Strips and new instruments in the Gilt-Edged Market

A consultative paper by the Bank of England

BANK OF ENGLAND

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STRIPS AND NEW INSTRUMENTS IN THE GILT-EDGED MARKET

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This paper accompanies a parallel consultative document from the Inland Revenue on the principles of a possible far-reaching reform of the taxation of returns from gilts and other bonds. One important consequence of the proposed reform is that it would make possible the introduction of an official facility for stripping gilts, so that the entitlement to individual coupon payments and principal repayments could be separately held and traded. Fundamental tax reform is a precondition for such a facility, and would also open the door for other possible innovations in the range of gilt-edged instruments.

The Bank of England is therefore consulting the market on whether there is demand for gilt strips and, if so, how best to provide such a facility or other innovations made possible by the proposed tax reform.

Comments on this consultative paper are invited and should be sent to:

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Comments should be received by 30 June 1995.

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I Introduction

1 It is in the interests of the government as issuer of gilt-edged securities and of the market as a whole that the tax regime applying to gilts should minimise distortions to trading and impediments to innovation. But in fact different types of participant in the gilt market are currently subject to different tax treatments, and in many cases coupon and capital gains or losses are taxed differently. In particular, at present capital gains from a gilt are not taxable and capital losses are not relievable. The proposals set out in the parallel Inland Revenue consultative document would reduce these differences by taxing the total return from a gilt: returns from coupon receipts and capital appreciation would be treated in the same way in the hands of UK tax payers.[1]

2 The proposed reform would, in the Bank's view, promote the efficiency of the market, and thus help to reduce the government's funding costs. It would reduce tax distortions to the yield curve, such as the way in which high coupon gilts trade at a higher pre-tax yield than low coupon gilts. It would allow many market participants, including the retail sector, a wider effective choice of gilts. And it would remove obstacles to developments which could help to deepen the liquidity and efficiency of the gilt market.

3 One such development would be stripping[2]. This is the process of separating a standard coupon bond into its constituent interest and principal payments, so that they can be separately held or traded as zero coupon instruments. For example, a ten year bond could be separated into 21 zero coupon bonds, one from the principal repayment and twenty from the semi-annual coupons; coupon payments due, say, 6, 12, 18 etc months after issue would, if the underlying bond were stripped, become 6, 12, 18 etc month zero coupon bonds. Subject to tax effects, the cash flows on the bundle of zero coupon strips would be identical to the cash flows on the unstripped bond.

4 The distinguishing characteristics of an official gilt strips facility would be that the coupon and principal strips would remain direct obligations of the government, that the market would be able to reconstitute a coupon gilt from a bundle of strips, and that the processes of stripping and reconstitution would be carried out within the official settlement system. The Bank believes that the provision of such a facility would have the potential to reduce the government's funding costs by enabling market participants to satisfy their desired pattern of cash flows more exactly.

5 However, for the reasons set out in Section II below, the introduction of gilt strips under the current tax regime - or any minor modification of it - is effectively impossible, not least because it would, perversely, add to tax distortions and increase the scope for tax avoidance trading strategies. As well as more generally promoting efficiency, the proposals in the Revenue paper would overcome these difficulties by taxing returns from strips and unstripped gilts on the same basis.

6 The Bank is therefore consulting on whether there is in fact demand for the new facilities and instruments that the proposed tax reform would make possible and, if so, how they would best be provided in the interests both of the government as issuer and of the market as a whole.

7 The main issues are set out in the following three sections: Section II sets out the obstacles to introducing strips within the current tax regime; Section III summarises in broad terms how an official strips facility might work; and Section IV addresses whether it might help to meet market demand. Section V briefly lists some of the detailed issues which would need to be considered if it was decided to set up an official strips facility.

1 In the case of index-linked gilts, the Revenue proposes a basis of taxing total real returns designed to leave unaffected their inflation-hedging qualities.

2 Originally "stripping" referred to the practice of physically stripping coupons from a bearer bond certificate. As the US market developed, the term "STRIPS" was employed to stand for Separate Trading of Registered Interest and Principal of Securities.

