XIII. Compiling the BOP Current Account: Income

Compensation of Employees

Introduction

577. Compensation of employees covers the earnings of border, seasonal, and other workers paid by an employer resident in one economy to employees resident in other economies. Compensation for employment may be earned by persons residing in economies that differ from the economies in which they work on a temporary basis and also by persons residing in their own economies. For example, foreign embassies, foreign military establishments, and international institutions may employ residents of the economies in which the embassies, etc. are located.

578. Compensation of employees includes compensation paid in kind, as well as that paid in cash. Transactions under this item should be recorded on a gross basis—that is, before any deductions for expenses (such as income taxes and acquisition, by the employee, of goods and services in the host economy). These expenses should be recorded under appropriate BOP items. The following example may help clarify the treatment of compensation of employees. A resident of country A works for three months in country B and earns $500 in cash before tax. In addition, the employer provides accommodation estimated to be worth $100. Income tax of $120 is paid to the government of country B, and the worker spends $200 on clothing and food during his stay in country B. The following entries would appear in the BOP of country A:

	Credit	Debit
Travel	...	300[1]
Compensation of employees	600[2]	...
Transfers	...	120[3]
Reserves	...	180

[1] 200 for food and clothing plus 100 for accommodation

[2] 500 paid in cash plus 100 for accommodation paid in kind

[3] Income tax payable to government of country B

579. Credits for compensation of employees have two distinct components: (1) compensation earned by residents working for enterprises abroad and (2) compensation earned by local staff working for foreign embassies and similar institutions—including international organizations—and by local staff working for nonresident enterprises operating in the compiling country. Likewise, debits for compensation of employees have two distinct elements: (1) compensation earned by nonresidents working for resident enterprises in the compiling country and (2) compensation earned by local staff working for the compiling country's foreign embassies and similar institutions located abroad and by local staff working for enterprises that operate abroad and are regarded as residents of the compiling country. The BOP compiler should be aware of each of these components because a collection methodology well suited to measuring one component may not be appropriate for measuring another.

Data Sources

580. Compensation of employees is typically measured by using one or more of the following sources: an ITRS, ES of employers, surveys of travelers, official sources, surveys of embassies, and partner country data.

International Transactions Reporting System (ITRS)

581. An ITRS may provide satisfactory coverage of residents working abroad or of nonresidents working in the compiling economy. However, the compiler should ensure that amounts reported for compensation of employees are stated on a gross basis and not net of expenses in the host economy. If this is not the case, the compiler should attempt to estimate gross amounts. The compiler might use a benchmark based on an alternative source, such as a survey of travelers, to make the estimate. For example, the compiler might establish percentages of compensation for employment that relate to income tax payable to the host economy's government, to goods and services acquired in the host economy, and to the net amount retained by the employee. Net amounts reported in an ITRS could then be expanded by using relevant percentages, and appropriate offset entries for transfers and travel could also be calculated. For example, the BOP compiler might establish that, for

residents working abroad, 10 percent of compensation is paid in taxes, 70 percent is expended on goods and services, and the remaining 20 percent is remitted to the compiling country and recorded in an ITRS. Credits for total compensation of employees would be equal to five times (100/20) the remitted amount. Transfer and travel debits would be equal to 10 and 70 percent of estimates of gross compensation of employees.[109]

582. Use of an ITRS to measure compensation of employees will, however, omit compensation paid in kind. Such compensation could be identified by using surveys of travelers or ES (for debits only).

583. The compiler should ensure that compensation for employment paid to local workers by foreign embassies and similar institutions and by enterprises that are not residents of the economies in which they are located (e.g., construction enterprises engaged in short-term projects) is not "bundled" with other BOP transactions. For example, an ITRS may record amounts transferred to cover expenses of the compiling country's foreign embassies. It is important that amounts used to pay local staff be recorded separately from other expenses. If this is not the case, supplementary sources (such as official sources—in the case of embassies located abroad, surveys of embassies—in the case of foreign embassies in the compiling country, or ES—in the case of enterprises operating in economies in which they are not resident) could be used to provide necessary BOP information.

