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Treatment of Income
Analogy Between Non-financial and Financial Assets

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TREATMENT OF INCOME
ANALOGY BETWEEN NON-FINANCIAL AND FINANCIAL ASSETS

1. The international statistical standards call for the accrual recording of the investment income on financial assets. While this accounting principle is now broadly accepted by national compilers of macro-economic statistics, the focus is now on **what to accrue**. Various approaches have been proposed but consensus has not emerged yet. One approach is to base the income on the contractual arrangements of the financial instrument (referred to as the debtor approach since the income is that expensed by the issuer of the financial instrument)? Another approach is to record as income earned the revenue of the holder of the financial instrument (the acquisition and creditor approaches).

2. The scope of this note is limited to the debtor approach. Its purpose is to show how the debtor approach on financial asset is similar to the treatment currently used in the SNA[1] to account for the lease of non-financial assets. In the *SNA 1993,* non-financial assets are divided into two categories: produced assets and non-produced assets. The note focuses on the lending of non-financial assets by an institutional unit to another unit. In a lease of a produced asset, rentals are recorded as services in the production account; and for a tangible non-produced assets as rent in the income account.

3. The findings of this note are that:

- **The price agreed at the beginning of a lease contract remains that to be used during the life of the contract (services rental and rent).**
- **The changes in the value of the underlying asset are recorded in the revaluation account and do not at any time modify the value recorded according to the original contractual arrangements**
- **If the asset is sold, the sale transaction is recorded as a capital transaction.**
- **If such sale is made inclusive of the original contract, the terms of the contract continued to be recorded as originally set in the contract.**

4. The above accounting treatment on non-financial asset is effectively according to that of the debtor approach for income on financial asset. Consistency of treatment on leased assets (non-financial and financial) within the SNA therefore favors the debtor approach.

5. The note is divided into three sections. A first section describes the accounting entries required to accrue the income according to the debtor approach in a balance of payments context. A second section describes the transactions on respectively two types of leased assets: warehouse (a produced asset) under a lease agreement; and land (a tangible non-produced asset) involving rent. This is done using the SNA context. The parallel is then drawn between the SNA treatment of these two cases

[1] The 1993 SNA distinguishes Current Accounts (production and income accounts), Accumulation Accounts and Balance sheets. Accumulation accounts cover capital and financial accounts (transactions) and the other changes accounts.

and that of the “Debtor approach” to record investment income on financial assets. A concluding section situates the “Debtor approach” against a conceptual backdrop where other treatments of recording investment income are summarily referred to.

SECTION 1: DEBTOR APPROACH TO RECORD INVESTMENT INCOME IN A BOP CONTEXT

Loan of cash in the form of bond

6. Abe lends $100,000 of cash to Xavier who issues a bond agreement with an interest coupon of 6% ($500 a month) to be repaid in two years (Period I). Under the debtor approach, the income will be recorded as a primary income distribution from Xavier to Abe in the Current Account.

7. Within six months of issue, the market value of the bond increases to $102,000. Both Abe and Xavier will show a revaluation entry of $2000. In the sixth month, Abe sells his bond to Barbara for $102,000. Again, according to the debtor treatment, the sale of the bond is recorded as financial transactions by both Abe and Barbara. Abe will also show a reduction of $2000 in his valuation account since he now has realized his capital gain. The investment income payments of $500 are now between Barbara and Xavier.

	Abe	Barbara	Xavier
Current account			
Income	$+3000_{(I)}$ (500 x 6)	$+9000_{(II)}$ (500x 18)	$-12000_{(I\ and\ II)}$ (500 x 24)
Financial account			
Bond			$+100{,}000_{(I)}$
• *new issue*	$-100{,}000_{(I)}$		
• *outstanding*	$+102{,}000_{(II)}$	$-102{,}000_{(II)}$	
• *retirement*		$+100{,}000_{(III)}$	$-100{,}000_{(III)}$
Valuation account			
Bond	$+2000_{(II)}$		$+2000_{(II)}$ $-2000_{(III)}$
Periods: (I), (II), (III)			

8. In a balance of payments context, the case could be further extended by assuming that Abe is a Canadian resident, Xavier a US resident and Barbara a UK resident.

