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Accrual Recording of Interest: Is there a Case for Revising the *1993 SNA*?

Prepared by the Statistics Department
International Monetary Fund

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Discussion Paper

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I. INTRODUCTION

1. What is interest, and how should it be recorded in statistics? To the unsuspecting user of national accounts data or the Fund's statistics, this question is not very difficult to answer. However, things are not always what they seem.

2. Opinions differ widely on the question of whether, in statistical systems that record on a full accrual basis, the value of interest depends on changing market conditions after the moment the interest-bearing financial instruments have been created. In the course of the revision process that led to the *1993 System of National Accounts* (*1993 SNA*) it was decided that such should not be the case and that, instead, the originally contracted conditions should be decisive. However, the fifth edition of the *Balance of Payments Manual* (*BPM5*), written in tandem with the *1993 SNA* with the objective of achieving maximum consistency, seems less resolute. Later Fund documents that aimed at providing guidance to balance of payments compilers diverged from the *1993 SNA* recommendation.[1] At about the same time, several authors started arguing for a revision of the *1993 SNA* in this respect.[2] Discussion notes issued by accounting boards about the same time pointed in a similar direction. On the other hand, more recent expert meetings held at the OECD, EUROSTAT, and the Fund show a majority view in favor of sticking to the guideline of the *1993 SNA*.

3. Three basic approaches have emerged, which have come to be labeled the debtor approach, the acquisition approach, and the creditor approach. This labeling is based on the view that debtors would exclusively be interested in the initial contract because they would only have to honor contractually agreed coupon payments (if any) and, at maturity, the redemption value, no matter the development of market interest rates and the market value of the security. On the other hand, creditors would be more interested in prevailing market conditions either at the moment of purchase (the acquisition approach) or on a continuing basis (the creditor approach). Although the validity of this labeling is arguable (for instance, one may argue that a debtor would also be interested in opportunities to improve his/her debt position if short term movements in the market allow, while some creditors may just take the long term view and wait for final redemption), this labeling has achieved some currency, and we use it in this paper to refer to the various approaches.

4. This paper first discusses in Section II the debtor approach as reflected in the *1993 SNA,* then in Section III the acquisition approach as reflected in the *BPM5,* and, subsequently, in Section IV the creditor approach. Each of these sections also includes a commentary. The concluding section V argues that the *1993 SNA* decision should be retained because the proposed alternatives conflict with the *1993 SNA* transaction concept and, furthermore, upset the basic distinction between volume changes and price changes.

II. THE DEBTOR APPROACH

A. Introduction

5. As mentioned, the label "debtor approach" has gained currency in describing the approach to the accrual recording of interest on the basis of conditions prevailing at the time of issue of a bond or bill. Thus, bearing in mind the caveats on this labeling made earlier, the term debtor approach may be viewed as best reflecting the position of *1993 SNA* because that publication also takes the originally contracted conditions at the time of issue as decisive. Although the debtor approach concerns both the value of the interest-bearing securities and the interest on those securities, this discussion is centered on the latter. This section first discusses the concept of interest as reflected in the *1993 SNA*, then discusses the rules of recording, and, finally, presents some comments on both.

B. The concept of interest

6. Paragraph 7.93 in the *1993 SNA* states that interest is a form of property income receivable by the owners of certain kinds of financial assets, namely, Deposits, Securities other than Shares, Loans, and Other accounts receivable. It also provides the following definition of interest:

> "Under the terms of the financial instrument agreed between them[,] interest is the amount that the debtor becomes liable to pay to the creditor over a given period of time without reducing the amount of principal outstanding."

7. Furthermore, the *1993 SNA* explains that interest may be a determined sum of money or percentage of the principal outstanding (the amount of the debtor's liability to the creditor at any point of time). If some or all of the interest accruing to the creditor is not paid during the period in question, it should either be added to the amount of the principal outstanding or it may constitute an additional, separate liability incurred by the debtor.

