minimum size but others were concerned about stranding stocks at around £5.25bn in size with no possibility to switch out of the stock sufficiently to make it a possible conversion candidate. On reflection the DMO recognises that there may be extreme circumstances in which it could be beneficial to be able to reduce a stock through a switch auction to a sufficiently small size for it to be considered as a possible candidate for outright conversion. (The current maximum size of a stock for it to be considered for outright conversion is £5 billion nominal.) However, the general principle will remain that if a stock is built up through issuance well in excess of £5 billion nominal, then it will not subsequently be reduced to a rump issue through switch auctions and a conversion offer.

**Conclusion:** The minimum size of a stock after a switch auction will be £4.5 billion (nominal). (This will give the Treasury and DMO the flexibility to hold a switch auction and then convert out of a stock in exceptional circumstances.)

6. **Initial Proposal:** The ‘initial focus’ of switch auctions would be out of non-strippable issues. Those respondents who commented on this issue stressed the need for flexibility in holding a switch auction out of either strippable or non-strippable stocks. The DMO’s presumption remains that where there are two appropriate source stock candidates (one strippable and the other not) the non-strippable stock should have priority, other things being equal. However, strippable stocks could be source candidates for switch auctions when they are more appropriate than non-strippable alternatives.



**Conclusion:** Strippable stocks *could* be amongst the first switch auction source stocks, but priority will be given to switching non-strippable gilts when appropriate.

**7. Initial Proposal:** The DMO should not issue a new stock through the process of a switch auction. This proposition was almost unanimously supported.

**Conclusion:** New stocks will not be issued through switch auctions.

**8. Initial Proposal:** The DMO should not hold a switch auction into a stock that had been auctioned outright less than 21 days earlier. This proposal was not specifically commented upon (it was designed to give comfort to the market that the DMO would not decide to announce a switch into a newly auctioned stock at short notice). However one GEMM recommended that the DMO commit not to switch out of a stock that had been last issued less than 2½ years earlier to give some certainty about minimum issue size of recent benchmarks into the future. Given that we may wish to switch a three-year issue into a five-year, the DMO believes that eighteen months is a more appropriate fallow period since a stock was last auctioned.

**Conclusion:** The DMO will not hold a switch auction into a stock that has been auctioned outright less than 21 days earlier unless both such auctions had previously been announced in a regular DMO quarterly auction announcement. A stock will not be a source stock in a switch auction within eighteen months of its last auction date.

**9. Initial Proposal:** Switches between stocks would be restricted to pairs within the same maturity brackets of either 0-7 years, 7-15 years over 15 years. This was the most contentious issue of the original proposed features of switch auctions. There were two main areas of discussion raised by respondents:

- First, there were those who suggested that such restrictions were unnecessary and that the DMO should be more ambitious in the switches



it was prepared to consider (eg. short stocks into ultra-longs). Against this, there was support not to switch between maturity brackets from a similar number of other respondents. The main reasons given for maintaining the maturity bracket restriction were:

- stocks of widely differing maturity would be held by different classes of investor, requiring the GEMMs to take on more risk in intermediating between clients;
  - the DMO would be seen to be taking a firm yield curve 'view';
  - there would be too much forced rebalancing by index-tracking funds if the DMO could move stock at will across maturity brackets;
  - experience of switches involving large maturity mismatches by other sovereign debt managers had not been as successful as hoped.
- Second, there were those who were keen to keep maturity bracket restrictions but preferred the FT-SE index cut-off of 5 years rather than 7 years. This would permit switches out of stocks that were about to fall out of the 5-year index.

Although responses were divided, the DMO believes that the arguments for maturity band restrictions remain valid. In particular, the risks to the market of participating in a switch auction involving large maturity mismatches between stocks would be significantly greater.

10. On the 5- or 7-year cut-off, the DMO believes that the market's concerns can be met by adapting the maturity brackets. At the shorter end, the brackets can be adapted to overlap in the 5-year area to allow switching of ultra-shorts into a new 5+year benchmark, while permitting bonds about to fall below 5-years to be switched into the 10-year area if necessary. Similarly, at the longer end, the presumption remains that if a stock approaching 15 years' maturity is to be switched longer, this would be most usefully effected prior to the stock crossing this boundary. However, practical considerations may make it difficult to schedule sufficient switches prior to this event to satisfy market demand in some of the larger stocks. In such circumstances, it would be helpful for the DMO to be able to respond to expressed market demand by



being able to switch longer. This would be facilitated by a similar overlap of the maturity brackets.