II The current tax obstacles to strips and other instruments

8 There would be three areas of difficulty with introducing strips under the current tax arrangements.

9 The first would arise from the treatment of strips under the current deep discount rules. Strips would be zero coupon bonds and so most potential holders would be taxed on the return accruing over the period a strip was held, calculated on the basis of the discount at issue. If the present rules applied without amendment, tax would become payable on the accrued income only at sale or redemption. In most market conditions this would give UK taxpayers a strong incentive to hold gilts in stripped form, as tax would be payable annually on coupon income if the same bond was held in unstripped form.

10 At the very least, therefore, the introduction of an official strips facility would require reform in order to tax all strip returns on an annual basis in common with unstripped gilts. There is a possible model for this in the rules which currently apply where coupon bonds are stripped once-and-for-all by a special purpose vehicle.

11 Even then, however, there would still be an incentive to strip gilts standing above par. The zero coupon strips would be created at a discount to par which in aggregate was lower than the outstanding coupons on the unstripped gilt. Less tax would therefore be payable on the return from the strips than on the return from the unstripped gilt, as the coupon income would be taxed but the capital losses as it approached redemption would not qualify for relief. Conversely, there would be an incentive to hold gilts standing below par in unstripped form.

12 Similar problems would arise with index-linked gilts because, under the current deep gain rules, the indexed uplift on a principal strip would be taxable, whereas the uplift on a principal repayment of an unstripped index-linked gilt is not taxed. Taxable investors would therefore have an incentive to hold index-linked gilts in unstripped form, whether standing above or below index-adjusted par.

13 Secondly, there would be a risk of liquidity being seriously impaired. The return from each strip (or zero issue) would, as described above, currently be taxed on the basis of the discount at issue, which would depend on the market value of the underlying unstripped gilt at the time the strip was created. Thus in practice a strip would be fungible only with otherwise similar strips created with exactly the same original yield.

14 Thirdly, coupon strips, if legally distinct registered gilts, would not be subject to the withholding tax arrangements currently applying to unstripped bonds. An unstripped gilt would therefore trade on a different pre-tax basis from the sum of its constituent strips, and investors liable to withholding tax would thus have an incentive to hold gilts in stripped form.

15 The proposals in the Revenue paper would overcome these problems, opening the way to strips and other possible instruments. The first would fall away as total returns (coupon and capital) would be taxed annually, on an accruals or mark-to-market basis (except for small investors). The second would not arise as the tax charge on strips would no longer depend on the discount at issue. And options are identified in the Revenue paper for solving the third problem, including not applying withholding tax to coupon payments on strippable gilt issues; one route, on which the Revenue is consulting, is therefore for interest to be paid gross on strippable gilts, whether held in stripped or unstripped form.

III Outline of a possible official gilt strips facility

16 As explained in Section I, an official gilt strips facility would enable investors to exchange a coupon gilt for a series of zero coupon strips matching exactly the cashflows of the parent bond; or, conversely, to exchange an appropriate bundle of strips for a coupon gilt. Gilt strips would be direct obligations of the UK government and the Bank believes that they would therefore need to be registered securities in their own right, as is the case in other government bond markets with strips. Stripping would be at the option of the holder. No one would be obliged to use the facility; and if some holdings of an issue were stripped, the rest of that issue would continue to trade unstripped. A strippable coupon gilt with a maturity of, say, 10 years would be strippable into 20 coupon strips and 1 principal strip.

(a) **Strippable gilts**

17 The Bank would want to consider what steps could usefully be taken to promote the liquidity of strips given that, taken on its own, a single gilt issue would not generate a significant volume of coupon strips; for example, a £5bn (nominal) issue of a stock with an 8% coupon would produce (semi-annual) coupon strips of only £200mn (nominal) each, with a cash market price (given the zero coupon) which was substantially lower. Most obviously, all coupon strips maturing on the same date would need to be fungible - that is coupons payable on the same date stripped from different underlying gilts would be completely interchangeable; and the coupon dates of strippable gilt issues could be aligned in order to build up scope for reasonably liquid coupon strips.[1]

18 Whether it would be possible for coupon and principal strips also to be fungible will depend on the outcome of the Revenue's consultation on how, and whether, withholding tax should apply to strippable gilts. But principal and coupon strips are not fungible in other government bond markets with strip facilities, and the Bank therefore seeks views on whether it is necessary, or even desirable, for them to be fungible.