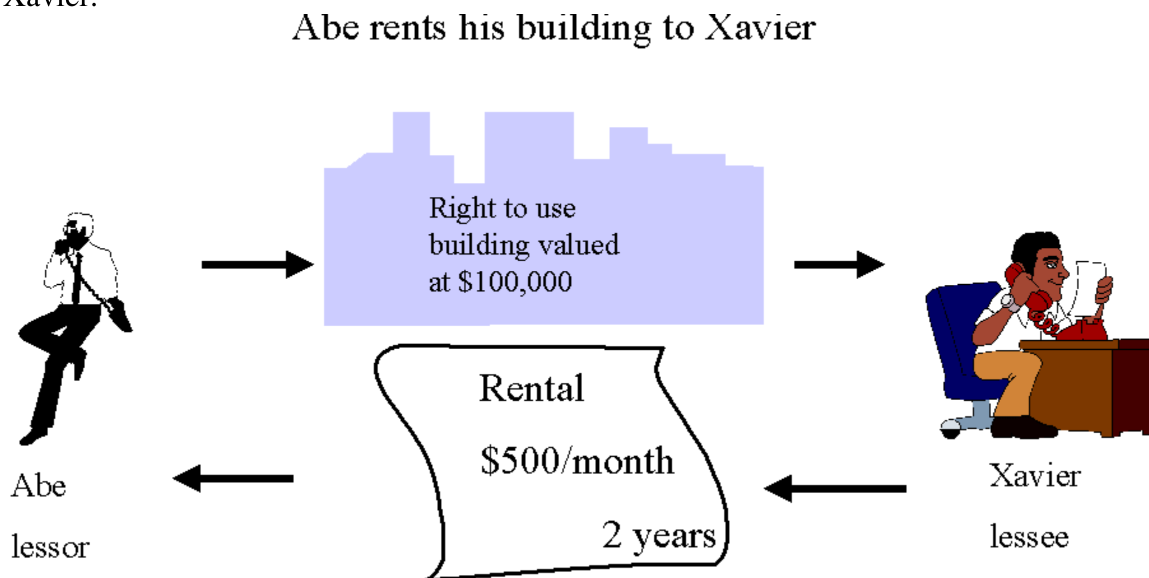
- The new issue of the bond will show in the financial account (CDA and US).
- The investment income in the current account (CDA and US for the first six months; UK and US for the remaining of the term)
- The capital gain on the bond in the financial account (CDA and UK);
- The redemption of the bond in the financial account (UK and US).

9. The debtor approach is also used for recording dividends on portfolio investment in the balance of payments. The dividends paid by the issuer of the stock equity are recorded in the investment income of both the payer and the equity holder. To the extent that the underlying stock equity increases in value, the increase is recorded in the revaluation account when unrealized and in the financial account when realized.