**Conclusion:** The DMO will revise the maturity brackets within which switches can occur to 0-7 years; 5-15 years; and over 14 years.

**11. Initial Proposal: a switch auction would not be held out of a stock that was cheapest-to-deliver, or had a reasonable likelihood of becoming cheapest-to-deliver, for any of the listed gilt futures contracts.**

This proposal prompted little comment. One GEMM queried whether the DMO would add to a stock that was cheapest-to-deliver (CTD) via a switch auction. The DMO does not believe that this is a problem, given that a stock that was CTD could be auctioned outright in any case. Another GEMM suggested the DMO clarify whether the moratorium on not switching out of a stock that was CTD, or had a realistic prospect of becoming CTD, applied to futures contracts for which there was no open interest in any of the listed contracts. Given that there is no prospect of market disruption if such a switch auction was held, LIFFE is content for this element of the moratorium to be relaxed.

**Conclusion:** The DMO will be free to consider switch auctions into stocks that are CTD for a listed futures contract. Also, it will relax the moratorium on switching out of stocks that are CTD, or have a reasonable prospect of becoming CTD, for a futures contract for which there is no open interest in any of the listed contracts. However, as originally, the DMO will not consider holding a switch auction out of a stock that is CTD, or has a realistic prospect of becoming CTD, in a gilt futures contract for which there is open interest outstanding in any of the listed contracts.

## **Size and Frequency of Switch Auctions**

**12. Initial Proposal: switch auctions would be held with a possible maximum of £½-2 billion (nominal) of the source stock being available to be switched.** This proposal prompted a mixed response. Some respondents said that the maximum should be larger and others that the range was right but there needed to be a programme of switches scheduled



for some large stocks to prevent a squeeze at a switch auction by index-tracking funds.

13. One respondent suggested that a scaling rule should also be introduced to prevent one GEMM or client monopolising the whole auction and leaving other index-tracking funds short of the new stock. The DMO believes this to be a reasonable point, given that the same concerns for some index-trackers will apply to some switch auctions as well as outright auctions. However, this concern will not apply to every possible switch auction where index-tracking is not such a concern and a large amount of the source stock will remain.

**Conclusion:** The DMO will retain the £½ -2 billion (nominal) maximum range of the source stock for a switch auction. However, the DMO will be prepared to consider holding a number of switch auctions out of one stock over a period if necessary. The maximum range per auction will be reviewed in the light of experience. The DMO will also consider applying a maximum allocation limit at switch auctions (either 25% or 40%) on a case-by-case basis depending on the circumstances of the switch auction in question.

### **The Switch Auction Format and Process**

14. **Initial Proposal: Switch auctions would be pre-announced in the quarterly auction calendar.** The general consensus, with one dissenting opinion, was to agree that there is a need for transparency in the process.

**Conclusion:** The DMO will schedule switch auctions for the forthcoming quarter on the last working day of the preceding quarter, as part of its regular auction announcements.

15. **Initial Proposal: Bidding at switch auctions would be restricted to GEMMs only.** Most respondents were content with this arrangement, given that retail holders will be able to participate via brokers and that the material features of the source stock will be unaffected by a switch auction. The administrative complications that arise from a non-competitive direct retail bidding option are too onerous to justify one without clear evidence that investors were being seriously disadvantaged by the process.



**Conclusion:** Bidding at switch auctions will be confined to GEMMs.

16. **Initial Proposal:** The switch auction bidding process will take a competitive, multiple price format. The multiple price bidding aspect of the proposal prompted little comment with only one GEMM suggesting a uniform price format. Given the more restricted pool of potential bidders in a switch auction, the DMO feels that multiple price format will reduce the potential for a large bidder overly to influence the average clearing price.

**Conclusion:** Switch auctions will be conducted on a multiple price basis, where successful bidders will switch at the terms they bid. There will not be a non-competitive bidding facility for either GEMMs or investors.

17. **Initial Proposal:** The bidding format would be that GEMMs would bid a clean price for the new destination stock after the DMO had published a clean price of the existing source stock (at 10am) at which settlement would occur. The quantity bid would be a nominal value of the source stock. One or two GEMMs raised questions over this proposal for the auction format. In particular, there were concerns that the proposed 10am fixing of the price of the source stock would create a 'false' market in that stock until after the close of bidding. However, the majority of GEMMs, and all investors who mentioned this issue, specifically endorsed this format on the basis that it provided procedural clarity.

**Conclusion:** The DMO will retain the proposed bidding process: following the publication by the DMO of an indicative clean price of the existing source stock, GEMMs will bid a quantity of the source stock, in units of £1 million (nominal), and a clean price for the new destination stock to 2 decimal places. (A worked out example of the bidding and settlement process is attached at Annex B.)