8. In general, interest on deposits, loans, and accounts receivable and payable is determined by applying the relevant rate of interest to the principal outstanding at each point in time throughout the accounting period. (It may be noted that the *1993 SNA*, paragraph 7.96, does not specify what the "relevant" rate of interest is.) Interest payable

over the life of bills and similar instruments is the difference between their face value and the price paid at the time of issue. Interest on bonds and debentures consists of two elements:

- coupon payments;
- the difference between face value or redemption price on the one hand, and issue price on the other.

9. Changes in bond prices attributable to changes in market rates of interest constitute price and not quantum changes. An increase in interest rates generates a nominal holding gain for the issuer of the bond and an equal nominal holding loss for the holder of the bond, and vice versa in the case of fall in interest rates (see *1993 SNA*, paragraph 12.111).

C. The recording of interest

10. The *1993 SNA* records all flows on an accrual basis, that is, at the time economic value is created, transformed, exchanged, transferred or extinguished. So, in principle, interest should be recorded in the period during which the amounts payable are built up. Any accrued interest liability is recorded in the balance sheet under the same category as the original financial instrument.

11. An apparent simplification of the full accrual accounting rules is found in paragraph 7.100 of the *1993 SNA*, which says that, concerning bonds and debentures, the amounts of the fixed or variable money incomes or coupon payments due for payment within the accounting period are treated as interest payable and receivable. However, the *1993 SNA* explicitly states that interest consisting of the difference between face value and issue price must be distributed over accounting periods. There is no prescribed method for this attribution, but the *1993 SNA* indicates that a possible method is to assume interest is credited at the end of each year at an annual rate that is constant over the life of the bond. The counterpart entries for the interest thus accrued are recorded in the financial accounts as additional investment.

D. Commentary

12. The classification as `interest' of what could be called the `redemption margin' (the difference between the redemption price and the issue price of securities other than shares) over and above any coupon payments conforms with the points of view of the market parties that created the financial instrument.

13. The *1993 SNA* is rather cautious on the allocation of the redemption margin over accounting periods. This seems justified, as there may be a difference in long-term and short-term interest rates. Nevertheless, the assumption of a constant interest rate over the whole period appears the most pragmatic solution.

14. Various commentators have pointed out that the treatment recommended in the *1993*

SNA leads to very complicated entries if, during the life of the instrument, the market applies discount rates that differ from the rates used at inception to determine the present value of the payments the debtor has undertaken to make. Possible causes for such differences include changes in the general interest rate, changes in forward exchange rates, and changes in the creditworthiness of the debtor. After such changes, the accrual of interest according to the method recommended in the *1993 SNA* (using the original rate) will not be reflected by an equivalent increment in the market value of the instrument (which is based on the market discount rate). To secure the consistency in the accounts, compensatory holding gains or losses should be recorded in the revaluation accounts. Because interest accrues continuously, the compensatory entries in the revaluation accounts should also be made on a continuous basis, even if the market discount rate remains stable after an initial shift.

15. Holding gains and losses in the value of an instrument as a result of changing market conditions level out over the life of the instrument if the *1993 SNA*'s treatment is followed. Suppose, for example, that the general interest rate shifts downwards and remains stable afterwards. Initially, the market value of the instrument will increase with the difference between the net present value of the debtor's future payments discounted at the new rate and the net present value discounted at the old rate. This increase should be recorded as a holding gain by the creditor. However, in all subsequent periods the accrual of interest as recorded according to the *1993 SNA* is higher than the change in the value of the instrument (which is determined by the interest according to the new market rate), so compensatory holding losses must be entered in the revaluation account to secure consistency with the value recorded in the balance sheet. These holding losses are exactly equal to the initial holding gain, as the market rate of the instrument according to the new rate and the one according to the old rate converge to the same point, namely, the debtor's last payment.