Enterprise Surveys (ES) of Employers

584. ES of employers could be useful sources of information on compensation payable by resident enterprises to nonresident employees and on compensation payable to local employees by nonresident enterprises located in the compiling economy.[110] The main advantages of using ES are that amounts are typically recorded on a gross basis, and compensation paid in kind can often be readily reported. The disadvantages of using ES are the amount of effort required to maintain coverage; the lack of information on credits for compensation of employees earned by residents working abroad and on compensation paid to local staff of embassies, etc.; and the expense of conducting a separate collection to measure what is, for many countries, a relatively trivial item in the BOP. Of course, collection expenses would be greatly reduced if the information were collected as part of a general approach that used ES to compile BOP statistics.

Surveys of Travelers

585. As well as collecting information on travel expenditure, surveys of travelers could be used to collect information on compensation earned by travelers.[111] The disadvantage with this approach is that it fails to provide information on compensation payable to local staff of foreign embassies, etc. and on compensation payable to local staff working for enterprises operating in economies other than those in which the enterprises are resident.

Official Sources

586. Official sources may be able to provide useful information on compensation payable to the local staff of the compiling country's embassies, etc. located abroad. Also, some countries have official agencies responsible for nonresidents working in the country or for residents working abroad. These agencies could have information that would be useful for compiling the compensation of employees item in the BOP.

Surveys of Embassies, etc.

587. Surveys of foreign embassies and similar institutions, including international organizations, located in the domestic economy could be a good source of information on compensation payable to resident staff working for these institutions.[112] Even if only a subset of embassies respond to such surveys, there may be reasonable information on per capita salary, etc., which could then be multiplied by the number of local staff working for foreign and international institutions in order to obtain an overall estimate. Information on staff employed by these institutions should be available from a country's ministry for external affairs or from similar government organizations.

Partner Country Data

588. In some countries, partner country data may be the best source of information on compensation of employees (particularly credits). Alternatively, partner country data

[109]For best results, separate percentages should be calculated for nonresidents working in the compiling economy and for residents working abroad.

[110]Such surveys are discussed in chapter 4, paragraphs 169-173.

[111]For information on these surveys, see chapter 7, paragraphs 315-324.

[112]These surveys are described in chapter 9, paragraphs 380-382.

could be used as a check on estimates derived from other sources.

Estimation in the Absence of Data, Extrapolations, and Projections

589. In the absence of complete data, a data model or models could be used to estimate part or all of the compensation of employees. The use of most data models involves multiplying estimates of numbers of employees by estimates of per capita compensation. The numbers of residents working abroad and of nonresidents working in the domestic economy could be available from migration statistics or from an official source, such as a relevant government agency.[113] Estimates of per capita compensation could be based on benchmark studies and adjusted for growth occurring in wages after the period of the study and for any other necessary factors. The estimates could also be based on other related indicators, such as the average earnings of employees in the compiling economy. This indicator could be used for deriving estimates of compensation paid to nonresidents working in the compiling economy or compensation paid to local staff of foreign embassies, etc. In addition, such estimates could be based on the average earnings of employees in partner countries. This indicator could be used for deriving estimates of compensation paid to residents working abroad or compensation paid to local staff of the compiling country's embassies and similar institutions abroad.

590. Extrapolations and projections of compensation of employees generally involve similar techniques. When numbers of employees are extrapolated or projected, provision should be made for any known or expected developments taking place in the compiling economy (or in partner country economies) and having a potential impact on these numbers. Likewise, when per capita compensation estimates are extrapolated or projected, account should be taken of known or expected developments in wages and, when relevant, exchange rates.

[113]If migration statistics are used in data models, estimates should (when possible) be used for numbers of persons traveling to other countries to work for employers located there. (This is not the same as the category of business travel, which includes travel by persons working for employers in their home countries.) However, such estimates may not be available. (That is, the compiler may be unable to distinguish residents traveling abroad to work for nonresident enterprises from other residents traveling abroad and nonresidents traveling to work for resident enterprises from other nonresident visitors.) Estimates of total numbers of travelers could then be used if this approach is also reflected in estimation of the per capita compensation element of the data model.