18. **Initial Proposal:** The DMO would precommit to a maximum quantity of the source stock that would be available for switching via the auction but reserve the right not to allocate stock to bids well below levels prevailing in the market. This prompted concern from some respondents



that if index-tracking funds were not given a firm assurance as to how much stock was to be created, they would not participate directly in the auction but wait to see the result and then move longer to match the index.

19. As with outright auctions, the DMO needs to retain the option not to allot the switch auction in full if the bids are at too high a discount to the prevailing market level. However, as with outright auctions, if the switch auction is covered, this is an option that would only be exercised in extreme circumstances. The DMO's willingness to accept low bids is enhanced by the auction being conducted on a multiple price, rather than uniform price, format. As with a standard conversion offer, the switched source stock would be cancelled at, or soon after, the switch auction.

**Conclusion:** The DMO will retain the option not to allot stock to bids at a switch auction if they are at an excessive discount to prevailing market levels but stresses that this option would only be exercised in extreme circumstances.

## Switch Taps

20. A natural extension of the switch auction procedure is the option to hold switch taps. As with outright issues of stock by 'tap', this could be a valuable market management tool when a small-scale switch might ease market illiquidity in a particular stock or area of the curve. It would be deployed only in extreme market conditions at a time when the Exchequer did not need the cash receipts from an outright tap of the destination stock but did not warrant the lead time involved in consulting on, and holding, a switch auction. Annex C outlines the mechanism for the conduct of switch taps (together with a worked example) which keeps the mechanism as close to the established tap and switch auction processes as possible. The same constraints on the choice of switch tap stocks would apply as for switch auctions. There would be no non-competitive bidding facility.

## Cash-plus Conversion Offers





21. Respondents' reactions to the concept of cash-plus conversions were far more ambivalent than for switch auctions. They divided into three groups:

- Some positively welcomed the proposal, largely because it would reduce or eliminate the duration mismatch between the conversion candidates.
- Others preferred the existing method of conversion offers but were prepared to consider a cash element on a case-by-case basis, particularly if this was the only way an offer could be countenanced by the DMO.
- However a significant number of large investors were hostile to the concept due to many gilt funds having to be fully invested at all times. If they were allotted a significant proportion of cash unexpectedly, they would have to reinvest the cash immediately and be subject to reinvestment risk. In the DMO's view the likelihood is that if these holders were presented with a cash-plus conversion offer, they would be unlikely to accept the terms on offer unless they were considerably more generous than otherwise.

22. Of those respondents who expressed a view, the maximum suggested cash payout per £100 nominal of the source stock ranged from £5 to £25.

23. **Discussion:** Given the strongly adverse reaction to the prospect of receiving cash from some gilts investors, such conversions should be treated cautiously. Hence, whilst the cash-plus method can be retained as a 'last resort' option if there was no other way to effect a required conversion offer at an acceptable degree of risk to the Exchequer, stock-only offers are to be preferred whenever possible.

**Conclusion:** The DMO will retain cash-plus conversion offers as a last resort option to reduce the Exchequer's exposure to risk if this is the only way a necessary conversion offer can be considered. Any such offer would involve a maximum cash payout of £10 per £100 nominal of stock.



**UK Debt Management Office**

**13<sup>th</sup> September 1999**



## Annex A: Summary of the Framework for the Conduct of Switch Auctions

### Candidates Stocks:

- The DMO would not hold a switch auction for a stock that could reduce the amount in issue to below £4.5 billion (nominal).
- Other considerations being equal, priority will be given to switching non-strippable gilts when appropriate. However, strippable stocks *could* be amongst the first switch auction source stocks.
- Switch auctions would not be used as a means to issue entirely new stocks to the market. The DMO will not hold a switch auction into a stock that has been auctioned outright less than 21 days earlier unless both such auctions had previously been announced in a regular DMO quarterly auction announcement. A stock will not be converted out of within eighteen months of its last auction date.
- The DMO would envisage only holding switch auctions where both the respective stocks were within the same maturity bracket (0-7 years; 5-15 years; 14 years and over).
- The DMO commits not to hold a switch auction out of a stock that is cheapest-to-deliver (CTD), or has a realistic prospect of becoming CTD, in a gilt futures contract for which there is open interest outstanding. However, this moratorium will not apply if there is no open interest in any of the listed contracts of the gilt future. The DMO will be free to consider switch auctions into stocks that are CTD for a listed futures contract.