19 In addition, it would be for consideration whether to make any existing gilt issues strippable, as well as new issues. Three existing benchmark issues - 8% Treasury 2000, 8 1/2% Treasury 2005 and 8% Treasury 2015 - have aligned coupon dates and so might in principle lend themselves to stripping. If there was sufficient market demand, other existing issues could be made strippable on a selective basis, possibly through conversion offers designed to align coupon dates. There might also be, say, two sets of aligned coupon dates. In selecting issues to be made strippable, however, it would be necessary to consider with the market (end-investors and intermediaries) whether stripping might reduce the liquidity of the part of the underlying gilt remaining in coupon-bearing form. In addition, if strippable issues were not subject to withholding tax, it would be necessary to consider the cash flow implications for the Exchequer when deciding which issues - new or existing - to make strippable.

20 The Bank seeks views on these questions, and more generally on how extensive a range of existing conventional issues it would be desirable to make strippable; on whether interest in stripping is likely to be concentrated on particular maturity areas - for example, mainly long-dated issues, or whether there would also be demand for short maturity gilts to be stripped; and on whether it would be desirable for any non-standard gilts to be strippable.

21 The Bank also seeks views on whether there would be demand for strips of index-linked gilts; on whether the existing index-linked gilt issues would be sufficiently large to be stripped; and on the practicalities of making index-linked issues strippable.

(b) **Trading gilt strips**

22 The Bank envisages that coupon and principal strips would be freely tradeable (under Stock Exchange rules) and that the GEMMs would make markets in strips as part of their general market-making obligation, though it would be recognised that the quality of service provided in strips could possibly be affected by the size of the individual stock issues. The service provided by the gilt IDBs, acting as matched principals between GEMMs, could extend to strips.

23 Arbitrage would tend to equalise the market value of an unstripped gilt and the aggregate market value of its constituent strips. The planned

1 For example, if strippable gilts paid coupons on 15 March and 15 September (dates picked randomly) the register would recognise a 15 March zero coupon gilt issue and a 15 September zero coupon gilt issue for each year up to and including the final year of the longest maturity gilt which was strippable.

introduction of an open gilt repo market in January 1996 should assist this process as it would be possible for anyone to repo - and thus to short and borrow - coupon and principal strips as well as the parent coupon bonds. Lending and borrowing of strips would also be possible. And the SEMBs' intermediation service in gilt borrowing and lending could extend to strips.

(c) The basic mechanics of stripping and reconstituting gilts

24 It would in addition be important that the mechanism for stripping and reconstituting gilts was secure and efficient. The Bank believes that this could best be achieved by offering the facility via GEMMs for gilts held in the Central Gilts Office book entry system; some 93% of outstanding gilts by nominal value are currently held in CGO. It would be for consideration whether, once stripped, the resulting zero coupon bonds could be held outside CGO; if so, they would have to be re-entered into CGO if reconstitution were subsequently desired.

25 If a strips facility were to be established, the Bank would consult on the technical details, possibly via market working parties along the lines used for developing gilt repo. A number of detailed issues are identified in Section V below.

IV Potential demand for gilt strips and other new instruments

26 Whether it would make sense to establish an official gilt strips facility depends on the potential attraction to investors and traders of the availability of zero coupon paper, which offers the most basic cash flow structure.

27 Through investing in a portfolio of zero coupon paper, an investor could in principle more easily achieve a desired pattern of cashflows. This might be attractive to a wide range of market participants: anyone wanting to avoid reinvestment risk; an investor seeking a specific set of cashflows; overseas investors familiar with strips in other markets, who might seek exposure to gilts via an instrument where a currency hedge was easier to effect; and retail investors saving for outlays due to start a number of years ahead. In addition, market participants would be able to adjust the average duration[1] of their portfolio more precisely than now; at current yields, the duration of the principal strip of the longest conventional gilt would be over twice that of the underlying bond.[2] This would on the face of it assist those long-term investment institutions with demand for long duration assets to match their liabilities.

28 More specifically, new patterns of demand for gilts seem recently to have been emerging in the pension fund and insurance company sectors, reflecting both demographic and institutional factors. First, an increasing number of pension funds have reached or are approaching maturity, or have closed on account of corporate changes or company closures. Second, the Pensions Bill is introducing a Minimum Funding Requirement for pension funds, and also a requirement that the future benefits to which a member is entitled increase at a rate matching the lower of the increase in the RPI or 5%. Against this background, some actuaries, other advisers and investment managers have been advising funds to increase their holdings of fixed income securities. Whether or not reflecting these factors, pension fund investment in gilts has recently picked up quite markedly.