Investment Income

Introduction

591. Investment income is income derived from ownership of external financial assets and payable by residents of one economy to residents of another economy. Investment income includes interest, dividends, remittances of branch profits, and direct investors' shares of the retained earnings of direct investment enterprises.[114] Investment income should be classified by direct, portfolio, and other investment components. Direct investment income should be further subdivided by dividends and branch profits, reinvested earnings, and interest. Portfolio investment income should be classified by dividends, interest on bonds and notes, and interest on money market instruments and financial derivatives. In supplementary classifications of the *BPM*, portfolio and other investment income are classified by resident sector.

592. Close relationships often exist among investment income, transactions in external financial assets and liabilities (the financial account of the BOP), and stocks of these assets and liabilities (the IIP). Because of these relationships, investment income estimates are often compiled from sources similar to those used to compile the financial account and the IIP. Accordingly, it may be helpful to refer to chapter 16 in conjunction with the investment income part of this chapter.

Data Sources

593. An ITRS, surveys of enterprises (including banks) with external assets and liabilities, ES of financial intermediaries, or official sources can be used to measure BOP transactions in investment income. Whatever approach is used, collection and estimation methods should be well designed to ensure that investment income is measured accurately. Table 13.1 summarizes the possible compilation strategies available to the compiler.

594. An ITRS can serve as a comprehensive source of data for measuring investment income. However, some transactions require special attention if investment income is to be measured completely and accurately. Many investment income transactions are not made through the banking system or do not involve the payment of cash. The compiler should ensure that these transactions are reported and that offsetting entries are also recorded. Many reporters tend to record certain transactions on a net basis—that is, after certain costs (such as withholding

[114]For a full description of the components of investment income, see chapter 14 of the BPM.

Table 13.1 Compilation of Investment Income Items

Item Number	Description	Source and Method of Compilation
x330	*Direct investment income*	These data, other than reinvested earnings, can be collected through an ITRS or ES. In either case, care should be taken to ensure that noncash income is collected. Data on reinvested earnings can be collected as a supplement in an ITRS, in ES, or sometimes as a byproduct of a foreign exchange or foreign investment approval system.
x331	Income on equity	
x332	Dividends and distributed profits	
x333	Reinvested earnings	
x334	Income on debt	
x339	*Portfolio investment income*	*Income credits* (income receivable on claims on nonresidents) can be collected in an ITRS, surveys of enterprises, surveys of financial intermediaries, or from official records. Care should be taken to ensure that income accrued but not paid is measured and offset appropriately in the financial account. An alternative methodology may involve maintaining an inventory of securities held by residents and estimating the dividends and interest on that stock by using yield analysis. *Income debits* (income payable on liabilities to nonresidents) can be collected through an ITRS, a survey of enterprises, surveys of financial intermediaries, or official sources. Care should be taken to ensure that income accrued but not paid is measured and offset appropriately in the financial account. An alternative methodology would involve maintaining an inventory of securities held by nonresidents and estimating the dividends and interest payments on that stock by using yield analysis.
x340	*Income on equity*	
x341	Monetary authorities*	
x342	General government*	
x343	Banks*	
x344	Other sectors*	
x349	*Income on debt*	
x350	Bonds and notes	
x351	Monetary authorities*	
x352	General government*	
x353	Banks*	
x354	Other sectors*	
x360	Money market instruments and financial derivatives	
x361	Monetary authorities*	
x362	General government*	
x363	Banks*	
x364	Other sectors*	
x370	*Other investment income*	Data can be collected through an ITRS, ES, or official sector sources. Some countries estimate income flows on certain assets, such as other sectors' deposits abroad, by using data obtained from international institutions. Alternatively, data models based on yield analysis may be used to estimate certain components.
x371	Monetary authorities*	
x372	General government*	
x373	Banks*	
x374	Other sectors*	

*Denotes supplementary components

taxes and finance charges) have been deducted. Rules pertinent to these matters should be clear to ensure that data is reported according to BOP requirements. Also, discount and premium income associated with nonequity securities may not be separated from other amounts paid at the redemption, so an ITRS should be designed to collect information on premiums and discounts. If not, alternative sources for this information should be established.[115] Interest accrued and not paid may be missed unless the compiler monitors such transactions carefully. The issue of recording interest on an accrual basis is discussed further in a subsequent section of this chapter. As persons completing ITRS forms may be somewhat overwhelmed by the level of detail, an ITRS must be well designed to ensure correct classification of transactions. In addition, an ITRS will not measure reinvested earnings. It is likely that the compiler will have to approach enterprises directly to measure reinvested earnings attributable to direct investors. The compilation of reinvested earnings is discussed in a subsequent section of this chapter.