16. While changes in market rates may not bother very much creditors and debtors that hold on to their assets or liabilities, there is a complication when sales occur. For instance, if the original creditor disposes of the instrument before redemption, the new owner is unlikely to know the originally agreed interest rate following from the redemption margin; even if this rate were known, the owner will regard it as irrelevant. To the new holder, neither the coupon payments nor the redemption margin are income; he or she is rather interested in the `yield' on the purchased instrument, which is determined by expected future receipts, their spread in time, and the cost of purchasing the financial instrument. The continued accrual of interest as recorded following the rules of the *1993 SNA*, compensated by revaluations, is alien to units that acquire existing interest-bearing instruments.

17. Related to this, a data collection problem exists. While coupon payments can still be captured on a due for payment or cash basis, it will usually be difficult for market parties to provide the statistician with information on accrued interest related to the existence of a redemption margin. As argued above, this will be virtually impossible for units that have acquired the instruments in a secondary transaction. An exact capture of the transactions in statistics would require, therefore, that the interest rate of each security other than shares be determined at the moment of its creation; and a perpetual inventory of holders be

maintained afterward to allocate the accrued interest to the correct sectors. It goes without saying that in most cases it would be virtually impossible to follow this procedure, so that only rough estimates can be made in practice. The situation seems particularly difficult regarding instruments acquired from abroad.

18. Finally, while there may be practical reasons for the *1993 SNA* rule that coupon payments be recorded on a due-for-payment basis, in many other respects it is not satisfactory. The rule is an infringement of the general accounting principles, and problems may also occur in the interpretation of sub-annual accounts. The relevant section in paragraph 7.100 is probably best regarded as a slip of the pen.

III. THE ACQUISITION APPROACH

A. Introduction

19. As mentioned, the "acquisition approach" focuses on the fact that market parties acquiring a bond or bill at a point in time after it was issued may not be aware of the conditions at the time of issue. While, in principle, at the time of issue data could be collected to record interest flows as needed to apply the debtor approach, in the case of subsequent acquisitions this will no longer be possible, in particular, if parties to the transactions are in different countries. Thus, largely for practical reasons, the acquisition approach has been promulgated in a balance of payments context as an alternative in certain situations. For this reason, we discuss the acquisition approach from the background of *BPM5*, again focusing on the recording of interest.

20. According to Chapter III of *BPM5*, the Manual essentially adopts an identical application of the accrual basis in specific categories of transactions as the *1993 SNA*. Nevertheless, there is a marked difference in the treatment of the redemption margin.

B. The concept of interest

21. The official label that *BPM5* uses for interest is "income on debt." Paragraph 274 states that interest is payable in accordance with a binding agreement between the creditor and the debtor.

22. Paragraphs 121 and 283 specify that the difference between the issue price of zero coupon and other deep discounted bonds and the value at maturity is treated as interest over the life of the bond. However, if these securities are traded--prior to their maturity--in the secondary market, prevailing rates that reflect the difference between the new owner's cost and the value at maturity should be used for the subsequent recording of interest on these securities.

23. Paragraphs 401 and following in the *Balance of Payments Textbook* contain an

extensive explanation:

> "How should the accrual of interest on securities be calculated when interest rates change during the life of the security?
>
> "A possible answer would be to ignore changes in interest rates and calculate the accrual of interest for all periods by using the interest rate prevailing at the time the security was issued. Such a method of recording would probably be consistent with the way the issuing enterprise accrues interest on its accounts. However, there are two disadvantages with this method. The first is that, if the security is traded, the new holder of the security is unlikely to know, or care, what the interest rate was at the time the security was issued. The purchaser's concerns will relate to the prevailing interest rate and the effect of that rate on the return that he or she will receive on his or her investment. The second disadvantage with using the interest rate prevailing at the time of issue to accrue interest over the life of the security is that this method does not reconcile well with the use of market values for measuring levels of investment. The change in the market value of a security in a particular period reflects (among other things) the prevailing rate of interest and not the interest prevailing when the security was issued. If the latter rate were used in the calculation of accrued interest, there would be distortions between the levels of investment and financial transactions and in the apparent rates of return on securities.
>
> "To overcome these difficulties, the *BPM5* recommendation is that, if securities are traded, prevailing rates should be used to determine accrued interest. This method will not always be consistent with those used by issuers of securities to accrue interest. However, unless there are significant movements in interest rates over time, any differences are unlikely to be significant."

