Annex 7. Selected Financial Issues (new annex)

I. Financial Derivatives

Overview

A. Definition

A7.1 *A financial derivative contract is a financial instrument that is linked to another specific financial instrument or indicator or commodity and through which specific risks (such as interest rate risk, foreign exchange risk, equity and commodity price risks, credit risk, and so on) can be traded in their own right in financial markets*. Transactions and positions in financial derivatives are treated separately from the values of any underlying items to which they are linked.

A7.2 The risk embodied in a financial derivative contract can be traded either by trading the contract itself, as is possible with options, or by creating a new contract embodying risk characteristics that match, in a countervailing manner, those of the existing contract. The latter practice, which is termed offsetability, occurs in forward markets. Offsetability means that it is often possible to eliminate the risk associated with a derivative by creating a new but "reverse" contract having characteristics that countervail the risk underlying the first derivative. Buying the new derivative is the functional equivalent of selling the first derivative because the result is the elimination of the underlying financial risk. The ability to countervail the underlying risk in the market is therefore considered the equivalent of tradability in demonstrating value. The outlay that would be required to replace the existing derivative contract represents its value; actual offsetting is not required.

A7.3 In many cases, derivatives contracts are settled by payments of net amounts in cash, rather than by the delivery of the underlying items. Once a financial derivative reaches its settlement date, any unpaid overdue amount is reclassified as other accounts receivable/payable, as its value is fixed, and thus the nature of the claim becomes debt.

A7.4 The following types of financial arrangements are not financial derivatives:

a) A fixed-price contract for goods and services is not a financial derivative unless the contract is standardized so that the market risk therein can be traded in financial markets in its own right. For example, an option to purchase an aircraft from the manufacturer is not classified as a financial derivative.

b) Insurance and standardized guarantees are not financial derivatives. Insurance involves the collection of funds from policyholders to meet future claims arising from the occurrence of events specified in insurance policies. That is, insurance and standardized guarantees are used to manage event risk primarily by the pooling, not the trading, of risk. However, some guarantees other than standardized guarantees meet the definition of financial derivatives (as covered in paragraph 5.68).

c) Contingent assets and liabilities, such as one-off guarantees and letters of credit, are not financial assets (as discussed in paragraphs 5.10–5.13).

d) Instruments with embedded derivatives are not financial derivatives. An embedded derivative arises when a derivative feature is inserted in a standard financial instrument and is inseparable from the instrument. If a primary instrument, such as a security or loan, contains an embedded derivative, the instrument is classified according to its primary characteristics—even though the value of that security or loan may well differ from the values of comparable securities and loans because of the embedded derivative. Examples are bonds that are convertible into shares, and securities with options for repayment of principal in currencies that differ from those in which the securities were issued. However, detachable warrants are treated as separate financial derivatives, because they can be detached and sold in financial markets.

e) Timing delays that arise in the normal course of business and may entail exposure to price movements do not give rise to financial derivatives. Timing delays include normal settlement periods for spot transactions in financial markets.

f) Gold swaps and most central bank swap arrangements are not financial derivatives (as discussed in pargaraphs 5.55

and 6.102-104).[1]

g) Subscription rights are classified as equity, rather than financial derivatives, since the sum of the value of the shares after the subscription issuance and that of subscription rights represents the total value of the corporation that issued the subscription rights.

B. Types of financial derivatives

A7.5 There are two broad types of financial derivatives—option-type contracts and forward-type contracts. Option-type of contracts entail two payment streams, a "premium leg", comprising of fixed payments from the buyer to the seller, and a "contingent leg", comprising payments from the seller to the buyer depending on the underlying asset's pricing, whereas forward-type contacts entail contingent payments between the parties involved depending on the underlying asset's pricing. The contingent leg in an option-type contract usually entails a single payment at maturity; the premium leg in standard put and call options consists in a single payment at inception.

A7.6 Option-type contracts can be contrasted with forward-type contracts in that:

(a) at inception, there is usually no up-front payment for a forward-type contract and the derivative contract begins with zero value, whereas there is usually a premium paid for an option-type contract representing a nonzero value for the contract;

(b) during the life of the contract, for a forward-type contract, either party can be creditor or debtor, and it may change, whereas for an option-type contract, the buyer is always the creditor and the writer is always the debtor except for contractsa with multiple payments in the premium leg such as credit default swaps;[2] and

(c) at maturity, redemption is unconditional for forward-type contracts, whereas the buyer of the contract determines it for standard call and put option contracts.

1. Option-type contract

A7.7 In an option-type contract (option), the purchaser acquires from the seller a right to buy or sell (depending on whether the option is a call (buy) or a put (sell)) a specified underlying item at a strike price on or before a specified date. The purchaser of an option pays a premium to the writer of the option. In return, the buyer acquires the right but not the obligation to buy (call option) or sell (put option) a specified underlying item (real or financial) at an agreed-on contract price (the strike price) on or before a specified date. (On a derivatives exchange, the exchange itself may act as the counterparty to each contract.).

A7.8 Warrants are a form of financial derivative option giving the owner the right but not the obligation to purchase from the issuer of the warrant a fixed amount of an underlying asset, such as equities and bonds, at an agreed contract price for a specified period of time or on a specified date. Although similar to other traded options, a distinguishing factor is that the exercise of the warrants can create new securities, thus diluting the capital of existing bond or shareholders, whereas traded options typically grant rights over assets that are already available. If attached to bonds (warrant-linked bonds) to allow for a lower coupon payment, the warrants are not treated as separate financial asset (see 5.83 (d)). Warrants also include covered warrants. A covered warrant is generally issued by a financial corporation and gives the holder the right, but not the obligation to buy or sell an underlying asset, at an agreed contract price for a specified period of time or on a specified date. A covered warrant allows the holder to buy or sell a variety of financial or non-financial items (e.g., equities, currencies, and commodities).

2. Forward-type contract

A7.9 *A forward-type contract (forward) is an unconditional contract by which two counterparties agree to exchange a specified quantity of an underlying item (financial or non-financial) at an agreed-on contract price (the strike price)*

[1] Most central bank swap arrangements have different pricing and/or conditions from those for a standard market priced currency swap. If a central bank swap arrangement follows pricing and conditions of a regular market priced swap, it should be recorded as a financial derivative.

