

## Chapter 27: Contracts, leases, licenses and permits (Part 5 of chapter 17 in the 2008 SNA, moved downwards)

### (OLD Chapter 17 Part 5: Contracts, leases and licences)

#### I.A. Introduction

~~17.27.1~~ Many transactions that take place in the economy and are recorded in the SNA are specified in terms of a contract between two institutional units. The majority of contracts are such that one unit provides a good, service or asset to the other unit for an agreed payment at an agreed time (possibly immediately after agreeing on the price). Such contracts may be written and legally binding or may be informal or even only implicit. If a unit accepts the estimate provided by a builder for the cost of specified work, the contract is written and may well be legally binding. If a book is ordered from a bookshop but there is a delay in delivery, there is an informal contract between the book shop and the customer but it is unlikely to be enforceable by either side. Whenever a customer asks how much a given service will cost, whether it is a haircut, the delivery of a heavy product or entry to a cinema, accepting the service at the quoted price is in effect an implicit contract. However, all these contracts are simply agreements about the terms under which goods, services and assets are provided to the customer along with the legal ownership of the item. The only extent to which these contracts feature in the SNA is that they determine the pointtime at which the transaction is to be recorded in the accounts. This is the time at which the ownership of the good, service or asset changes. For services, this is always when the service is delivered and for goods it may coincide with the time of delivery. However, the time of recording is never determined by the time when payment is made. Any difference between the time of payment and time of change of ownership gives rise to an entryentries in the financial account under other accounts receivable ~~or~~and payable.

~~17.27.2~~ ~~However, there are other~~In addition to these informal and implicit contracts that underpin most transactions, there are also formal contracts and legal agreements variously described as leases and licences (or permits) where the terms of the agreement may affect the time of recording of transactions made under the agreement as well as the classification of payments and the ownership of the item subject to the agreement. The purpose of this ~~part of the~~ chapter is to provide guidance on how transactions made under these more complex arrangements are to be recorded in the SNA.

~~27.1~~ ~~The first item for discussion concerns the different sorts of leases recognized in the SNA. The next topic for discussion is the treatment of permits to use natural resources. This is of particular importance when it is government that claims ownership of the resource on behalf of the community at large but can apply to privately owned resources also. This leads naturally into a discussion of the treatment of assets where more than one unit has a claim to ownership, or the benefits of ownership accrue to more than one unit.~~

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~~27.3~~ ~~Some contracts are not connected with the use of assets. The first contracts for discussion are licences (or permits) given to undertake particular activities independently of any assets that may be used in the activity. Here there are different treatments when the permits are issued by government and when they are given by other institutional units. The next point for consideration is when a contract can constitute an asset in itself, independently of the subject of the contract. Finally, a number of clarifications are made concerning the timing and nature of payments made under a contract.~~

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~~27.3~~ Section B considers the treatment and recording of operating and financial leases. Section C discusses the recording of rights to use natural resources and the different arrangements and considerations that are relevant. General considerations are presented first followed by a discussion of the treatments for different natural resources. Section D describes situations where assets can be considered to be shared including an explanation and example of the split-asset approach to recording natural resources. Section E discusses the relevant recording treatments for a range of other situations in which permission is granted to undertake specific activities, including the treatment of permits to use the environment as a sink. Sections F, G and H

[cover off on a number of smaller topics namely contracts for future production, the situations in which leases can be considered assets and the treatment of time-share arrangements and lost deposits.](#)

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## **J.B. Leases**

~~17.5~~27.4 Three types of leases are recognized in the SNA; operating leases, ~~financial~~finance leases and resource leases. Each of these leases relates to the use of a non-financial asset. Fundamental to the distinction between the different sorts of leases is the difference between legal and economic ownership. This distinction is elaborated in chapter 34. The legal owner of an asset is the institutional unit entitled in law and sustainable under the law to claim the benefits associated with the asset. By contrast, the economic owner of an asset is entitled to claim the benefits associated with the use of the asset in the course of an economic activity by virtue of accepting the associated risks. The legal owner is often the economic owner also. When they are different, the legal owner has divested itself of the risks in return for agreed payments from the economic owner. [In this section, the treatment of operating and finance leases are described. Section C includes discussion of resource leases.](#)