[115]Related financial transactions reported in an ITRS also may have to be adjusted for premiums and discounts.

595. ES may be selective (for example, concentrating only on banks or enterprises in direct investment relationships) or broadly based (for example, covering all enterprises with external assets and liabilities). Income should be recorded on a gross basis—that is, before the deduction of financial fees and withholding taxes. As with an ITRS, it is important that enterprise survey collection forms are well designed, that reporters have a good understanding of the collection requirements, and that close contact is maintained between the compiler and collection reporters. ES may include collections from financial intermediaries that report data on income from securities.

596. Data, especially that related to official debt and reserve assets, on investment income could also be obtained from official sources. The official debt office may also have, particularly when interest payments are guaranteed by the government, information on interest payable by other sectors of the economy.

597. Some countries require, either as part of foreign exchange controls or foreign investment approval procedures, that enterprises submit applications to remit profits. These applications could be used to estimate some components of investment income.

Estimation in the Absence of Data, Extrapolations, and Projections

598. The most common approach to estimating investment income in the absence of actual data is to use a data model in which income yields are applied to levels of financial assets or liabilities.[116] This approach is quite commonly used to estimate interest and dividends on securities and is sometimes used to estimate income on other financial items, such as loans and deposits.[117] However, this approach is rarely used to measure direct investment income. Like most other data models, the income yield model works best when used at the greatest possible level of disaggregation. For example, better estimates of portfolio investment income debits would be derived if separate models were established for equities and for nonequity securities than if a single model were used to derive estimates. In more sophisticated models, the income on each type of security held is estimated separately, and the yield pertaining to the security is taken into account.

599. One of the keys to developing estimates of good quality is choosing an appropriate income yield. For estimates of dividend debits, the average dividend yield in the compiling country's stock markets could be a good indicator. For estimates of dividend credits, the weighted average yield in the stock markets of partner countries could be appropriate.[118] For interest debits and credits, separate models should be developed for each significant type of instrument and by each currency in which financial assets and liabilities are denominated. For example, for loan liabilities denominated in U.S. dollars, an appropriate yield might be the U.S. lending rate, adjusted for risk (if any) associated with the compiling country. *International Financial Statistics (IFS)*, which is published by the IMF, provides a number of interest rates that may be useful in determining appropriate yields.[119] If disaggregation of this nature is not possible, then a weighted average yield, with weights determined on the basis of whatever information is available, could be applied.

600. When actual data are not available on a timely basis, estimates of investment income will have to be extrapolated from data for earlier periods. Most extrapolation techniques for portfolio and other investment income involve determination of historical income yields. These yields are then adjusted, in the case of interest, for changes in interest rates and credit risks and, in the case of dividends, for changes in profitability and policies with regard to the retention of earnings.[120] The adjusted yields are then applied to estimates of stocks, which may be based on actual data or extrapolated.[121] Alternatively, the compiler may use known interest payment schedules for certain components of debt and yield analysis for the remainder. For the extrapolation

[116] Levels of financial assets and liabilities may either be measured directly or derived by using the perpetual inventory method. For an explanation of this method, see chapter 16, paragraphs 740-743.

[117] For an example of the use of the yield approach to derive estimates of investment income, see chapter 16, paragraph 776.

[118] The weights may be determined by using the proportion of portfolio equity assets located in each country.

[119] These rates are included in world and area tables provided at the beginning of issues of IFS.