[2] Credit default swaps are generally regarded as option-type contracts. However, either party of a credit default swap contract can be creditor or debtor.

on a specified date. Forward-type contracts include futures and swaps (other than as discussed in paragraph A7.11. Forward-type contract is used as a term because the term "forward" is often used more narrowly in financial markets (often excluding swaps). Forward rate agreements and forward foreign exchange contracts are common types of forward-type contracts.

A7.10 Futures are forward-type contracts traded on organized exchanges. The exchange facilitates trading by determining the standardized terms and conditions of the contract, acting as the counterparty to all trades, and requiring margin to be deposited and paid to mitigate against risk.

A7.11 At the inception of a forward-type contract, risk exposures of equal market value are exchanged, so a contract typically has zero value at that time. As the price of the underlying item changes, the market value will change, although it may be restored to zero by periodic settlement during the life of the forward. Asset and liability position of financial derivative contracts may switch except for those of standard option contracts.

Swap contracts

A7.12 *A swap contract involves the counterparties exchanging, in accordance with prearranged terms, financial instruments or cash flows based on the reference prices of the underlying items*. Swap contracts classified as forward-type contracts include foreign exchange swaps, currency swaps, interest rate swaps, and cross-currency interest rate swaps. Under a swap contract, the obligations of each party may arise at different times, for example, an interest rate swap for which payments are quarterly for one party and annual for the other. In such cases, the quarterly amounts payable by one party prior to payment of the annual amount payable by the other party are recorded as transactions in the financial derivative contract. Other types of arrangements also called swaps but not meeting the definition above include gold swaps (see paragraphs 5.55 and 7.58 for a discussion of their treatment), central bank swap arrangements (see paragraphs 6.102–6.104), and credit default swaps (see paragraph 5.93).

A7.13 For financial derivative contracts involving foreign currency, such as currency swaps, it is necessary to distinguish between a transaction in a financial derivative contract and transactions in the underlying currencies. At inception, the parties' exchange of the underlying financial instruments is usually classified under other investment. At the time of settlement, the difference in the values, as measured in the unit of account at the prevailing exchange rate, of the currencies swapped are allocated to a transaction in a financial derivative, with the values swapped recorded in the relevant other item (usually other investment).

A7.14 For foreign currency financial derivative contracts that could involve the exchange of principal (e.g., foreign exchange swaps, currency swaps, and foreign exchange forwards), the amount of principal to be returned/delivered at maturity is not recorded as a liability on the balance sheet. To capture these off-balance sheet items, scheduled payments and receipts of foreign currencies associated with these financial derivatives are to be compiled as described in A7.43-A7.45.

Credit derivatives

A7.15 *Credit derivatives are financial derivatives whose primary purpose is to trade credit risk*. They are designed for trading in loan and security default risk. In contrast, the financial derivatives described in the previous paragraphs are mainly related to market risk, which pertains to changes in the market prices of securities, commodities, interest, and exchange rates. Credit derivatives take the form of both forward-type (total return swaps) and option-type contracts (credit default swaps).[4] Under a credit default swap, premiums are paid in return for a cash payment in the event of a default by the debtor of the underlying instrument. Like other financial derivatives, credit derivatives are frequently drawn up under standard master legal agreements and involve collateral and margining procedures, which allow for a means to make a market valuation.

3. Other issues associated with financial derivatives

Margins

A7.16 Margins are payments of cash or deposits of collateral that cover actual or potential obligations incurred. The required provision of margin reflects market concern over counterparty risk and is standard in financial derivative markets, especially futures and exchange-traded options. :

[4] Credit default swaps also have some characteristics for forward-type contracts (e.g., potential switch of the credi-tor-debtor positions for both parties).

A7.17 Ownership of the margin remains with the unit that deposited it. Margin payments in cash are classified as deposits (if they are liabilities of a deposit-taking corporation or are included in broad money), loans, or other accounts receivable/payable.[5] When a repayable margin deposit is made in a noncash asset (such as securities), no transaction is recorded because no change in economic ownership has occurred.In organized exchanges and clearing houses, margins are increased or decreased as a result of settling profits/losses of the derivative contracts by marking them to market value often on a daily or intraday basis. They are recorded as an increase or decrease in deposits, loans, or other accounts receivable/payable with a cressponding entry in a decrease in financial derivative assets or liabilities. If the margin falls short of a required level (often called a maintenance margin), an additional margin must be posted to meet the requirement. This payment is not to settle a financial derivative contract and should not be recorded in financial derivatives.

These principles for the classification of margins also apply more generally to other cash collateral agreements, including margin calls relating to positions in other financial assets.

Employee stock options

A7.18 *Employee stock options (ESOs) are options to buy the equity of a company, offered to employees of the company as a form of remuneration*. In a few cases, the company that issues the option is a resident of a different economy from the employee (e.g., where the employer is a branch or subsidiary of the company to which the option relates). ESOs have similar pricing behavior to financial derivatives, but they have a different nature—including arrangements for the granting and vesting dates—and purpose (i.e., to motivate employees to contribute to increasing the value of the company, rather than to trade risk). If a stock option granted to employees can be traded on financial markets without restriction, it is classified as a financial derivative.

A7.19 In some cases, stock options may be provided to suppliers of goods and services to the enterprise. Although these are not employees of the enterprise, for convenience they are also recorded under ESOs because their nature and motivation are similar. (Whereas the corresponding entry for stock options granted to employees is compensation of employees as discussed in paragraph 11.20, the corresponding entry for stock options granted to suppliers is the goods and services supplied.)

A7.20 For transactions associated with the issue of ESOs, see paragraph 8.41.

C. Financial derivatives in functional category

A7.21 The functional categories are the primary classification used for each of financial transactions, positions, and income in the international accounts. Five functional categories of investment are distinguished in the international accounts:

(a)direct investment,
(b)portfolio investment,
(c)financial derivatives (other than reserves) and ESOs,
(d)other investment, and
(e)reserve assets.

A7.22 The functional categories are built on the classification of financial assets and liabilities discussed in Chapter 5, but with an additional dimension that takes into account some aspects of the relationship between the parties and the motivation for investment. The functional categories are designed to facilitate analysis by distinguishing categories that exhibit different economic motivations and patterns of behavior.