### **1. Operating leases**

~~17.6~~27.5 *An operating lease is ~~one where~~ a contract between a lessor and a lessee, under which the lessor charges a rental to the lessee for the use of a produced non-financial asset, and the lessor remains the legal owner is also the ~~and~~ economic owner and accepts the operating risks and receives the economic benefits from the asset by using it in a productive activity of the asset.* One indicator of an operating lease is that it is the responsibility of the legal owner to provide any necessary repair and maintenance of the asset. Under an operating lease the asset remains on the balance sheet of the lessor.

~~17.7~~27.6 The payments made under an operating lease are referred to as rentals and are recorded as payments for a service. The character of operating leases may most easily be described in relation to equipment since operating leases often concern vehicles, cranes, drills etc. In general, though, any sort of non-financial asset, ~~an~~including intellectual property ~~product or a non-financial asset~~products, may be subject to an operating lease. The service provided by the lessor goes beyond the mere provision of the asset. It includes other elements such as convenience and security, which can be important from the user's point of view. In the case of equipment, the lessor, or owner of the equipment, normally maintains a stock of equipment in good working order that can be hired on demand or at short notice. The lessor must normally be a specialist in the operation of the equipment, a factor that may be important in the case of highly ~~complicated~~technical equipment, such as computers, where the lessee and ~~his~~its employees may not have the necessary expertise or facilities to service the equipment properly themselves. The lessor may also undertake to replace the equipment in the event of a serious or prolonged breakdown. In the case of a building, the lessor is responsible for the structural integrity of the building, so would be responsible in the case of damage due to a natural disaster, for example, and is usually responsible for ensuring that elevators, heating and ventilation systems function adequately.

~~17.8~~27.7 Operating leasing developed originally to meet the needs of users who require certain types of equipment only intermittently. Many operating leases are still for short periods though the lessee may renew the rental when the period expires and the same user may hire the same piece of equipment on several occasions. However, with the evolution of increasingly complicated types of machinery, especially in the electronics field, the servicing and backup facilities provided by a lessor are important factors that may influence a user to rent. Other factors that may persuade users to rent over long periods rather than purchase are the consequences for the enterprise's balance sheet, cash flow or tax liability.

### **2. ~~Financial~~Finance leases**

~~17.9~~27.8 *A financial lease is ~~one where~~ a contract between a lessor and a lessee, under which the lessor, as legal owner of an asset ~~passes the economic~~, substantially conveys the risks and rewards of ownership of the asset to the lessee ~~who then accepts the operating risks and receives~~. The lessee, therefore, becomes the*

*economic benefits from using owner of the asset in a productive activity.* In return, the lessor accepts another package of risks and rewards from the lessee. It is frequently the case that the lessor, though the legal owner of the asset, never takes physical delivery of the asset but consents to its delivery directly to the lessee. One indicator of a financial lease is that it is the responsibility of the economic owner to provide any necessary repair and maintenance of the asset. Under a financial lease, the legal owner is shown as issuing a loan to the lessee with which the lessee acquires the asset. Thereafter the asset is shown on the balance sheet of the lessee and not the lessor; the corresponding loan is shown as an asset of the lessor and a liability of the lessee. Payments under the financial lease are treated not as rentals but as the payment of interest and repayment of principal. If the lessor is a financial institution, part of the payment is also treated as a service charge (FISIM implicit financial services on loans and deposits).

~~17.10~~27.9 Very often the nature of the asset subject to a financial lease may be quite distinct from the assets used by the lessor in ~~his~~their productive activity, for example a commercial airliner legally owned by a bank but leased to an airline. It would make no economic sense to show either the aircraft or its ~~consumption of fixed capital~~depreciation in the accounts of the bank or to omit them from the accounts of the airline. The device of a financial lease avoids this undesirable form of recording the ownership of the aircraft and the decline in its value while keeping the net worth of both parties correct throughout the length of the lease.