[120] Changes in interest rates will not fully impact other investment income in the periods in which the changes occur because many financial assets and liabilities will have fixed rates of interest. The compiler should analyze the composition of other investment assets and liabilities to determine the fixed-interest component. This information should be used to moderate the impact of changes in interest rates on income estimates. Changes in interest rates should change the market value of fixed-interest securities (portfolio investment) so that actual yields equal the prevailing rate of interest. If these changes in market values are captured in underlying stock estimates (as discussed in chapter 16), there would be no reason for the compiler to moderate the impact of any changes in interest rates when he or she extrapolates portfolio investment income by using the income yield approach. Information on changes in profitability could be available from profit surveys used to compile national accounts or from tax records. Information on changes in distribution policies could be obtained from stock exchanges. For example, changes in the ratio of average dividend yields to the inverse of the average price/earnings (p/e) ratio could be used as an indicator of changes in distribution policies.

[121] See chapter 16 for further details.

of direct investment interest, similar techniques could be used. For equity income on direct investment, the best results are usually achieved when total equity income—that is, dividends and remittances plus reinvested earnings—is extrapolated and then broken down into component parts on the basis of historical distribution patterns and known changes in these patterns. The compiler may also be able to obtain useful information on profitability and on dividend payments from discussions with a few significant direct investors (in the case of credits) and direct investment enterprises (in the case of debits).

601. Projections of investment income typically involve techniques similar to the extrapolation techniques described previously. When projections are developed, account should be taken of expected changes in interest rates, profitability, dividend distribution policies, exchange rates (when financial assets and liabilities are denominated in foreign currencies), etc. In some cases, schedules of interest payments or enterprise forecasts of dividends may be available, and the compiler should use this information in developing projections.

Calculation of Reinvested Earnings on Direct Investment

602. In most cases, reinvested earnings on direct investment are calculated by using the accounts of direct investment enterprises.[122] There are several broad steps involved in measuring reinvested earnings. These are:

Calculate operating profit.

Calculate, from operating profit, net earnings before tax by taking into account other current earnings (such as dividend receipts, rents, net interest receipts-that is, interest receivable less interest payable), other current transactions (such as insurance claims), and the enterprise's share of the reinvested earnings of any subsidiary or associate enterprises.[123]

Calculate net earnings after tax by deducting taxes due for payment.

Derive total retained earnings by deducting dividends due for payment from net earnings after tax.

Determine each direct investor's share of retained earnings by multiplying total retained earnings by the percentage of total voting equity held by each direct investor in the enterprise.

603. All of these data should be available from the accounts of enterprises concerned and, more particularly, from enterprise income and expenditure and profit and loss statements. In practice, enterprises could be permitted to report on an individual basis or a group of related enterprises could report on a consolidated basis. To be fully consistent with requirements of the *BPM* and the *SNA*, the BOP compiler may have to make some of the adjustments that are subsequently discussed.

604. Operating profit is equal to operating revenue (or sales) plus changes in physical stocks held (inventories) less operating costs incurred in producing output. Costs incurred include materials used, wages, salaries and supplements paid, other expenses, and depreciation.

605. Depreciation should be calculated on the basis of replacement cost. However, company accounts may reflect a variety of bases, including historic cost depreciation. When advising companies on how to report, the compiler could suggest that depreciation be calculated by using current cost accounting methods and by excluding any special tax allowances for depreciation, such as accelerated depreciation allowances. Alternatively, the BOP compiler may, in conjunction with the national accounts compiler, make an aggregate adjustment, which is based upon a knowledge of company accounting practices, to depreciation estimates underlying reported reinvested earnings data. Another option is for the BOP compiler to ask companies on what basis depreciation was recorded; when replacement cost was not used, the compiler may consider making adjustments to data reported in individual collection forms.

606. Similarly, changes in physical stocks should be calculated by using current valuation accounting methods. It is important that gains in stocks arising from price changes be excluded from the calculation of changes in stocks.[124] The compiler may advise enterprises to use such methods to value the change in stocks, may make an aggregate adjustment in consultation with the national accounts compiler, or may collect (with a view to making individual adjustments to reported data) information on the method used to value the change in stocks.

607. Operating profit should be adjusted to determine net earnings before tax by taking into account other

[122]For direct investment abroad, direct investors in the compiling economy should have access to the accounts of their direct investment enterprises and should be approached for the necessary BOP information.