A7.23 The definition of the functional category financial derivatives and ESOs (other than reserves) largely coincides with the corresponding financial instrument class, which is discussed in detail in paragraphs 5.79–5.98. The difference in coverage between the functional category and the financial instrument is that financial derivatives associated with reserve asset management are excluded from the functional category and included in reserve assets (see paragraph 6.91). This category is identified separately from the other categories because it relates to risk transfer, rather than

[5] Some compilers may prefer to classify these margins within loans or other accounts receivable/ payable in order to reserve the term “deposits” to monetary aggregates.

supply of funds or other resources.

A7.24 Unlike other functional categories, no earned income accrues on financial derivatives. Any amounts accruing under the contract are classified as revaluations and are included in the other changes in assets and liabilities account. (These entries are discussed in paragraphs 9.30–9.31.) In addition, as noted in the footnote to paragraph 10.121, an intermediary may provide services associated with transactions in derivatives.

A7.25 Recording of financial derivatives separately for both assets and liabilities is encouraged for both positions and transactions. However, it is recognized that measuring transactions on a gross basis may not be feasible, in which case net reporting is acceptable. For example, in cases where several payments by both counterparties are made in a period when a derivative contract switches between asset and liability positions (e.g., forwards and swaps) gross recording may be impractical. In such cases, net recording is acceptable by recording net payments as a reduction in liabilities for one party and a decrease in assets for the other.Information on financial derivatives (other than reserves) and ESOs is included in Chapter 5 (conceptual framework and classifications), Chapter 6 (functional category), Chapter 7 (concerning positions), Chapter 8 (concerning financial account transactions), and Chapter 9 (concerning revaluations); no investment income arises (see paragraph 11.95).

D. Valuation

A7.26 Financial derivatives and ESOs are valued at market prices prevailing on balance sheet recording dates. If market price data are unavailable, other fair value methods (such as option models or present values) may be used to value them. Compilers are generally constrained to use the parties' own accounts. The value of a derivative contract can change if payments are made before the derivative contract expires (such as payments in interest swaps). , These changes in the value of the contracts due to the payments between the two parties are recorded as transactions (not as revaluations). .

A7.27 A key characteristic of many derivative contracts is that the counterparties make commitments to transact, in the future and at agreed-on prices, in underlying items. The present value (or market price) of a financial derivative is derived from the difference between the agreed-on contract price of an underlying item and the prevailing market price (or the market price expected to prevail), appropriately discounted, for that item. For options, the price depends on the potential price volatility of the underlying instrument, the time to maturity, interest rates, and the difference between the strike price and the market price of the underlying item. The counterpart liability is attributable, to the writer of the option and is valued at the current cost of buying out the rights of the option holder. For a warrant, the counterpart liability of the issuer is the current outlay required to buy out the exercise rights of the holder. The value of a credit default swap is determined by the difference between the present value of the series of premium payments and the estimated present value of the potential payments in the event of default. The value of a swap contract is derived from the difference, appropriately discounted, between expected gross receipts and gross payments.

A7.28 The market value of financial derivivative contracts except for standard option contracts can switch from an asset position to a liability position (and vice versa) between reporting dates. The switch is a result of movement in the price of the underlying item(s) from which the value of the derivative contract is derived. When a switch in position occurs (and there are no settlement payments), the market value of the gross asset or liability position at the close of the previous accounting period is revalued to zero, and the gross liability or asset position is revalued from zero to the market value at the end of the present accounting period.

A7.29

Gross asset and gross liability data should be compiled by summing, respectively, the values of all individual contracts in asset positions and the values of all individual contracts in liability positions. The notional value (sometimes called notional amount or nominal amount) of a financial derivative is the amount underlying a financial derivative contract that is necessary for calculating payments or receipts on the contract. This amount may or may not be exchanged. The notional values are useful for analysis because they provide information about the risk exposure and assist in understanding the link between financial derivatives and the underlying items to which they relate. See paragraphs 7.37 and A7.43-45 for compiling currency composition of notional values for foreign exchange related financial derivatives.

A7.30 Any value changes in financial derivatives are classified as revaluations and are included in the other changes for both assets and liabilities (BPM6, paragraph 6.59). Financial derivatives that include a foreign exchange risk are a case where the steps for separating revaluations into exchange rate changes and other price changes, as stated in paragraph 9.28, are not applicable. In those cases, a valuation change due to exchange rate changes can arise even in the currency of denomination of the instrument. In some cases, such as cross-currency swaps that are also interest

rate swaps, it may not be practical to separate exchange rate revaluations from other price changes, so a convention that all revaluation effects are due to other price revaluations may be adopted.

A7.31 Cumulation of transactions should never be used to estimate financial derivative positions. Transactions relate largely to those in option-type contracts and to settlements. Settlements eliminate positions, while the value of derivatives positions emerges largely from revaluation.

A7.32 ESOs are valued consistently with the cumulated compensation of employees until the vesting date (see paragraphs 11.20–11.21); thereafter, they are valued at market prices (see paragraph 9.30). ESOs can be measured from a market value of equivalent options or according to an options-pricing model, such as Black-Scholes. International accounting standards give guidance on methods, and recording in the international accounts normally will follow business accounts.

E. Recording of financial derivatives (i) at inception, (ii) in secondary market, (iii) on servicing and margins, (iv) at settlement, and employee stock options

A7.33 Transactions involving financial derivatives may arise at inception, on secondary markets, with ongoing servicing (such as payments in a interest rate swap), and at settlement. Financial account entries for derivatives preferably should be shown separately for each of assets and liabilities, wherever possible, but net settlements are acceptable when gross reporting is impractical. Any explicit or implicit service charges should be deducted from the value of the financial derivative. However, distinguishing implicit service charges is not usually possible, in which case, the entire value of the financial derivative is classified as being for the financial asset.

A7.34 The exchanges of claims and obligations at the inception of a derivative contract are financial transactions creating asset and liability positions that normally have, at inception, zero value if the instrument is a forward-type contract and value equal to the premium payable if the instrument is a option-type contract. Changes in the value of derivatives due to change in the underlying item are recorded as revaluation. (Changes in the value of derivatives to or from zero are classified as revaluation, not economic appearance or disappearance of assets.)

1. At inception

(a) The creation of a forward-type contract does not generally require the recording of a transaction in a financial derivative because risk exposures of equal value are usually being exchanged. That is, there is usually zero exposure and zero value for both sides. In some cases, however, there may be a nonzero transaction value at issue.