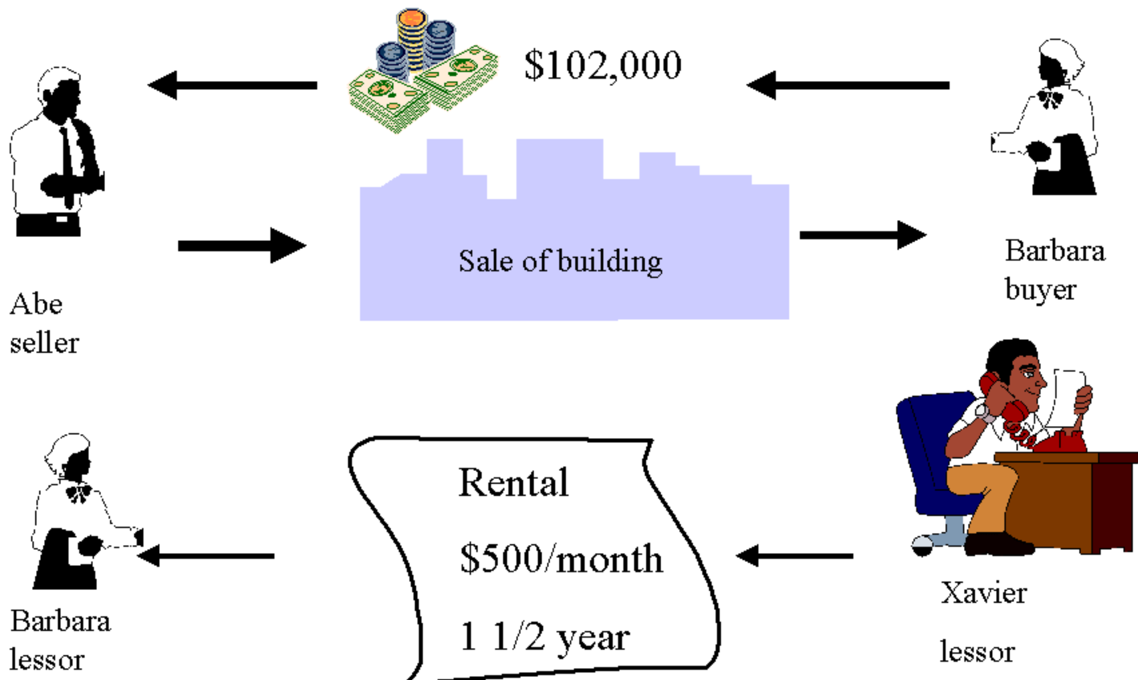
SECTION 2: LEASING OF NON-FINANCIAL ASSET IN A SNA CONTEXT

Leasing of a warehouse

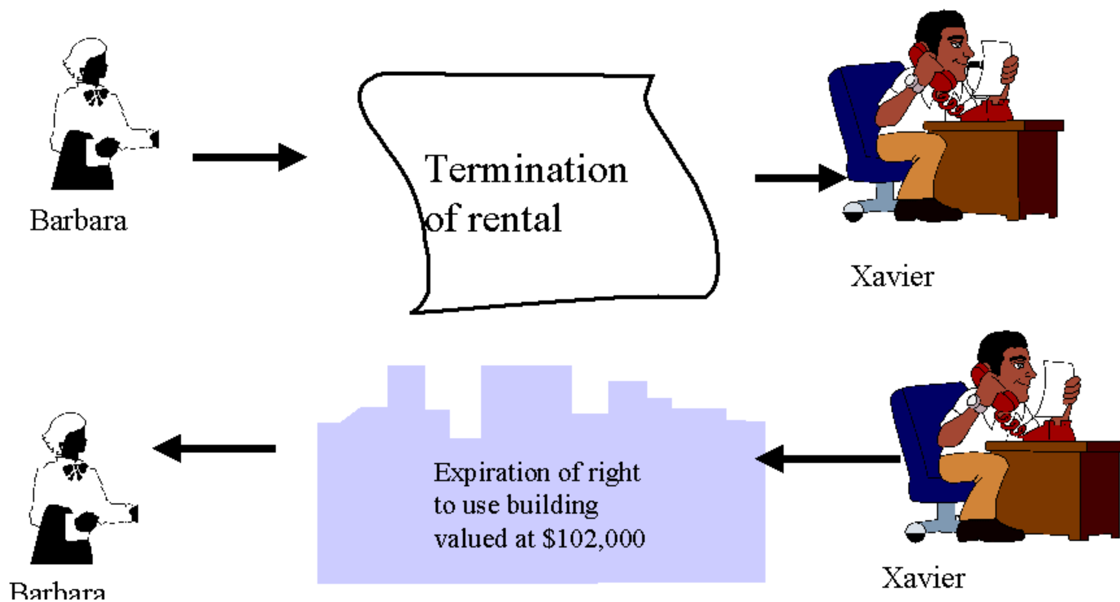
10. A warehouse **owner**, say Abe, enters into an agreement with a potential warehouse **user**, say Xavier, to lease his warehouse valued at $100,000 for a 2 year fixed period at a price of $500 a month (Period I). In the SNA production account, the lease payments show as a service receipt (resource or credit) by Abe and services payment (use or debit) by
Xavier.