[123]If the consolidated accounts of a group of enterprises are used in the calculation of reinvested earnings, only the reinvested earnings from any enterprises that are outside the group and in which the group has a significant shareholding (that is, 10 percent or more) should be included in this step.

[124]The exclusion is particularly important in high inflation countries.

current earnings (such as dividends receivable), net interest receipts (interest receivable less interest payable), current transfers (such as subsidies received), and the reinvested earnings receivable from other enterprises (including enterprises located abroad). Income items should not include capital items, such as exchange rate gains and losses, proceeds from sales of assets, and provisions for write-offs of bad debts.

608. Net earnings after tax are calculated by deducting taxes due for payment from net earnings. Reinvested earnings are derived by deducting, from earned profits after tax, any dividends due for payment (or profits remitted, in the case of branches). A direct investor's share of reinvested earnings should be calculated according to the direct investor's equity share in the enterprise.

609. As previously noted, the calculation of reinvested earnings should not include reinvested earnings derived from capital items, even if these are included in enterprise profit and loss statements. For example, if an enterprise sold an asset on which it made a windfall profit—that is, the sale price of the asset was greater than the purchase price—a direct investor's share of that profit should be shown in the BOP as a distribution of capital and the subscription of new capital and not included as part of the calculation of reinvested earnings.[125]

610. Insurance enterprises may be direct investment enterprises. For purposes of calculating operating profit, the output of these enterprises should equal premiums earned, plus net income from investment, less claims due, less changes in actuarial reserves.[126] If life insurance enterprises are organized as mutual funds, all changes in the assets of these funds are attributable to policyholders. Hence, the reinvested earnings of these funds are not attributable to the enterprises that manage them.

611. Banks may also be direct investment enterprises. Operating revenue for these enterprises and other financial intermediaries should equal fee-based revenue (including imputed fees such as those from foreign exchange trading), plus property income receivable, less property income payable.[127] Of course, property income used in the calculation of operating profit should be excluded from the calculation of net earnings before tax.

612. Reinvested earnings can also be derived from examination of an enterprise balance sheet. One of the components of a balance sheet is shareholder funds. Shareholder funds may change in a period as a result of:

issues less redemptions of shares;

extraordinary items, such as capital gains and losses;

changes in revaluation reserves;

retained earnings.

613. Thus, retained earnings can be measured directly or derived by deducting the first three components from the total change in shareholder funds. However, the compiler should be aware that an enterprise balance sheet may be prepared according to accounting rules that differ from those required by the *BPM* and the *SNA*. (In particular, differences may arise with stock valuations, recording and classification of capital gains and losses, and depreciation.) The differences may have an impact on the derivation of reinvested earnings from balance sheets and, when the impact is significant, an appropriate adjustment should be made. For this reason, many BOP compilers prefer to calculate reinvested earnings by analyzing profit and loss statements (in which appropriate adjustments are more easily identified) rather than calculating reinvested earnings from balance sheets.

Recording Interest Income on an Accrual Basis

614. Interest is recorded in the BOP and the national accounts on an accrual basis.[128] That is, interest on the amount of principal outstanding is recorded as accruing continuously to the creditor. Accrued interest is the amount ultimately receivable by the creditor and payable by the debtor. Accrued interest may differ from the amount due to be paid during a specified period, and this amount may, in turn, differ from the amount actually paid in the period.

615. In the BOP, offset entries to accrued interest can take one of three forms. First, if interest is accrued during a particular period but not due for payment in that period, the offset to the accrued interest should be recorded as a financial account transaction in the same type of instrument as the underlying principal. For example, if a resident of the compiling country holds a bond issued by a nonresident enterprise, and interest of 10 is accrued but not due for payment during a particular period, the

[125] The two BOP entries required in the case of reinvested capital gains are made to the same financial account item and the result is therefore net. Consequently, it is not, in practice, necessary to measure these unless additional information beyond that required by the standard components is being provided in the BOP.

[126] For a description of these components, see chapter 12, paragraphs 551-552.

[127] Property income (in this case) is equal to investment income plus rent.