~~17.11~~27.10 It is common for a financial lease to be for the whole of the life of the asset, but this need not necessarily be so. When the lease is for the whole of the life of the asset, the value of the imputed loan will correspond to the present value of the payments to be made under the lease agreement. This value will cover the cost of the asset and include a service fee charged by the lessor. Payments made regularly to the lessor should be shown as a payment of interest, ~~possibly a repayment of principal and a service fee. If the lessor is a financial institution, the interest payment should be partitioned to record~~ a payment for ~~a service and a repayment of capital~~implicit financial services on loans and deposits. If the terms of the agreement do not specify how these ~~three~~ items are to be identified, the repayment of principal should correspond to the decline in the value of the asset (the ~~consumption of fixed capital~~depreciation), the interest payment to the return to capital on the asset (including any implicit financial services on loans and deposits) and the service ~~charge~~fee to the difference between the total amount payable and these two elements.

~~17.12~~27.11 When the lease is for less than the whole life of the asset, the value of the loan should still be estimated as the value of the asset plus the value of the service charges to be made under the terms of the lease. At the end of the lease, the asset ~~will appear on the balance sheet of the lessee and its~~ value will be equal to the value of the loan owed to the lessor at that time. At that point the asset could be returned to the lessor to cancel the loan or a new arrangement, including the outright purchase of the asset, may be reached between the lessor and lessee. Because a financial lease requires the lessee to acquire substantively all the risks and rewards associated with the asset, if the lease is for less than the expected life of the asset, the lease usually specifies the value to the lessor at the end of the lease or the terms under which the lease can be renewed. Any variation in the price of the asset from the value in the lease agreement is borne by the lessee.

27.12 From a conceptual point of view, the transfer of leased assets at the end of the lease period should be recorded as extinguishing the financial claim of the lessor (and the corresponding liability of the lessee) that has been progressively built up over the leasing period. In practice however, it is considered appropriate to ignore the progressive recording of these financial claims, and to instead record the transfer of the relevant assets as capital transfers at the end of the lease period. In certain circumstances, however, particularly where there is a high degree of certainty that the asset will be transferred and where the value of that asset at the time of the transfer will be significant, a recording of building up a financial claim (and associated liability) should be preferably applied.

~~17.13~~27.13 Although a financial lease will typically be for several years, the duration of the lease does not determine whether the lease is to be regarded as an operating or financial lease. In some cases, a large complex such as an airport or even a building may be leased for short periods, perhaps only one year at a time, but on condition that the lessee takes all responsibility for the asset, including all maintenance and cover for exceptional damage, for example. Even though the lease period is short, and even though the lessor may not be a financial institution, if the lessee must accept all the risks associated with the use of the asset in production as well as the rewards, the lease is treated as a financial and not an operating lease and the asset appears on the balance sheet of the lessee with a corresponding loan extended from the lessor to the lessee.

~~17.14~~27.14 As a consequence, any corporation that specializes in this sort of leasing, even though it may be

called a property company or aircraft leasing company, should be treated as a financial corporation offering loans to the units leasing assets from them. If the lessor is not a financial corporation, the payments are split into repayments of principal and interest only; if the lessor is a financial corporation, the interest is split into SNA interest and a service charge (FISIM implicit financial services on loans and deposits).

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## 2. Resource leases

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27.8 A resource lease is an agreement whereby the legal owner of a natural resource that the SNA treats as having an infinite life makes it available to a lessee in return for a regular payment recorded as property income and described as rent. The resource continues to be recorded on the balance sheet of the lessor even though it is used by the lessee. By convention, no decline in value of a natural resource is recorded in the SNA as a transaction similar to consumption of fixed capital.

27.9 The classic case of an asset subject to a resource lease is land but natural resources are also generally treated in this way. An exception, when a long term lease of land may be taken as the sale of the land is described in paragraph 17.328.

27.10 Payments due under a resource lease, and only such payments, are recorded as rent in the SNA. There is further discussion of leases on natural resources in the following section.