(b) The purchaser of a option-type contract pays a premium to the seller, which is the acquisition price of the instrument. Sometimes a premium is paid after the inception of the contract. In that case, the value of the premium is recorded at the inception of the contract in the same manner as if it had been paid then, but is shown as being financed by accounts receivable/payable between the writer and the purchaser.

Subsequent changes in the prices of derivatives are recorded as revaluations, not as transactions (see paragraphs 9.30–9.31).

2. Transactions in the secondary market

A7.35 Sales of options in secondary markets—whether exchanges or over the counter—are valued at market prices and recorded in the financial account as transactions in financial derivatives.

3. Servicing and margins

A7.36 When a contract requires ongoing servicing (such as payments in an interest rate swap) and a cash payment is received, there is a decrease (increase) in a financial derivative asset (liability) if, at the time of the payment, the contract is in an asset (liability) position. If compilers are unable to implement this approach because of market practice, all cash receipts should be recorded as reductions in financial assets, and all cash payments should be recorded as decreases in liabilities.

A7.37 If margins keep being increased or decreased to settle a profit or loss as a consequence of the marking of derivatives to market value on an ongoing basis, they are recorded as an increase or decrease in deposits, loans, or

other accounts receivable/payable with a corresponding entry in a decrease in financial derivative assets or liabilities.

4. At settlement

A7.38 At settlement, either a cash payment is made or an underlying item is delivered.

(a) When a financial derivative is settled in cash, a transaction equal to the cash value of the settlement is recorded for the derivative. In most instances, when a cash settlement payment is received, a reduction in a financial derivative asset is recorded. When a cash settlement payment is made, a reduction of a financial derivative liability is recorded.

(b) When an underlying item is delivered, two transactions are recorded:

i. The transaction involving the underlying item is valued at the market price at the time. The entry for the underlying item is recorded under the relevant heading (goods, financial instrument, etc.).

ii. The transaction involving the derivative is valued as the difference, multiplied by the quantity, between the market price for the underlying item and the strike price specified in the derivative contract.

(c) When more than one contract is settled—in cash, at the same time, and with the same counterparty—some of the contracts being settled are in asset positions and some are in liability positions. In this situation, transactions involving assets should be recorded separately from those involving liabilities, wherever possible, but net settlements are acceptable when gross reporting is impractical.

5. Employee stock options

A7.39 An ESO is created on a given date (the "grant" date), providing that an employee may purchase a given number of shares of the employer's stock at a stated price (the "strike" price) either at a stated time (the "vesting" date) or within a period of time (the "exercise" period) immediately following the vesting date. Transactions in ESOs are recorded in the financial account as the corresponding entry to the compensation of employees (as discussed in paragraph 11.20) or direct investment (paragraph 11.21). When the option is exercised, the transaction in the ESO is recorded in the financial account at a value that reflects the difference between the market price of the equity and the price paid by the buyer for the equity (see also paragraph 8.40(a) and (b)).

A7.40 Cancellation of ESOs is discussed in paragraph 9.12. Changes in the values of ESOs at or after the vesting date are revaluations (see paragraphs 3.59, 7.39, and 11.20). (In practice, it may be feasible to recognize the revaluation only at exercise date.) ESOs do not generally raise separate issues to those for financial derivatives, but one special case occurs when an employee of a subsidiary is issued options for stock in the parent company. Because the parent is not the employer, the subsidiary is shown as acquiring the option from the parent. (If the subsidiary pays nothing or an unrealistic value to the parent, a value may be imputed, possibly in direct investment, as discussed in paragraph 11.101 on transfer pricing.).

F. Specific issues related to financial derivatives

1. Additional breakdowns

A7.41 Financial derivatives can be further classified in many other ways. They include the following:

1) *By market risk categories:* foreign exchange risk, interest rate risk, equity and commodity price risks and credit risk or risks to other underlying instruments;

2) *By instrument:* options, forwards and related instruments (i.e., futures), swaps, credit derivatives, ESOs, and other instruments;

3) *By trading venue and clearing status:* exchange traded; over-the-counter (OTC) (with clearing); OTC (without clearing)

A7.42 Particularly, the information from the classification by market risk category of the underling instrument is often used to analyze financial markets and macroeconomy. Each market risk category has distinctive characteristics:

(a) **Foreign exchange derivatives** involve the exchange of currencies in the forward market. They include all contracts involving exposure to more than one currency, whether in interest rates or exchange rates, and cover outright forwards, foreign exchange swaps, currency swaps (including cross-currency interest rate swaps) and currency options.

(b) **Single currency interest rate derivatives** are restricted to those deals where all the legs are exposed to only one currency's interest rate. These are contracts related to an interest-bearing financial instrument whose cash flows are determined by referencing interest rates or another interest rate contract (e.g., an option on a futures contract to purchase a Treasury bill). They include forward rate agreements, single-currency interest rate swaps and interest rate options, including caps, floors, collars and corridors, but exclude contracts involving the exchange of currencies (e.g., cross-currency swaps and currency options) and other contracts whose predominant risk characteristic is foreign exchange risk.

(c) **Equity derivatives** contracts have a return, or a portion of their return, linked to the price of a particular equity or to an index of equity prices.

(d) **Commodity derivatives** are contracts that have a return, or a portion of their return, linked to the price or to a price index of a commodity such as a precious metal, petroleum, lumber or agricultural products.

(e) **Credit derivatives** are contracts in which the payout is linked primarily to some measure of the creditworthiness of a particular reference asset. They specify an exchange of payments in which at least one of the two legs is determined by the performance of the reference asset. Payouts can be triggered by a number of events, including a default, a rating downgrade, or a stipulated change in the credit spread of the reference asset. Typical credit derivative instruments are credit default swaps, credit-spread forwards and options, credit event or default swaps and total return swaps.

(f) **Other derivatives** are any other derivative contracts, which do not involve an exposure to foreign exchange, interest rate, equity, commodity or credit risk. They include inflation-indexed derivatives, volatility derivatives, dividend derivatives, weather derivatives, property derivatives or freight derivatives as well as any derivatives with a non-standard underlying item which are developed for a particular client.

A7.43 In practice, however, individual financial derivatives may straddle more than one risk category. In such cases, financial derivatives that are simple combinations of exposures should be reported separately in terms of their individual components. Those that cannot be readily broken down into separable risk components should be reported in only one risk category. The allocation of such products with multiple exposures should be determined by the underlying risk component that is most significant. However, if there is doubt about the correct classification of multi-exposure financial derivatives, the allocation by risk component should be made according to the order of precedence adopted by the BIS: commodities, equities, foreign exchange, and single-currency interest rate, credit, and other.