29 Some market participants suggest that this interest might continue and also that there might be demand for new types of gilt-edged instrument issued by the government. Three basic types have been mentioned: deferred payment gilts, which would not pay any coupon income for a set period; annuities, which would pay a stream of coupon income but not a larger principal repayment at maturity; and limited price indexation (LPI) gilts, which would have coupon and principal indexed to the lower of the increase in the RPI or 5%. A number of hybrid instruments have been mooted, including deferred annuities, indexed annuities and deferred LPI annuities; the desired length of deferral of coupon income seems to vary according to a fund's particular circumstances.

30 The proposed tax reforms would make it technically possible for the government to issue any of these types of gilts, or indeed a number of others. The advantage of doing so would be in directly meeting specific market demand. If end investors were prepared to pay a premium for such instruments, this could reduce the government's funding costs, depending on the effect on demand for standard gilt issuance. There could, however, be disadvantages. The extent and spread of this demand - as well as its durability - is very difficult to judge, so it is not clear that the government could be confident of achieving fair value. In addition, individual issues might be of relatively limited size, closely-held and only infrequently traded, which might impair liquidity. The risk of fragmenting liquidity would be particularly important in the index-linked sector, which the authorities are keen to promote. The Bank seeks views on whether new instruments of this kind could usefully be issued.

31 An official strips facility could enable demand for such instruments to be satisfied indirectly, while avoiding the counterparty credit exposures entailed by private sector stripping schemes. For example, strips would enable an investor to put together a cashflow profile equivalent to a deferred payment or annuity gilt: a deferred payment gilt could be synthesised by

1 The duration of a bond is the weighted average of the time to each of its cash flows, where the weights are the present values of each of the payments as a proportion of the total present value of all the cash flows. Modified duration is an adaptation of this to give the price sensitivity of a bond to changes in its yield.

2 Strips would also have greater 'convexity' than a coupon bond with the same maturity; that is, if yields fall by a given amount, the rise in the price of strips will be proportionately greater than the fall which would result from an equivalent rise in yields. Convexity is, broadly, the rate at which the price sensitivity of a bond with respect to yield changes with yield.

purchasing a coupon gilt, converting it into strips via CGO and selling coupon strips from the years up to the date on which the investor wanted the deferred payments to commence; and an annuity gilt could be acquired by similarly stripping a coupon gilt but selling the principal strip. Alternatively, the desired cashflows could be obtained by purchasing strips in the market.

32 If index-linked gilts were strippable, desired cashflow patterns guaranteeing real returns could be obtained. However, stripping would not make LPI gilts directly available, although as now the private sector could, in theory, synthesise similar products; for example, a holder of index-linked gilts could enter into a contract for differences under which the right to cashflows arising from any excess of RPI inflation over 5% was transferred to the counterparty. In addition, the proposed tax reform would make it easier than now for the private sector to issue and strip LPI bonds.[1]

33 The Bank therefore seeks views on whether an official gilt strips facility along the lines described in the previous section would meet with market demand, including helping to satisfy demand for new types of gilt instrument. The Bank also seeks views on whether there would remain additional demand for tailored instruments delivering specific cash flows which could not be satisfied by a strips facility and, if so, how such instruments should be structured.

34 The proposed tax reforms would also make it feasible for the government to issue zero coupon gilts directly. The Bank seeks views on whether there would be demand for such direct issuance or whether demand for zero coupon paper would be better met, at least initially, by allowing the market to strip standard coupon-paying gilts, which would enable the authorities to monitor the nature and extent of demand for zero coupon paper.

1 LPI bonds at present fall under the deep gain regime. The Revenue paper proposes that they should be taxed on a total return basis, with the effect that issuers would be able to deduct the cost of the indexed element in computing profits.

V Detailed issues concerning strips

35 A range of detailed issues would need to be addressed if a gilt strips facility were established. Those identified by the Bank include the following:

(a) **Legislative changes**

36 A number of legislative changes would be needed, including to constitute strips as transferable securities within the terms of the Stock Transfer Act and to make any existing issues strippable.