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## K.C. Licences and permits Rights to use a natural resource

17.18 27.15 As noted above, in many countries permits, rights to use natural resources are generally issued by government since government claims ownership of the resources on behalf of the community at large. However, the following treatments are described using this general starting point, however, the same treatments apply if the resources are privately owned.

17.19 27.16 There are basically three different sets of conditions that may apply to the use of a natural resource. The first, the legal owner may permit the resource to be used to extinction. The and thus transfers economic ownership of the resource. Second, the legal owner can extend or withhold permission to continued use of the resource from one year to the next and thus retains economic ownership of the resource. Third, the legal owner may allow the resource to be used for an extended period of time in such a way that in effect the user controls the use of the resource during this time with little if any intervention from the legal owner. The Under the third option the economic ownership of the resource is shared to the extent that both the user and the legal owner can extend or withhold permission to continued are entitled to future economic benefits from the use of the asset from one year to the next resource.

27.17 The first option results in the sale (or possibly an expropriation) of the asset. This is recorded as a transaction in the capital account with corresponding changes in the balance sheets of the two institutional sectors involved.

27.18 The second option leads involves treatment of the use as a resource lease. A resource lease is an agreement whereby the legal owner of a natural resource makes it available to a lessee in return for a regular payment recorded as property income and described as rent. The value of the natural resource continues to be recorded on the balance sheet of the lessor even though it is used by the lessee to the extent that the balance of risks and rewards is held by the lessor. The classic case of a natural resource subject to a resource lease is land but other natural resources may also be treated in this way depending on the circumstances surrounding the rights to use the resource.

27.19 The third option involves recording the creation of an asset for the user, distinct of the natural resources and an asset for the legal owner following the split-asset approach. The total value of these two assets is equal to the total value of the natural resource with the allocation of the total value between the user and the legal owner reflecting their respective shares of the future economic benefits to be earned from the resource itself but where the value exploitation of the resource and. Under the third option, depending on the asset allowing us nature of it the agreement, regular payments of rent are linked. The third option comes back to the

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~~treatment of the use as a resource lease, typically paid by the user to the legal owner.~~

~~17.20 27.20 The difference in treatment between the second and third options was articulated in the context of the case of a mobile phone licence and that recommendation (see SNA News and Notes Volume 14, (United Nations, 2002)) is recapitulated depends on a range of criteria concerning the agreement established between the legal owner and the unit using the natural resource in production. The general criteria are presented first before seeing describing how each of the three options relates to different types of natural resources.~~

~~27.15 The “mobile phone” treatment of licences or permits to use a natural resource~~

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~~27.17 The case arose in 2000 when the sale of licences to use radio spectra for third generation mobile phones brought a flurry of interest from companies wanting to have exclusive access to the spectra and who in consequence were prepared to bid (often by auction) extremely large sums for the access rights to the spectra.~~

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~~27.19 Eight conclusions were agreed in respect of the mobile phone licences. Allowing for updated terminology, these were:~~

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~~27.21 The spectrum constitutes a natural resource.~~

~~27.22 The licence to use the spectrum constitutes an asset described as a permission to use a natural resource which is a subset of the general asset class of contracts, leases and licences.~~

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~~27.24 Typically licence payments are neither taxes nor purchases of the spectrum itself.~~

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~~27.26 Land, mineral deposits and the spectrum are similar types of assets and so are leases and licences based on the use of those assets.~~

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~~27.28 There is no single, universal and clear cut criterion to distinguish between rent and asset sale; a range of criteria needs considering.~~

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~~27.30 Most cases examined point to treating licence payments as the purchase of an asset, not rent.~~

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~~27.32 The value of the licence and the value of the spectrum move symmetrically.~~

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~~27.34 Further elaboration will be useful in future.~~

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~~27.36 The considerations referred to under conclusion (e) were six in number and are reproduced below.~~

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27.21 There are six general criteria in distinguishing between the options.