2. Currency composition of notional values of foreign exchange derivatives

A7.44 In balance of payments and IIP, financial derivative contracts are recorded at market value (or at fair value when market value is not available). In terms of foreign exchange related financial derivatives, such as foreign exchange forwards, foreign exchange swaps and currency swaps, their notional values also provide useful information to assess currency exposures of the economy. Foreign exchange forwards, foreign exchange swaps, and currency swaps have debt-like characteristics because they may require delivery of the principal amount (i.e., notional value/amount) at maturity. However, as these obligations are not carried on the balance sheet (nor recorded as a liability in IIP), the currency composition of the notional values of foreign exchange related financial derivatives are to be compiled in the Tables I-III in Annex 14, along with the currency composition for debt instruments carried on the balance sheet (see paragraph 7.37).[6]

[6] The tables for the notional values of foreign exchange forwards, foreign exchange swaps, and currency swaps are memorandum items, and thus are required reporting. The tables for the notional values of foreign exchange related options are supplementary items, since the delivery of foreign exchange is conditional for options.

A7.45 Several foreign exchange derivatives products – in particular foreign exchange swaps, currency swaps and foreign exchange forwards – have properties that make them special. In a foreign exchange swap or currency swap, two parties typically exchange currencies at the spot price and commit to reverse the exchange at some pre-agreed future date and price (the forward rate). Once the spot transaction is complete, the position is indistinguishable from an outright foreign exchange forward position. Traded amounts in these instruments typically require two-way payments at maturity. This exchange of principal distinguishes these instruments from other types of derivatives (e.g., interest rate swaps) where relatively small payments are made to reflect differences in rates of returns based on a notional amount. The payment obligations from foreign exchange swaps, currency swaps and forwards can be large. Contracts are typically short term. Thus, markets for these products are subject to squeezes when foreign-currency-funding conditions deteriorate As happened during the Great Financial Crisis and again in March 2020 when the Covid-19 pandemic went global. Yet, under standard accounting treatments, the payment obligations associated with these products are not recorded on the balance sheet.

A7.46 Additional information about the payment obligations from foreign exchange derivatives helps users of the IIP form a more complete view of the currency profile in a country's IIP position. Specifically, a comprehensive picture of a country's gross and net foreign currency positions, which are important in financial stability analysis, requires information about future payment obligations and receipts that arise from positions carried both on and off the balance sheet. Annex Tables XX that capture off-balance sheet payment obligations from foreign exchange derivatives are designed to be used in conjunction with Annex Tables YY that capture the currency breakdown of on-balance sheet positions. The combination of the information in these tables provides users with more complete measures of countries' and sectors' external foreign currency positions.

(These tables will be refined at a later stage. Non-deliverable forwards could be identified separately as you suggested earlier.)

Table A9-I-1b. Financial Derivative Positions with Nonresidents
Foreign Currency Derivatives: Notional Value of Contracts with Nonresidents[8]

	Central bank	General government	Deposit-taking corporations, except the central bank	Other sectors[5]			Inter-company lending	Total
				Total	OFC	Other		
Receive foreign currency							n.a.	
U.S. dollar							n.a.	
Euro							n.a.	
Yen							n.a.	
Other currencies							n.a.	

[1]Table A9-I is a memorandum item.

[2]Excluding reserve assets.

[3]See paragraph 5.107 on when currency data is shown as unallocated.

[4]Original maturity.

[5]OFC = other financial corporations, Other = nonfinancial corporations (except intercompany lending), households, and NPISHs.

[6]Data on debt instruments from the direct investment category. Intercompany lending (as defined in paragraph 6.26) is classified as long-term by convention. Intercompany lending is excluded from data for the other sectors.

[7]Total reserve assets.

[8]Data on notional value of derivatives in this table should include those derivatives that swap foreign currency liabilities into domestic currency (e.g., if the monetary authority issues a foreign currency bond and uses a foreign currency swap contract with a nonresident to swap the proceeds into domestic currency, the notional value of the swap contract to receive foreign currency when the swap contract matures should be reported in the Table I-1b). For similar foreign currency derivative transactions with residents, similar data on notional positions with other residents could be considered.

Table A9-I-2b. Financial Derivative Positions with Nonresidents
Foreign Currency Derivatives: Notional Value of Contracts with Nonresidents

	Central bank	General government	Deposit-taking corporations, except the central bank	Other sectors[2]			Inter-company lending	Total
				Total	OFC	Other		
Pay foreign currency							n.a.	
U.S. dollar							n.a.	
Euro							n.a.	
Yen							n.a.	
Other currencies							n.a.	

[1]Original maturity.

[2]OFC = other financial corporations, Other = nonfinancial corporations (except intercompany lending), households, and NPISHs.

[3]Data on debt instruments from the direct investment category. There is no original maturity breakdown for intercompany lending (as defined in paragraph 6.26); see also paragraph 5.103 on maturity for direct investment). Intercompany lending is excluded from data for the other sectors.

BOX A7.1 Recording of post trading activities in financial derivatives

1. The 2008 financial crisis triggered several legislative actions around the world, particularly in the European Union and in the United States, to mitigate the risk of financial derivatives' trading. Regulations such as the EMIR in the European Union and the Dodd Frank Act in the United States changed considerably the landscape of the financial derivatives markets by introducing, amongst others, stricter clearing and reporting obligations. These changes brought along so-called post-trade processes, which are necessary for the completion of the trade, including novation, clearing, portfolio compression, and collateral management. These processes are conducted by specialized financial infrastructure providers including central clearing counterparties (CCPs). Central clearing is required in the European Union for certain classes of financial derivatives. **This box provides methodological guidance for the recording of novation and portfolio compression as financial transactions.**

2. **Novation** is a process in which a bilateral OTC derivative contract between two market participants is replaced by two bilateral contracts between each of the market participants and a CCP. An important factor in the recording of novation is the timing between entering the initial contract and the novation. If the novation process takes place immediately after the initial contract (i.e., within the reporting time frame of the entities involved) only the (novated) contracts vis-à-vis the CCP have to be reported. However, there may be cases in which novation takes place with a significant delay after entering the initial contract. In such cases, both counterparts of the original contract should report two (offsetting) transactions for the reference period(s) when they take place: one transaction terminating the initial contract (e.g., extinguishing an asset position in financial derivatives) and a second transaction creating an asset position in financial derivatives of equal market value vis-à-vis the CCP. The CCP thus becomes the new counterpart to both initial parties and takes over the risks and rewards associated with the contract. In case the two initial parties are not clearing members of the CCP, each side of the bilateral contract may be replaced by two, rather than one contract—one between the initial entity and the clearing member, and another one between the clearing member and the CCP, giving rise in total to four transactions/positions.[7] The country (countries) of residence of the initial entities, the clearing member, and the CCP is decisive in determining whether a novated contract is recorded in cross-border statistics and how it is treated in national accounts (see Example 1 for more details).