C. The recording of interest

24. Interest is recorded on an accrual basis, which *BPM5* paragraph 121 defines as a continuous method of recording that matches the cost of capital with the provision of capital.

D. Commentary

25. As for the first disadvantage of the *1993 SNA* treatment cited in the *Balance of Payments Textbook*, in the event of redemption margins, indeed "the new holder of the security is unlikely to know, or care, what the interest rate was at the time they issued the security." However, no reason is given why the view of the new holder should prevail over the view of the debtor if the latter has not ceded the liability to another unit. The argument that "unless there are significant movements in interest rates over time, any differences are

unlikely to be significant," does not hold, of course, as it equally applies to the *BPM5* treatment itself.

26. The precise gist of second disadvantage indicated by the Textbook somewhat uncertain. Probably it is said that the ratio of property income earned on financial instruments and their stock values should have a more or less predictable value and reflect global market rates. Yet, advocates of the treatment recommended in the *1993 SNA* could reject this reproach easily by pointing out that the transactions recorded in that System are interactions agreed upon by institutional units, and that any differences between transaction accounts and balance sheets are explained in the "other flow" accounts. *BPM5* paragraph 274 itself states that interest is payable in accordance with a binding agreement between the creditor and the debtor. Any secondary transaction other than between these two parties cannot change the basic agreement. If the market appraises the agreement otherwise than originally foreseen, this is appropriately accounted for in the revaluation accounts.

27. An argument similar to the reasoning in the Textbook[3] goes that the prevailing market rate determines both the debtor's cost of capital and the creditor's opportunity cost of extending capital. However, the System does not want to portray what would or could be the cost of capital, it simply describes the actual cost of capital.

28. As under the treatment as recommended in the *1993 SNA*, the collection of data is problematic. In fact, the situation seems even worse if the *BPM5* recommendations are followed, because often no indications will be available at all. If, for instance, a government bond circulates abroad, how could sources be found on the foreign creditors' view regarding the interest accrued? Only when it is presumed that instruments are constantly being traded, interest flows could be estimated rather simply by applying some predetermined rate or rates to the International Investment Position data.

29. The *BPM5* treatment[4] has a number of theoretical imperfections, apart from the preferential treatment of creditors' views discussed above, namely:

- The redemption payment made by the debtor differs from the sum of the instrument's issue price (the principal that has to be repaid) and accrued interest as recorded following *BPM5* rules (which reflects the market rate at sale rather than the agreed rate at inception);
- Interest according to market rates at the time of sale is exclusively recorded in the case of zero coupon or deep discounted bonds, disregarding the similar situation for many other debt securities (debt securities are often issued at a value that slightly differs from the face value);
- A differentiation is made between traded and nontraded financial instruments, where theoretical arguments would apply to all cases. In particular, this would be a problem for statistical recording in the context of government finance statistics.

IV. THE CREDITOR APPROACH

A. Introduction

30. The creditor approach takes the acquisition approach one step further, and argues that the conditions at the time of the issue of a bond or bill are of no relevance to any holder, be it the initial creditor or subsequent acquisitors. Instead, current market rates are decisive at all times. As mentioned, labeling this approach as a creditor approach is somewhat misleading, because it could be argued that the conditions at the time of issue are only relevant at the time of issue, and after that have no relevance to anyone at all, be it the debtor or the creditor. The creditor approach has most effectively been evoked by Mr. Hill in his paper "Holding gains and Interest Accrual," and in the subsequent subsections this approach will be discussed against the background of that reference paper.