- a.—*Costs and benefits assumed by licensee/user:* the more of the risks and benefits associated with the right to use an asset are incurred by the licensee/user, the more likely the classification of a transaction as the sale of an asset as opposed to rent. Thus, preagreement/pre-agreement on the value of payments (whether by lump sum or by instalments) effectively transfers all economic risks and benefits to the licensee/user and so point to the sale of an asset. If, on the other hand, the value of payment is made contingent on the results from using/use of the licensee/rights, risks and benefits are

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only partially transferred to the licensee and the situation is more readily characterized as payment of rent. ~~In the case of mobile phone licences, the total amount payable has often been pre-agreed, a resource lease or split ownership.~~ An additional indication of the degree to which commercial risks have been passed to the licenseeuser is to examine the hypothetical case where a licenseeuser goes

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~~27.38a.~~ bankrupt. If, in such a case, the licensorlegal owner reimburses none of the upfront payment made by the licenseeuser, this would constitute a strong case againstfor a characterization of the transaction as rentsale of an asset, as apparently the licenseeuser has incurred all the commercial risks involved.

~~a.b.~~ *Upfront payment or instalment:* as with other indicators, the mode of payment is in itself not conclusive for a characterization ~~as asset or rent payment under one of the options~~. Generally, the means of paying for a licensee rights to use is a financial issue and as such not a relevant factor in determining ~~whether or not it is an asset the treatment~~. However, business practice shows that upfront payments of rent for long periods (~~15-25 years in the case of mobile phone licences~~) are highly unusual and this ~~favours an interpretation would then favour treating the rights to use~~ as sale of an asset.

~~a.c.~~ *Length of the licensee contract: rights* granted for long periods suggest a treatment as the sale of an asset, while those granted for shorter periods suggest a treatment as payments for rent. ~~The time frame involved in mobile phone licensing (15-25 years) is considered rather unusual as a period for which to conclude a fixed payment of rent and therefore a further indication favouring an interpretation as sale of an asset resource lease.~~

~~b.d.~~ *Actual or de facto transferability:* the possibility to sell the licensee rights is a strong indication of economic ownership and if transferability exists, this is considered a strong condition to characterize the licensing act establishment of rights as the sale of third-party property rights. In practice, mobile phone licensee rights are often transferable either directly (by the enterprise selling the licensee rights to another enterprise) or indirectly (through the enterprise being acquired through a takeover).

~~e.e.~~ *Cancellation possibility:* the stronger the restrictions on the issuer's capacity to cancel the licensee rights at its discretion, the stronger the case for treatment as a sale of an asset. Conversely, when licensee rights can easily be cancelled at the discretion of the issuer, economic ownership over benefits and risks has not been fully transferred to the licenseeuser and the ~~transaction treatment~~ qualifies more readily as rent a resource lease or split ownership.

~~d.f.~~ *Conception in the business world and international accounting standards:* businesses, in accordance with international accounting standards, often treat a licensee right to use the spectrum natural resources as an asset. Again, in itself this does not ~~lead to require~~ treatment as an asset in the national accounts, and there are other areas where companies choose to present figures in their accounts in ways that are not consistent with the national accounts. But the treatment of the acquisition of mobile phone licensee rights as capital investment in company accounts provides an added incentive to treat them in a similar way in the national accounts, either as the sale of an asset or as split ownership.

27.22 Not all these considerations criteria have to be satisfied to characterize the licensee a right to use as a sale of an asset nor does a simple majority of them being satisfied do so. However, in order to qualify as a rental agreement resource lease, at least some of the following sorts of conditions criteria should hold.

- a. The contract is of *short-term duration*, or renegotiable at short-term intervals. Such contracts do not provide the lesseeuser with a benefit when market prices for the leased asset resource go up in the way that a fixed, long-term contract would. Such benefits are holding gains that typically accrue to economic owners of assets.
- b. The contract is *non-transferable*. Non-transferability is a strong but not a sufficient criterion for the treatment of licensee payments as rent resource leases, because, although ~~it such a contract~~ precludes the lesseeuser from cashing in on benefitting from holding gains, it does not preclude the lesseeuser from reaping comparable economic benefits (for example, using the licensee resource in their business).