3. **Portfolio compression** refers to a bilateral or multilateral process in which the counterparties wholly or partially terminate the derivatives submitted for inclusion in the portfolio compression and replace the terminated derivatives with new derivative(s) whose combined notional value is less than the combined notional value of the terminated derivatives.

4. In particular, a number of contracts between market participants are replaced by new (fewer) contracts. Consequently, all counterparties involved in the compression process should report a number of offsetting transactions: (i) transactions terminating the initial contracts (extinguishing asset/liability positions in financial derivatives) and (ii) transactions creating new asset/liability positions in financial derivatives. While the overall net

[7] The relationship between the client and the clearing member may take two main forms: the agency model or the principal-to-principal model. Under the agency model, the clearing member acts as an agent on behalf of the client and is not considered as a counterparty to a derivative transaction. Under the principal-to-principal model, each party acts on their own behalf, which implies that for cleared derivatives there will usually be two derivative contracts: one between the client and the clearing member, and another on between the clearing member and the CCP. The distinction whether the clearing member acts as an agent or as a principal is based on the risk exposure (economic as well as counterpart) with regard to the derivative contract according to the contractual arrangements with the client.

positions of the involved parties should remain unchanged, the post-compression gross positions can be quite different compared to the initial positions. Moreover, the bilateral counterparts of the new transactions and positions may also differ considerably from the original ones. Hence, a comprehensive recording of all transactions extinguishing the initial positions and of the transactions creating the new positions is required (see Example 2 for more details).

Example 1. Recording Positions in Financial Derivatives Before and After Novation

This example shows how two entities (A and B), which are clearing members of a CCP and resident in Country X, sign a financial derivative OTC contract, resulting in assets and liabilities of 100 of A and B, respectively. As both entities are resident in Country X no positions are recorded in balance of payments and IIP statistics.

Subsequently, the contract is novated to the CCP which is resident in Country Y, requiring a recording in balance of payments and IIP statistics. The original contract between A and B is replaced by two new contracts, respectively of A and B with the CCP. As the CCP is resident abroad, the novation creates a cross-border asset position for A and a cross-border liability position for B, while the original purely domestic asset and liability positions of A and B disappear.[8] These changes in asset and liability positions arise entirely from financial transactions as shown in the example.

Globally, the novation results in a doubling of positions compared with the situation before novation. The net IIPs of countries X and Y remain however unchanged at 0.

Table 1. Recording of Positions in Financial Derivatives Before and After Novation

		Entity A	Entity B	CCP
	Resident in country	X	X	Y
1. Before novation				
Vis-à-vis non-residents (IIP)	Assets			
	Liabilities			
Vis-à-vis domestic sectors	Assets	100		
	Liabilities		100	
2. After novation				
Vis-à-vis non-residents (IIP)	Assets	100		100
	Liabilities		100	100
Vis-à-vis domestic sectors	Assets	0		
	Liabilities		0	

Example 2. Recording Positions in Financial Derivatives for Portfolio Compression Related Trades

This example shows how three entities (residents A and B, and non-resident C) compress positions outstanding at the end of the previous reporting period.

[8] If entities A, B, and the CCP are all residents of economy X, no transactions or positions in the external accounts will be recorded, but domestic asset and liability position will both amount to 200 after the novation.

Table 2. Recording of Positions in Financial Derivatives Arising from Compression

		Entity A	Entity B	Entity C
	Resident in country	X	X	Y
1. Before compression				
Vis-à-vis non-residents (IIP)	Assets	10		20
	Liabilities		20	10
Vis-à-vis domestic sectors	Assets		30	
	Liabilities	30		
Net assets position		-20	10	10
2. After compression				
Vis-à-vis non-residents (IIP)	Assets			10
	Liabilities	10		
Vis-à-vis domestic sectors	Assets		10	
	Liabilities	10		
Net assets position		-20	10	10

For the purpose of this example, there are no obstacles for entities to involve in multilateral compression. Entities A and B have both bilateral domestic positions and cross-border positions with non-resident entity C. The net overall position of entity A is a liability (20), while the other two entities each have asset positions (10 + 10). The original deals are "tore up" and replaced with new, lower volume deals that do not change net position of each entity. Note that the new deals are additionally presented as transactions, and the termination of all previous deals should also be recorded as financial transactions (for the economy of Entities A and B, a decrease in both assets and liabilities by 10). Note that the net cross-border position changed for entities A and B in this example (i.e., from assets of 10 to liabilities 10 for A; and from liabilities of 20 to zero for B) and remained unchanged for entity C (asset 10 before and after compression). Net domestic and cross-border positions of each entity did not change.

II. Reverse Transactions

A. Definition

A7.47 *Reverse transactions are arrangements that involve a change of legal ownership of securities, gold, or other assets (e.g., commodities) with a commitment to repurchase the same or similar securities, gold, or other assets either on a specified date or with open maturity. Major types of reverse transactions are* securities repurchase agreements, gold swaps, securities lending, and gold loans. The commitment to reverse the change in legal ownership in the future at a fixed price means that the original owner retains the risks and rewards of changes in the price of the asset. Accordingly, there is considered to be no change of economic ownership of the security, gold, or other asset, so no transaction in that asset is recorded, and ownership of the asset as shown in the IIP, if the asset is a financial asset, is unchanged.

A7.48 A reverse transaction may be with or without the supply of cash. If cash is supplied, as in a repurchase agreement (repo or securities lending with cash collateral), and in return the other party supplies securities, the arrangement is regarded as giving rise to a loan or deposit. (The classification of the cash supplied is discussed in paragraphs 5.52–5.54.) Analogously to repos, a gold swap or a swap of other assets for cash is treated as being a loan with the gold or the other assets as collateral, and there is no change in the economic ownership of the gold or the other assets.