[128] The fourth edition of the BPM advocated recording interest on a due-for-payment basis.

following BOP entries should be recorded:

	Credit	Debit
Portfolio investment income		
Income on debt—bonds	10	...
Portfolio investment—assets		
Debt securities—bonds	...	10

616. When interest is actually paid—which, in the case of discount income on a security, will be when the security is redeemed—the offset to the payment should be recorded as a reduction in investment in the instrument in which the offset to the accrued interest was recorded rather than as investment income.

617. Second, if interest accrued during a particular period is paid during that period, the offset to the accrued interest is simply a transaction in the instrument by which payment is made.

618. Third, if the interest accrued during a particular period is due for payment during that period but not actually paid, the offset to the accrued interest should be shown as an increase in interest arrears, which is recorded under the other assets/liabilities item in the other investment component of the financial account. For example, if the interest accrued on country A's loans from nonresidents during a particular period is 25 and that amount is due for payment but not paid during the period, the following entries should be recorded in the BOP of country A:

	Credit	Debit
Other investment income	...	25
Other investment—liabilities		
Other liabilities	25[1]	...

[1] In analytical presentations of the BOP, this entry would be shown as part of exceptional financing.

619. When interest in arrears is actually paid, the interest should be recorded as an extinguishment of arrears rather than as investment income.

620. For securities (portfolio investment), accrued interest for a particular period should be calculated by applying the prevailing interest rate to the average market value of the security.[129] The result may differ from coupon interest payments made during the period. If coupon interest payments are higher than calculated accrued interest, the difference should be recorded as a withdrawal of investment in the underlying security. If coupon interest payments are lower, the difference should be recorded as further investment in the underlying security.[130]

621. To obtain the information necessary for properly recording accrued interest on securities, the BOP compiler could approach creditors and debtors through ES or a supplement to an ITRS. However, use of prevailing interest rates for calculation of accrued interest on securities may or may not parallel ways that debtors or creditors record interest in their accounts. Debtors may calculate accrued interest on the basis of the interest rate applicable at the time a security was issued. Creditor calculations may be based on the time a security was acquired. From the BOP point of view, such calculations lead to inaccurate results when interest rates change significantly over time. Also, interest may be recorded when coupon payments are due. This method of recording interest will have a detrimental impact on the BOP only in the case of zero coupon and deep discounted bonds.[131] In each of these cases, the compiler should make adjustments when the impact is significant.

622. For other types of debt, accrued interest should be calculated in accordance with interest terms specified in the contract. For example, if a contract specifies a fixed-interest rate of 10 percent each year, the accrued interest for each year should be calculated as 10 percent of the amount outstanding. On the other hand, if floating interest rates are applicable to debt, the prevailing rate appropriate to the debt instrument should be used to calculate accrued interest.

623. The nature of an ITRS makes it more difficult to measure interest on an accrual basis than on a payment basis. Nonetheless, an ITRS can be used as a source for measuring investment income in the balance of payments because interest, in many cases, is paid in the periods in which it is accrued. The compiler need only be concerned about collecting supplementary information for significant cases in which interest is not paid in the same period in which it is accrued (for example, interest in arrears

[129] For a discussion on compiling estimates of stocks of securities at market values, see chapter 16, paragraphs 732-743.

[130] The first-mentioned case—that is, coupon payments are greater than accrued interest—can only occur for securities issued or trading at a premium. In these cases, the coupon interest payments contain an element representing "repayment" of the premium—hence the recording of a decrease in investment when the coupon payment is made. The opposite case—that is, coupon payments are less than accrued interest—can only occur for securities issued or trading at a discount. In these cases, coupon interest payments represent only a part of the creditor's return; the other part is the discount itself, which is payable at redemption. Accordingly, an increase in investment reflecting accrual of the discount is reflected in the BOP.

[131] For a full discussion of BOP recording issues associated with these types of bonds, see chapter 16, paragraphs 760-762.

and interest on zero coupon and deep discounted bonds).