(b) **Stock Exchange rules**

37 The rules of the LSE would need amendment to recognise strips as gilt-edged securities. In addition, ISIN or SEDOL numbers would need to be allocated to all coupon strips maturing on the same day and to each principal strip.

(c) **Settlement issues**

38 Both the CGO system and the gilt-edged register would need to be able to recognise the new zero coupon gilts which could be created from those bonds made strippable and also the transfers consequent upon stripping and reconstitution. With aligned coupon dates, this need not entail very many extra new registered gilts - if, say, a 20 year gilt were the longest strippable issue, the number of new zero coupon gilts would be 41 plus the number of other strippable issues (to take account of each principal strip); the number would be greater if there were, say, two sets of aligned coupon dates.

39 The Bank would aim for CGO to be able to offer a real-time stripping and reconstitution facility, though this would be likely to require further development work on the CGO system: this is already under active consideration.

40 The CGO service would need to recoup the cost of providing a stripping service. This could be done by a per item charge for each stripping/reconstituting transaction; or by an appropriate adjustment to the overall CGO tariff. The Bank seeks views on these options and any others.

41 Further technical issues would arise. First, it would be necessary to determine what should be the minimum denomination in which gilts could be held in stripped form; gilts in unstripped form are transferred in multiples of one penny. Secondly, since coupon strips would be registered securities in their own right, they would, if held in stripped form to maturity, be repaid under the procedures for a redemption rather than those for interest payments. There are currently different final dates for recording transfers of rights to dividend and redemption payments[1]; the Bank would consider aligning the length of these periods so that coupon bonds did not trade on a different basis from constituent coupon strips. The Bank is already separately reviewing the extent to which the length of the ex-dividend period can be reduced.

(d) **Prudential issues**

42 The regulators of firms dealing in strips would need to ensure that their capital adequacy requirements captured the risks of holding and trading zero coupon securities and that firms had in place the necessary systems and controls. For UK and other European banks and investment firms, including gilt-edged market makers, implementation of the EU Capital Adequacy Directive with effect from 1996 will introduce minimum capital requirements to cover the market risks and counterparty credit risks arising on strips business. As set out in the detailed proposals which have already been circulated by the Bank and other supervisors and regulators, firms will be able to choose whether to apply capital requirements based on the duration of their positions, including strips, or to use a maturity ladder approach under which strips would be treated in the same way as other low coupon securities. Any questions concerning the detailed prudential treatment of strips should be directed to the appropriate supervisory or regulatory body.

(e) **Futures market issues**

43 It would be necessary to consider, with the London International Financial Futures And Options Exchange and others, whether bundles of strips could be delivered into gilt futures (or other derivative) contracts.

(f) **Market information**

44 The Bank would envisage publishing regular information on the use made of a stripping and reconstitution facility, including how much of a gilt was stripped. It would consult on the details, including on any information which the Bank might want to collect.

1 Transfers of a gilt are usually made ex-dividend from up to 37 days before the payment date of that dividend. Transfers of a right to proceeds of a maturing gilt are not accepted after up to 30 days before redemption.

V (continued)

(g) **Bank operations in gilt strips**

45 If stripping were introduced, the Bank would consider whether to accept gilt strips, alongside standard coupon gilts, as collateral in its twice-monthly gilt repo and daily late lending operations, subject to margin arrangements which reflected the duration of the strips. The Bank would monitor closely the use of a strips facility, and would do whatever it could to facilitate market liquidity and efficiency. The Bank would consider whether to re-open strippable issues with a view to increasing the volume of strippable gilts, or if necessary to alleviate potential squeezes. The Bank seeks views on whether it would be beneficial to market efficiency for it to reserve the right to tap particular strips in order to alleviate potential squeezes.

46 The Bank invites comment on all issues identified in this section and on any other technical issues which the introduction of stripping would raise.

VI The way forward

47 This paper has set out proposals for the possible development of an official gilt strips facility, provided via CGO, if the tax reforms covered in the parallel Inland Revenue consultative document are implemented. The Bank invites comment on all the issues in this paper to the Head of Gilt-Edged and Money Markets Division by Friday 30 June. If a strips facility is established, the Bank will work closely with the market on its design and detailed implementation.

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