B. Major types of reverse transactions

1. Security repurchase agreements

A7.49 *A securities repurchase agreement is an arrangement involving the provision of securities in exchange for cash with a commitment to repurchase the same or similar securities at a fixed price*. The commitment to repurchase may be either on a specified future date (often one or a few days hence, but also further in the future) or an "open" maturity. Repos, securities lending with cash collateral, and sale-buybacks are different terms for arrangements with the same economic effect as a securities repurchase agreement—all involve the provision of securities as collateral for a loan or deposit. A repo is used as a term from the perspective of the security provider, while a reverse repo is used from the perspective of the security taker.

2. Gold swaps

A7.50 *A gold swap involves an exchange of gold for foreign exchange deposits with an agreement that the transaction be reversed at an agreed future date at an agreed gold price.* The gold taker (cash provider) usually will not record the gold on its balance sheet, while the gold provider (cash taker) usually will not remove the gold from its balance sheet. In this manner, the transaction is analogous to a repurchase agreement and should be recorded as a collateralized loan or deposit. Gold swaps are similar to securities repurchase agreements except that the collateral is gold.

3. Securities lending

A7.51 *Securities lending involves the temporary exchange of securities, usually for other securities or cash of equivalent value (or occasionally a mixture of cash and securities), with an obligation to redeliver a like quantity of the same or equivalent securities at a future date*. As with security repurchase agreements, most securities lending is structured to give the borrower legal title to the securities for the life of the transaction, even though, economically, the terms are more akin to a loan. The borrow fee is generally agreed in advance and the lender has contractual rights similar to beneficial ownership of the securities, with rights to receive the equivalent of all interest payments or dividends and to have equivalent securities returned. The importance of the transfer of legal title is twofold. First, it allows the borrower to deliver the securities onward, for example in another securities loan or to settle an outright trade. Second, it means that the lender usually receives value in exchange for the disposition of legal title (whether in cash or securities), which ensures that the loan is collateralized.

4. Gold loans

A7.52 *Gold loans (sometimes known as gold lending or gold deposits) consist of the delivery of gold for a given time period, with an obligation to redeliver a like quantity of gold at the end of the period.* They may be associated with physical gold or (less frequently) unallocated gold accounts. As with securities lending, legal ownership of the gold

is transferred (the temporary borrower may on-sell the gold to a third party), but the risks and benefits of changes in the gold price remain with the lender. Gold borrowers (usually market dealers or brokers, but also gold producers and industrial gold users) often use these transactions to cover their sales to third parties in periods of (temporary) gold shortage. A comparable fee is paid to the original owner for the use of the gold. The amount of the fee is determined by the value of the underlying asset and the duration of the reverse transaction.

C. Recording of reverse transactions (see Tables 1 to 4 below for recording in income and financial accounts of balance of payments and IIP)

1. Recording of a loan or deposit

A7.53 The supply and receipt of funds under a reverse transaction is treated as a loan or deposit (as other deposits—see paragraph 5.43). Margin calls in cash under a reverse transaction are also classified as loans or deposits. It is generally a loan, but it is classified as a deposit if it involves liabilities of a deposit-taking corporation or is included in national measures of broad money. If a reverse transaction does not involve the supply of cash (e.g., there is an exchange of one security for another, or one party supplies a security without collateral), there is no loan or deposit.

A7.54 The securities or gold provided as collateral under a reverse transaction, including a securities repurchase agreement, securities lending, or a gold swap, is treated as not having changed economic ownership, as discussed in paragraph 7.58. This treatment is adopted because the cash receiver is still subject to the risks or rewards of any change in the price of the security or gold. (The same treatment is adopted for repurchase agreements without cash collateral, in which case there is no transaction in the securities and no loan.)

A7.55 There may be problems in attributing securities ownership when using custodians as a data source, because custodians may not know whether securities being held are under a repurchase agreement or not.

2. Recording of short/negative positions

A7.56 Short positions occur when an institutional unit sells securities for which it is not the economic owner. For example, a security subject to a repurchase agreement may be on-sold by the security-receiving party (see paragraphs 5.52–5.54 on repurchase agreements). Delivery to the purchaser is made through the use of a borrowed security. The party with the short position records a negative value for the holding of the asset. The short position is shown as a negative asset, rather than a liability.

A7.57 This treatment reflects the economic ownership in that the holder of the negative position is exposed to the risks and rewards of the security, in an equal and opposite way, as the party in a long position. Interest accrues on the negative position negatively (i.e., the negative position becomes larger). In aggregate, the recording of a negative position overcomes the double counting of the security by both the economic (original) owner and the final owner (the party who bought the borrowed security) and helps present consistent debtor-creditor relationship at a global level. Reverse transactions may be sequenced in a long chain of transactions and positions using the same security.

3. Recording of income

A7.58 The economic owner of securities continues to record dividends and the accrual of interest on the securities even when the legal ownership changes under a reverse transaction (see paragraph 7.58) or a custodian has on-sold the securities to a third party (see paragraph 10.124). If the reverse transaction covers the period when dividends or coupons are payable, the security taker is typically obliged to compensate the security lender. The payments to the security lender to compensate for the interest or dividends are called “manufactured interest” or “manufactured dividends.”.

A7.59 Manufactured interest and dividends corresponding to on-sold securities are recorded as positive credit/receipt for the security lender and negative credit/receipt for the security borrower (i.e., the on-seller who pays the manufactured interest or dividends). The recording of negative credit for the security borrower provides coherence between income and positions in the underlying instrument. It reflects the negative position in the security the borrower records on the balance sheet and IIP, and for debt securities, it would match an increasing negative asset position when interest accrues. The recording of negative credit in interest/dividends for the security borrower also offsets the double-recording of positive credit (by the security lender and the security holder to whom the security is

on-sold).[9]

A7.60 Securities and monetary gold are financial instruments and thus the fees for securities lending without cash collateral and gold loans are payments for putting a financial instrument at the disposal of another institutional unit. Accordingly, fees on securities lending (equity securities as well as debt securities) and gold loans accrue to the security owner and are treated as interest (with the corresponding entry in other accounts receivable/payable; see paragraph 5.73). As a simplifying convention, fees paid on loans of nonmonetary gold are also treated as interest. For securities lending, although, in some circumstances, the fee is payable to the custodian in the first instance (and used to defray custodial charges, in whole or in part), in principle, all of the fee is payable to the owner of the security who, in turn, is deemed to pay part or all of it to the custodian in a separate transaction. (Amounts accruing to custodians are included under custodial services, discussed under financial services in paragraphs 10.121 and 10.124.)