31. The reference paper argues that if the market price of a security changes as the result of a change in market rates of interest, there should be an equal and opposite change in the interest received over the remaining life of the security. Paragraphs 32 through 36 summarize some essential points from the reference paper.

B. The concept of interest

32. According to the approach advocated in the reference paper, interest is never a fixture. The total return on a security may be fixed at the time it is issued, but not the split between holding gains and interest. Only if there are no price changes is it all interest. If, however, the market price of the asset rises as a result of a fall in interest rates, the holder accepts an instant holding gain in exchange for an equal reduction in interest in the future. It makes no difference whether the asset is actually sold or not, but the accounting is more obvious when the asset is sold to a third party.

33. The occurrence of a holding gain brings a benefit forward in time so that the recipient is better off. It changes the time profile of the benefits received by the holder of the asset and the time profile of the liabilities incurred by the issuer. Similar arguments apply, mutatis mutandis, to holding losses.

34. It is a fallacy that holding gains must cancel out over the life of the asset. Once a gain occurs, it can only be canceled out by subsequent changes in interest rates.

C. The recording of interest

35. Interest accrues over the principal outstanding in accordance with the rate that follows from the market value of the security. Each time the market price changes, the subsequent interest on the security also changes.

36. Accrued interest is a stream of new lending which increases the size of the asset.

D. Commentary

37. The approach advocated in the reference paper has some appeal, as the constant entries in the revaluation account that are a consequence of the approach recommended by the *1993 SNA* are avoided. It does so by equalizing the `interest' concept with a `current expected yield' concept. An additional advantage is that the market price of a security is observable by both the creditor and the debtor at any point in time. In theory, therefore, both units should be able to calculate the amount of interest accrued over an accounting period.[5]

38. However, the outcome of this exercise will not be recognized as `interest' or `yield' by any market party, unless the discount rate does not change over the full accounting period. What is commonly perceived as `interest' follows either from the original agreement or from coupon payments, and creditors will assess the `yield' of securities by comparing payments of any kind receivable from the debtor with the outlays they made in acquiring the instruments.

39. In addition, the approach advocated in the reference paper comes at a heavy price from a theoretical point of view. The opinion that the total return over the life of a security is divided between holding gains and interest, in shares still unknown at inception, is in direct contradiction with the *1993 SNA* definition of interest ("Under the terms of the financial instrument agreed between them interest is the amount that the debtor becomes liable to pay to the creditor over a given period of time without reducing the amount of principal outstanding"[6]). Indeed, it is in contradiction with the definition of a transaction (as the *1993 SNA* reads in paragraph 3.12: "A transaction is an economic flow that is an interaction between institutional units by mutual agreement or an action within an institutional unit that it is analytically useful to treat like a transaction, often because the unit is operating in two different capacities").

40. The incidental occurrence of `other flows' can never modify the terms of an agreement between two institutional units.[7] The amount of interest payable, either explicitly in the shape of coupon payments or implicitly in the payment of a redemption margin, is determined in an understanding between the original creditor and debtor. This is entirely obvious in a cash recording system. The accrual system of the *1993 SNA* does not change the basic character of interest, it only spreads it out over the periods in which it is earned.

41. Thus, it is not correct to state that, when a holder sells his bond in the market, implicitly a new contract is made between the new holder and the debtor. The sale of a financial instrument in secondary markets does not change the substance of the contractual obligations of the debtor. Nor is it justified to say, as the reference paper does, that any change in the market price of a bond implies the acceptance by the holder and debtor of a holding gain, or loss, in exchange for a change in future interest. A bond's interest rate and

the market discount rate applicable to that bond are two essentially different things.

42. This may be illustrated by the following analogy. Suppose a building company is constructing a house. Each month the construction increases $10,000 in value and the work takes ten months to finish. Now suppose further that after four months of construction the company sells the future house. If the prevailing interest rate is 12% and other circumstances are disregarded, the market price will be $100,000 (ten times $10,000) less $5,660 (six months of interest at 12%), equals $94,340. While the value of the structure itself will continue to grow by $10,000 per month, the new holder may see only a monthly growth of about $1,000 in the value of the purchased asset. Both views are pertinent, and one should be careful not to confuse the two.