624. Conversely, the use of yield analysis to derive estimates of investment income accords closely with the requirements of accrual accounting. The compiler should be aware, however, of situations in which prevailing interest rates are not relevant for the calculation of accrued interest—that is, in the case of fixed interest, nontradable debt—and should ensure that these are considered in the calculation of interest yields.[132]

Financial Intermediation Services Indirectly Measured (FISIM)

625. The *SNA* recommends that national accounts compilers should compile financial intermediation services indirectly measured (FISIM). These consist of services that (a) are provided by financial intermediaries but not explicitly charged and (b) may be imputed or derived from the difference between an appropriate reference interest rate (such as the interbank or central bank rate) and interest rates actually applied to loans or debt securities (rates paid by borrowers) and deposits (rates received by depositors).[133] The *SNA* allows some flexibility in recording FISIM. National accounts compilers in some countries may prefer to record FISIM as intermediate consumption of a nominal industry that has no implications for the BOP. Compilers in other countries may wish to allocate FISIM to users of the services.

626. In the second case, if users and providers of FISIM are residents of different countries, supplementary information may be provided in the BOP to meet national account requirements. The *BPM*, unlike the *SNA*, does not require reclassification of FISIM from interest to services.

627. For interest receivable by financial intermediaries, FISIM are components of actual interest. For interest payable by financial intermediaries, the actual interest is the difference between the amount that would have been payable if the reference rate had been used to calculate interest and FISIM. In both cases, the service provider is the financial intermediary.

628. The following example illustrates supplementary entries in BOP accounts. In a particular period, the nonbank enterprise sector in country A earns 52 units of interest on bank deposits of 1,300 units (denominated in currency B) in country B and pays 48 units of interest on bank loans of 800 units (denominated in currency B) from country B. Therefore, in the period, the average interest rate on currency B bank deposits (earned by the nonbank enterprise sector in country A) was 4 percent, and the average interest rate (paid by the nonbank enterprise sector in country A) on bank loans was 6 percent. The interbank rate (the reference rate) for currency B was 5 percent. The imputed service charge earned, in respect of currency B, by banks in country B from the nonbank sector in country A would be 1 percent of the value of both deposits and loans; the imputed service charge would be calculated as the difference between actual rates and the reference rate. Relevant entries in the BOP for country A would be:

	Credit	Debit
Income		
Other investment		
Financial intermediation services indirectly measured	...	13 + 8[2]
Other interest	65[1]	40[3]
Financial account (net)	...	4

[1]Equals the interest receivable on deposits plus FISIM applicable to deposits

[2]Equals 1 percent of deposits plus 1 percent of loans

[3]Equals the interest payable on loans less FISIM applicable to loans

629. Gross income entries shown in the example are different from those that would be shown if FISIM were not recorded. However, net entries are the same.

630. The calculations previously described would have to be made for both portfolio and other investment interest income.[134] To make such calculations, the compiler should collect—possibly on a periodic and selective basis—data on interest rates applicable to each instrument and currency and monitor changes in interest rates. For this purpose, it may be necessary to collect periodic data, from which yield data may be calculated, on the currency of denomination of both stock positions and income classified by broad instrument and sector. The difference between the yield and the reference rate of interest is the imputed service charge, which should be applied to

[132]This information could, for example, be obtained from a sample of nontradable debt agreements between residents and nonresidents.

[133]A separate reference rate should be used for each currency. For some currencies, the (interbank) reference rate may vary from market to market. For example, the interbank rate for U.S. dollars in Europe (Eurodollars) may differ from the U.S. dollar interbank rate in the United States. Nevertheless, the rate applicable to the country that issues the currency should suffice for most compilation purposes. For example, for assets and liabilities denominated in U.S. dollars, the reference rate should be that used in the United States.

[134]FISIM are not applicable to direct investment because any financial intermediation between enterprises in a direct investment relationship should be treated as portfolio or other investment.

the stock of debt to calculate FISIM. Alternatively, data on stock positions and income classified by broad instrument, currency, and sector could be used in conjunction with data on interest rates collected selectively from transactors. The difference between reference rates and average actual interest rates for each currency, instrument, and sector would be applied to stocks of debt to calculate FISIM. If the BOP compiler prepares FISIM estimates, he or she should work closely with the national accounts compiler.