### Size of Switch Auctions:

- The maximum size range of a switch auction will be £½ -2 billion (nominal) of the source stock. However, a number of switch auctions out of one stock may be held over a period if necessary. A maximum allocation limit at switch auctions may be considered on a case-by-case basis depending on the circumstances of the switch auction in question.

### Timetable for the Conduct of a Switch Auction

- The possibility and range for the potential size of switch auctions would be specified in the Treasury's annual remit to the DMO published in the Debt Management Report. Also, if applicable, the Remit would state how switch auctions were to be integrated into the overall portfolio strategy of the Government, if relevant.
- Unlike conversion offers, however, the DMO proposes that it would preannounce the auction and settlement date(s) of switch auction(s) in the



quarterly auction calendar, including the stocks involved. This would follow the usual consultation with market participants at the relevant quarterly meetings. As with standard auctions, switch auctions would normally be scheduled for Wednesday mornings.

- On the Tuesday of the week prior to the switch auction, a press notice would be issued confirming the details of the switch auction, settlement details, maximum size and whether any limit on maximum allocation will apply. However, given the uncertainty over the amount of the destination stock to be created as a result of the switch auction, this stock would not be created and listed until settlement (as with a standard conversion offer). Consequently, a formal 'when-issued' market in the new stock would not exist.
- On the switch auction day:
  - At 10am, the DMO would publish on its wire service screens an indicative clean price for the source stock involved in the switch auction.
  - Between 10.00 and 10.20am, Gilt-edged Market-Makers (GEMMs) would be allowed an unlimited number of telephone bids to switch a nominal quantity of the source stock into the destination stock at the clean price of the destination stock (given the indicated 10am clean price of the source stock).
  - Between 10.20 and 10.30am, GEMMs would be allowed up to 10 telephone bids to switch a nominal quantity of the source stock into the destination stock at the clean price of the destination stock (given the indicated 10am clean price of the source stock).
  - By 11.10am, the DMO would aim to publish the results of the switch auction. These would include the highest, lowest and average clean prices of the destination stock which were successful, and their dirty price ratio equivalents; the percentage allotted of the bids at the lowest accepted price; the nominal amount of the source stock that would be switched; and the nominal amount of the destination stock that will be created as a result.
- Settlement of the switch auction would normally occur the following working day unless specified otherwise.



## ANNEX B: Worked example of a switch auction bid and settlement

As a worked example, assume that the last conversion of 9½% Conversion Stock 2004 (9HCV04) into 5% Treasury Stock 2004 (5TY04) had been conducted as a switch auction on 26 July 1999 with the following parameters:

- Maximum nominal amount of 9HCV04 for switching: £1,000 million.
- Clean price fixed by the DMO for 9HCV04: £117.70 (dirty price for next day settlement - £120.113934).
- Accrued interest for 5TY04 for next day settlement: £0.464481 per £100 (nominal).
- Individual bids to comprise the following pairing: clean price for 5TY04 and nominal quantity of 9HCV04 (in £1 million units) offered.

Assume that a bid was made as follows:

£97.79 clean price for 5TY04, £10 million (nominal) of 9HCV04 offered.

### **Case 1: Bid is successful with no scaling required (ie. the clean price bid for 5TY04 is greater than the lowest accepted price)**

The nominal quantity of 5TY04 allocated is derived as follows:

$$\begin{aligned} (1) \text{ Effective dirty price ratio} &= \text{dirty price of 9HCV04} / \text{dirty price of 5TY04} \\ &= £120.113934 / [£97.79 + 0.464481] \\ &= 1.2225 \text{ (when rounded to 4 decimal places)} \end{aligned}$$

$$\begin{aligned} (2) \text{ Nominal 5TY04 allocated} &= (1) * \text{Nominal 9HCV04 offered} \\ &= 1.2225 * £10,000,000 \\ &= £12,225,000 \end{aligned}$$

### **Case 2: Bid is successful but scaling of 60% is applied (ie the clean price bid for 5TY04 is equal to the lowest accepted price)**

The nominal quantity of 5TY04 allocated is derived as follows:

$$\begin{aligned} (1) \text{ Effective dirty price ratio} &= \text{dirty price of 9HCV04} / \text{dirty price of 5TY04} \\ &= £120.113934 / [£97.79 + 0.464481] \\ &= 1.2225 \text{ (when rounded to 4 decimal places)} \end{aligned}$$

$$\begin{aligned} (2) \text{ Nominal 5TY04 allocated} &= (1) * \text{Nominal 9HCV04 offered} * \text{Scaling factor} \\ &= 1.2225 * £10,000,000 * 0.6 \\ &= £7,335,000 \end{aligned}$$



## Annex C: Methodology for Switch Taps

The choice of switch tap stocks would be constrained by the same considerations as for switch auctions. However, a switch tap would be announced at short notice and would be limited to a maximum of £0.5 billion (nominal) of the source stock. The tap result and allocation would be calculated on a uniform price basis. The DMO would not publish a minimum price for the destination stock but would reserve the right not to allot bids if they were at too great a discount to prevailing market terms. Given the greater complications of bidding at a switch tap, the DMO would give more notice than for an outright tap of stock.