43. When this analogy is applied to an interest-bearing security, the instrument's increase in volume owing to the accrual of interest is comparable with the monthly $10,000 growth of the construction. The change in the security's market value, on the other hand, is comparable with the $1,000 monthly increase in the example above, because it depends on the current market price for future payments. This market value is beyond the control of the debtor and creditor and takes the buildup in the volume of the asset for granted. The statement that the accrual of interest is exchangeable for holding gains or losses (which are price effects), not only misunderstands the character of the original transaction, it also confuses volumes and prices.

44. The reference paper states that it is a fallacy that holding gains must cancel out over the life of the asset. However, as already argued above, such a cancellation is exactly what happens provided the asset is denominated in domestic currency. A holding gain or loss occurs if there is a change in the market appreciation of having instant money instead of a claim on future money. Given a fixed redemption sum in future, any particular change in interest rates will generate holding gains or losses that will be smaller the closer the bond is to maturity. At maturity, they are zero. So, as the bond approaches the maturity payment, the initial holding gain or loss must gradually fade out until it is entirely extinguished.

An Example

Imagine a ten-year bond with a face value of $5,000. The bond pays a 10% coupon at the end of each year. During the first two years after inception, the relevant market rate remains at 10%. However, the prevailing market rate suddenly changes to 5% at the beginning of the third period, and stays at this level until the end of the tenth year.

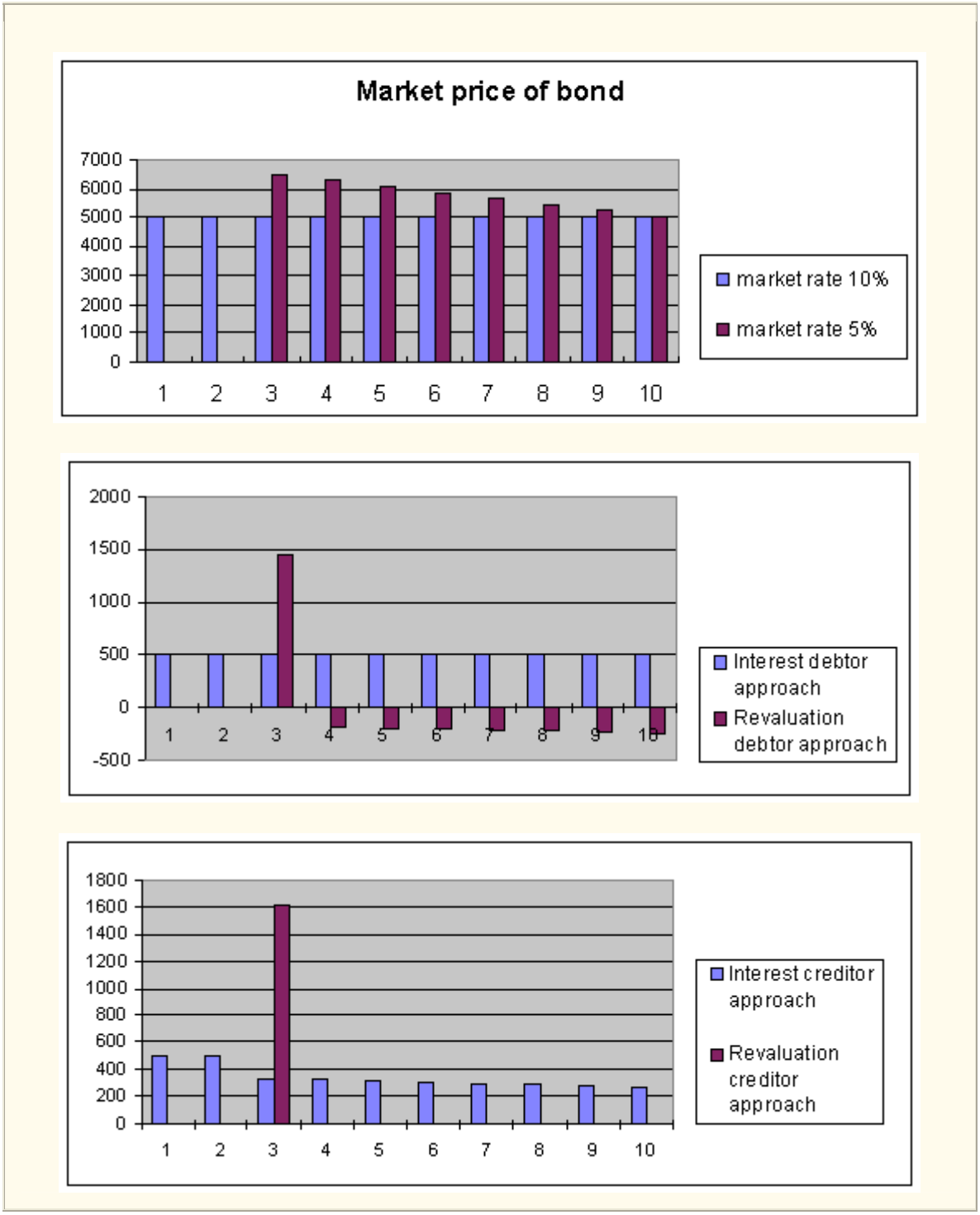
The graph below shows the market value of the bond at the end of each year, just after the payment of the annual coupon. In year one and two, the value is exactly $5,000 because the value of all future payments (the third through tenth coupons plus the redemption payment) discounted at 10% add up to that figure. At the end of the third year, the market price of the bond is much higher, as now all future payments are