D. Treatment of reverse transactions in reserve assets

A7.61 Monetary authorities may also be engaged in reverse transactions as part of their reserve asset management strategies. Securities or monetary gold transferred under reverse transactions by the monetary authorities are an asset of the original monetary authorities. However, securities and monetary gold under reverse transactions are collateralized and generally not readily available for a balance of payments financing need during the tenor of the contract. Assets that are not readily available do not qualify as reserve assets.

A7.62 If securities provided as collateral under a repurchase agreement are not readily available for meeting a balance of payment financing need for the monetary authorities, they are excluded from reserve assets and reclassified to portfolio investment assets. This treatment is also applied to cases where the securities are available for meeting a balance of payments financing need only if a substitute reserve asset is provided as collateral. This is because the securities and the substitute reserve asset cannot be readily available for the monetary authorities simultaneously. Monetary gold provided as collateral under a gold swap is treated similarly. If it is not readily available for a balance of payments financing need for the monetary authorities, it is excluded from reserve assets and either removed from financial assets (for gold bullion) or reclassified to other investment, currency and deposits, assets (for unallocated gold accounts).

A7.63 Any loan or deposit liability under reverse transactions is recorded within "other investment." Convertible foreign currency received is recorded as an increase in currency and deposits in reserve assets, provided it is a liquid claim on a nonresident. If the monetary authorities provide funds and receive securities or gold as collateral (e.g., reverse repos), the funds provided to the counterparty are recorded as a decrease in currency and deposits in reserve assets. If the claim (e.g., repo asset) is liquid and available upon demand to the monetary authorities, then it is considered part of reserve assets in "other claims" (or "deposits" if classified in national measures of broad money). Securities or gold collateral should not be included in reserve assets of the receiving monetary authorities because the receiving monetary authorities are not the economic owner of the asset.

E. Supplementary information on reverse transactions

A7.64 Reverse transactions are not separately identified in the standard presentation of balance of payments and IIP. Provision of cash is recorded under loans or deposits, but assets used as collateral (e.g., securities) are not recorded because there is no change in their economic ownership. To identify these items, a table could be compiled on a supplementary basis to show loans/deposits and collateralized securities, gold, and other items (i.e., commodities) under reverse transactions, covering movements of these assets comprehensively regardless of the change in their economic ownership. This information may have high analytical value, particularly for economies that are actively involved in reverse transactions.

[9] The security lender should identify the partner for manufactured interest/dividends by the economy and sector of the security issuer, not the security borrower which pays the manufactured interest/dividends to the security lender, consistent with the position held by the lender against the issuer.

Table 1: RTs - Accrual recording of transactions related to repos and security lending

Country/sector A		Country/sector B	National Accounts and Balance of Payments			
			Income Account		Financial Account	
			Country/sector A	Country/sector B	Country/sector A	Country/sector B
Repo/security lending with cash collateral (security lender)	security → / ← cash	Reverse repo/security lending with cash collateral (security borrower) /1	Accrued interest for cash received (debit) /1	Accrued interest for cash provided (credit) 1/	Loan liability (increase) (no recording of securities)	Loan asset (increase) (no recording of securities)
Security lending with security collateral (security lender)	security → / ← security	Security lending with security collateral (security borrower)	Accrued security lending fees (recorded as interest - credit)	Accrued security lending fees (recorded as interest - debit)	Accounts receivable for security lending fees (increase)	Accounts payable for security lending fees (increase)
Security lending without collateral (security lender)	security →	Security lending without collateral (security borrower)	Accrued security lending fees (recorded as interest - credit)	Accrued security lending fees (recorded as interest - debit)	Accounts receivable for security lending fees (increase)	Accounts payable for security lending fees (increase)

/1 In cases where security lending fees are involved, they should be recorded separately. Security lending fees are recorded as interest (BPM6 §11.68).
Note: → orange arrow represents a change in the legal ownership, but not in the economic ownership.

Table 2: Recording of (1) dividends and (2) accrued interests for securities acquired under repo and security lending

Country A		Country B		Country C	Balance of Payments		
					Country A	Country B	Country C
					Income Account		
Security lender/securities provided under repo	← dividends as shares go ex-dividend/ accrued interest	Security borrower/securities acquired under reverse repo	← dividends as shares go ex-dividend/ accrued interest	Security issuer	1. Dividends as shares go ex-dividend (credit) 2. Accrued interest (credit)	1. No recording 2. No recording	1. Dividends as shares go ex-dividend (debit) 2. Accrued interest (debit)
					Financial Account		
					1. Accounts receivable (for dividends) - assets (increase) 2. Debt security - assets (increase)	1. No recording 2. No recording	1. Accounts payable (for dividends) - liabilities (increase) 2. Debt security - liabilities (increase)

Table 3: Recording of actual (1) dividend and (2) interest payments for securities acquired under repo and security lending

Country A		Country B		Country C	Balance of Payments		
					Country A	Country B	Country C
					Income Account		
Security lender/securities provided under repo	← dividends payments/ interest payments	Security borrower/securities acquired under reverse repo	← dividends payments /interest payments	Security issuer	1. No recording 2. No recording	1. No recording 2. No recording	1. No recording 2. No recording
					Financial Account		
					1. Accounts receivable (for dividends) - assets (decrease) 2. Debt security - assets (decrease)	1 & 2. No recording other than increase in currency and deposits (for dividend/intrerest receipt from Country C) followed by decrease in currency and deposits (for dividend/interest payment to Country A)	1. Accounts payable (for dividends) - liabilities (decrease) 2. Debt security - liabilities (decrease)

Table 4: Recording of on-selling of securities acquired under repo and security lending

Country B		Country D	Balance of Payments		International Investment Position	
			Financial Account			
			Country B	Country D	Country B	Country D
Security borrower/securities acquired under reverse repo	security → / ← cash	Security purchaser	Security assets (decrease/credit)	Security assets (increase/debit)	Security assets (negative position) /2	Security assets (positive position)

/2 Assuming the opening position is zero.