### Timetable

#### *Day preceding the tap:*

**3.30pm:** DMO announces intention to switch tap including the source gilt against which the switch will occur; the destination stock; and the maximum nominal amount of the source gilt allowable for switching. DMO has the discretion to impose a per GEMM allocation limit.

#### *Day of the switch tap:*

**10.15am:** DMO announces clean price of the source stock at which it will settle the switch.

**10.45am:** Opening of bidding by GEMMs. Bids comprise nominal quantities offered of the source stock (in units of £1 million), and the clean prices bid for the destination stock (to 2 decimal places). GEMMs would be limited to a maximum of six bids.

**10.50am:** Close of bidding.

**As soon as practicable after 10.50am:** Publication of tap results. The DMO would publish on the screens the nominal amount of the source gilt offered and the nominal amount successfully switched, the nominal quantity of the destination gilt created, the new amounts outstanding following the switch tap, and the striking (clean) price of the destination gilt. Settlement and creation of the new stock would be next day. Source stock that was successfully switched would be cancelled at the same time as the new stock was created.

In the tap process, the bids would be ranked as usual. The bids would be filled from the top but the striking price would be calculated on a uniform price basis (as with outright taps). The nominal quantities of the destination stock



created and allocated to each GEMM would be calculated as the ratio of the dirty prices of the two gilts, which would be rounded to 4 decimal places as with switch auction dirty price ratios, multiplied by the nominal quantity of the source stock.

If the switch tap attracted insufficient demand to clear (at acceptable prices), the remainder would not be created.

### Switch taps: worked example

As a worked example, assume that the conversion offer operation of 9½% Conversion Stock 2004 (9HCV04) into 5% Treasury Stock 2004 (5TY04) was conducted as a switch tap on 26 July 1999 with the following parameters:

- Maximum nominal amount of 9HCV04 for switching: £300 million
- Clean price fixed by the DMO for 9HCV04: £117.70 (dirty price for next day settlement is £120.113934)
- Accrued interest for 5TY04 for next day settlement: £0.464481 per £100 nominal
- Individual bids must be made according to the following pairing: clean price for 5TY04 and nominal quantity of 9HCV04 (in £1 million units) offered.

Assume that a bid is made as follows:

£97.79 clean price for 5TY04, £10 million nominal of 9HCV04 offered.

**Case 1: Allotment price is £97.50. The bid is successful with no scaling required (ie the clean price bid for 5TY04 is greater than the allotment price)**

The nominal quantity of 5TY04 allocated is derived as follows:

$$\begin{aligned} (1) \text{ Effective dirty price ratio} &= \text{dirty price of 9HCV04} / \text{allotment dirty price of 5TY04} \\ &= £120.113934 / [£97.50 + 0.464481] \\ &= £1.2261 \text{ (when rounded to 4 decimal places)} \end{aligned}$$

$$\begin{aligned} (2) \text{ Nominal 5TY04 allocated} &= (1) * \text{Nominal 9HCV04 offered} \\ &= 1.2261 * £10,000,000 \\ &= £12,261,000 \end{aligned}$$

**Case 2: Allotment price is £97.79. Bid is successful but scaling of 60% is applied (ie the clean price bid for 5TY04 is equal to the allotment price)**

The nominal quantity of 5TY04 allocated is derived as follows:



$$\begin{aligned} (1) \text{ Effective dirty price ratio} &= \text{dirty price of 9HCV04} / \text{allotment dirty price of} \\ &\quad \text{5TY04} \\ &= \text{£}120.113934 / [\text{£}97.79 + 0.464481] \\ &= 1.2225 \text{ (when rounded to 4 decimal places)} \end{aligned}$$

$$\begin{aligned} (2) \text{ Nominal 5TY04 allocated} &= (1) * \text{Nominal 9HCV04 offered} * \text{Scaling factor} \\ &= 1.2225 * \text{£}10,000,000 * 0.6 \\ &= \text{£}7,335,000 \end{aligned}$$