discounted at only 5%. After the third period, the bond's market value gradually approaches its redemption value.

The graph below shows the debtor point of view. Interest continues to accrue according to the original agreement. The volume of the bond does not change as all interest that accrued during the year is paid out by way of the December 31 coupon. This is also the reason why, on an annual basis, full accordance with interest on a cash basis is maintained. Although thus the bond's volume remains the same, its price changes every year. This implies that corresponding entries have to be made in the revaluation account. Over the full life of the bond, the entries in the revaluation account sum to zero.

The graph below depicts the entries that follow from the creditor point of view, as represented in the reference paper. The initial holding gain at the beginning of the third year ($1616) is the same as under the debtor approach; the difference is explained by the fact that at the end of the third period the entry for the debtor approach also incorporates a $169 downward slide in the bond's value during the year. Note that in this example interest from the creditor approach is lower than the total of the annual coupons. More in general, depending on circumstances, the interest recorded according to the creditor method may range from zero to 100 percent of all future payments by the debtor, including the redemption margin.

Year	Face value	Coupon	End of period market value	Debtor approach		Creditor approach	
				Interest	Revaluation	Interest	Revaluation
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	5000	500	5000	500	0	500	0
2	5000	500	5000	500	0	500	0
3	5000	500	6447	500	1447	331	1616
4	5000	500	6269	500	-178	322	0
5	5000	500	6082	500	-187	313	0
6	5000	500	5886	500	-196	304	0
7	5000	500	5681	500	-206	294	0
8	5000	500	5465	500	-216	284	0
9	5000	500	5238	500	-227	273	0
10	5000	500	5000	500	-238	262	0
Total		5000		5000	0	3384	1616



V. CONCLUSION

45. In macroeconomic statistics, the debtor approach as recommended (although not under that label) in the *1993 SNA* treatment of accrued interest is preferable from a theoretical

point of view as it distinguishes clearly between the volume accrual of interest, and price effects that necessarily die out when the last payment of the debtor approaches. It has the disadvantage that, when the instrument is sold, the new holders may not be able to distinguish the interest element within total yield. However, this disadvantage is mostly limited to the accrual of interest which is implicit in redemption margins, as recurrent interest payments are readily recognized.