11. Six months after the signing of the lease (Period II), Abe sells his warehouse, inclusive of the lease agreement, to Barbara for $102,000. In the SNA, the sale of the warehouse will be recorded as $102,000 in the capital account and the monthly service payment of $500 will continue as such in the production account but it will be between Barbara, the new lessor and Xavier the lessee.



12. The only entries in the current account (here the production account) are $500 a month for two years. The changes in the underlying value of the warehouse gives rise to entries in the accumulation accounts (unrealized as a valuation adjustment, realized as a capital entry).



Rent for the use of a land

13. The same transactions as above occur but they now involve land, a non-produced, non-financial asset: in such a case, the $500 paid by Xavier is recorded as distribution of primary income, again a current account item (Period I).

14. After six months (Period II), Abe sells his land, inclusive of the rent arrangements, to Barbara for $102,000. While the increase in the valuation of the land is recorded as valuation in Abe's account, the sale itself is recorded in the capital account of both Abe and Barbara. The rent payments of $500 a month are now primary income distribution from Xavier to Barbara. The rent agreement expires in Period III.

15. Again, it is seen that changes in the value of the underlying assets do not modify the stream of payments that are recorded in the current account (property income).

Common features between financial assets and non-financial assets

16. Similarities: Both financial and non-financial capital can be lent to another institutional unit. The lending of the asset gives rise to a stream of payments agreed upon at the time of the lease. The value of the leased asset can fluctuate during the term of the lease but this does not in any case modify the terms of the contract.

17. Differences: The changing values of financial assets are more widely known than those of non-financial assets. Furthermore most financial assets are transferable inclusive of the contractual arrangement. Non-financial assets may not be transferable; for instance, the owner may have to terminate the lease agreement to sell his asset (if it involves buying back the lease agreement, the transaction will be recorded in the capital account).

18. While there may be variants in terms of liquidity and transferability, overall the SNA treatment of non-financial asset is comparable to the debtor approach of recording income on financial asset. The capital gains/losses arising from the changes of the underlying assets are not part of production and are therefore not recorded in the current accounts.

SECTION 3: THE DEBTOR APPROACH VERSUS OTHER RECORDING APPROACHES OF INCOME

Options to calculate interest income

19. In the economic literature to date, various options have been proposed to calculate income. They can be broadly grouped under three options: a narrow version of interest income that excludes any elements of capital gains/losses ; the "traditional" SNA method where the nominal rate of interest (contractual arrangements) is used to

calculate income (debtor approach); and the all inclusive income where the return of the holder is fully recorded as investment income (creditor approach).

20. The narrow calculation of income has been presented in *Annex B* of Chapter XIX of *SNA 1993* and in *Inflation accounting: A Manual on National Accounting under Conditions of High inflation* (authored by P. Hill and published by the OECD in 1996). This calculation is based on the theoretical concept that income is what remains after the capital has been kept intact. The treatment consists in recording as income only the "real"/"prime" rate of interest and to record the capital gains/losses in the accumulation accounts. The approach from *Inflation Accounting* has been challenged by A. Vanoli in *Interest and Inflation Accounting* in the Review of Income and Wealth (Series 45, Number 3, September 1999).

21. The debtor approach to record income (contractual arrangements) is advocated in the core of the *SNA 1993:*

> *"Property income may be therefore defined as: The income receivable by the owner of a financial asset or a tangible non-produced asset in return for providing funds to, or putting the tangible non-produced asset at the disposal of, another institutional unit. The terms governing the payment of property incomes are usually specified in the financial instrument created when the funds are transferred from the creditor to the debtor or in the contract or lease signed when the right to exploit the land or subsoil assets is transferred from the owner to the tenant or lessee. Such arrangements are typically made only for a limited period of time".* (Par. 7.88)

22. The creditor approach is more encompassing as it calculates as income the full return to capital invested. This approach has been extensively presented in *Calculating the Accrual of Interest on tradable debt Securities,* a document prepared by J. Joisce and C. Wright for the October 2000 meeting of the IMF Committee on Balance of Payments Statistics. It provides a wider notion of income than the SNA income that is essentially based on production. The creditor approach accounts in the transaction accounts for economic events that are beyond the basic contractual arrangements of the financial asset.