46. The acquisition approach implicit in the *BPM5* treatment concurs with the perception of the units that have obtained the instrument in secondary transactions. However, it is very shaky from a theoretical point of view and has the significant disadvantage that the debtor will usually have a totally different view of the accrual of interest. Under its original form, the collection of data may be very difficult.

47. The creditor approach has the advantage that both creditors and debtors are in principle able to compute the accrued interest. The two main disadvantages are that the method does not generate results that transactors recognize, and above all that it is at odds with some of the most fundamental principles in the *1993 SNA*.

48. In situations where there is little information, which is typically the case concerning financial instruments that circulate both in the economy and abroad, a watered down acquisition/creditor treatment of estimating interest by applying an average interest rate to the average market value of the instruments, may have some merits. However, the *1993 SNA*'s debtor approach is theoretically superior, and it will be difficult to advocate the use of any other method in the case of, for instance, bonds issued by government or the central bank. The analysis in this paper leads to the conclusion that there is no reason to revise the *1993 SNA*'s recommendations concerning the accrual of interest.

Bibliography

Commission of European Communities, IMF, World Bank, Organization for Economic Cooperation and Development, United Nations, *System of National Accounts, 1993* Brussels/Luxembourg, Washington, D.C., Paris, New York.

European Commission, Statistical Office of the European Communities, *Recording Interest on an Accrual Basis, Methodological Note*, provisional version of a chapter in a manual relating to deficit and debt measurement in the framework of *ESA 95*, document for the Financial Accounts Working Party, Luxembourg, March 18, 1999.

Federal Accounting Standards Board *Exposure Draft*, *Financial Accounting Series Accounting for Derivatives and Similar Financial Instruments and for Hedging Activities and Reporting Comprehensive Income,* Norwalk, Connecticut June 20, 1996.

IMF *Balance of Payments Manual, Fifth Edition,* Washington, D.C., 1993.

IMF *Balance of Payments Compilation Guide*, Washington, D.C., 1995.

IMF *Balance of Payments Textbook,* Washington, D.C., 1996.

IMF Statistics Department, *Accrued Interest on Debt Securities with a fixed Rate of Interest at the Time of Issue*, paper for the Eleventh meeting of the IMF Committee on Balance of Payments Statistics, Washington, D.C., October 21-23, 1998.

International Accounting Standards Committee, Canadian Institute of Chartered Accountants *Accounting for Financial Assets and Financial Liabilities Discussion Paper*, London, Toronto, 15 July 1997.

Harper, Peter, *Recording Interest Income in the Balance of Payments,* IMF Working Paper (WP/95/71), July 1995.

Hill, P., *Holding gains and Interest Accrual* (unpublished).

McColl, R., *Full Accrual Accounting for Investment Income Under New International Statistical Standards,* Australian Bureau of Statistics, (unpublished), October 1996.

[1]Harper (1995), *Balance of Payments Compilation Guide*, and the *Balance of Payments Textbook*.
[2]For instance, in 1996, Peter Hill, writing in support of note by R. McColl of the Australian Bureau of Statistics, stated that the *1993 SNA* should be rectified on this point.
[3]Peter Harper (1995), p.7.
[4]The *Balance of Payments Compilation Guide* (1995) and *Balance of Payments Textbook* (1996) deviate in a number of respects from *BPM5*.
[5]It may be noted that a March 1997 discussion paper entitled *Accounting for Financial Assets and Financial Liabilities*, issued for comment by the International Accounting Standards Committee contains proposals which closely correspond to Hill's views.
[6]Compare also *1993 SNA* 12.110: When bonds are issued at a discount, including deep discounted and zero coupon bonds, the difference between its issue price and its face or redemption value when it matures measures interest that the issuer is obliged to pay over the life of the bond.
[7]Of course, a contract may contain stipulations which refer to `other flows', such as in the case of index-linked bonds.