- c. The contract contains *detailed stipulations* on how the lesseeuser should make use of the assetresource. Such stipulations are often seen in cases of rentuse of land, in which the legal owner wishes to retain a control over the usage of the land. In ~~the case of licensee~~ other cases, examples of such stipulations would be that the contract states what regions or types of customers should be served, or that ~~it sets~~ there are limits on the prices that the lesseeuser may charge.
- d. The contract includes conditions that give the ~~lessor~~ legal owner the *unilateral right to terminate* the lesseright to use without compensation, for instance for underuse of the underlying asset by the lesseeuser.
- e. The contract requires *payments over the duration of the contract, rather than a large upfront payment*. Although this conditioncriterion is essentially financial in character and thus cannot be decisive on the ~~type of the lease~~ treatment, it may indicate a degree of control for the ~~lessor~~ legal owner to direct the use of the spectrumresource. The case for a treatment as renta resource lease is further supported if the payments are related to the revenue the lesseeuser derives from the licenseerights to use.

~~17.25~~ 27.23 These two sets of ~~considerations can be seen as~~ criteria reflect a more specific parallel to application of the distinction ~~efbetween~~ economic ownership from and legal ownership as used in distinguishing between an operating and financial lease as described above. ~~The conditions~~ Further, the criteria for treatment of the payment as the acquisition of an asset and for treatment as payment of rent transactions are indicative rather than prescriptive. Once a decision on the appropriate treatment ~~when some of the conditions are not met will necessitate~~ is made, further consideration of how to record ~~those conditions not met~~ the actual transactions will be needed, accepting that not all criteria pointing to a specific treatment may be met. For example, if on balance the decision is to treat the paymentarrangement as renta resource lease but a large upfront payment was made, this payment should, in principle, be treated as a prepayment to be recorded on an accrual basis. However, if the recipient is not willing to consider a refund if the contract is suspended, accrual recording is difficult. This is one reason why upfront payments are often indicative of the sale of an asset rather than ~~the payment of~~ renta resource lease.

~~17.26~~ 27.24 The application of these principlescriteria to the main forms of natural resources is described below; beginning with radio spectra. six criteria quoted above are to be considered.

## 1. Land

~~17.31~~ 27.25 Land may be sold outright when the legal ownership is transferred from one institutional unit to another. (Land may not be recorded as being sold to a non-resident unit. In such cases a notional resident unit is created that holds title to the land; the non-resident unit then owns the equity of the notional resident unit.)

~~17.32~~ 27.26 ~~The type of asset~~ Land is the natural resource most frequently subject to a resource lease ~~is land~~. Tenant farmers usually pay regular rent to their landlord. A ~~resource lease on~~ right to use land may be considered as a sale of the land if the leasecontract satisfies most or all of the ~~same criteria as these considerations~~ listed above for ~~payments for a mobile phone licensee to be considered at~~ treatment as the sale of an asset. When the land is leasedused in other circumstances, the payments are recorded as rent under a resource lease agreement.

~~17.33~~ 27.27 In some jurisdictions, the land under buildings remains in the legal ownership of a landlord other than the owner of the buildings. If regular payments are made to the landlord, these are recorded as rent. However, it is sometimes the case that, even though the land legally belongs to another unit, the right to occupy it for an extended period is paid for in a single upfront payment often when the building is acquired. As explained in the previous section, this suggests recording the payment as the acquisition sale of the asset. In such a case, when the building changes ownership, the purchase price includes an element representing the present value of future rent payments. In such a case, the land is recorded in the SNA as if the ownership is transferred along with the building above the land. If, at the end of the land lease, a further payment is liable for extension of the lease for another long-term period, this should be recorded as capital formation and an acquisition of an asset in a manner similar to costs of ownership transfer on purchase and sale of an

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asset.

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## **2. Mineral and energy resources**

27.28 When a unit owning a mineral or energy resource cedes all rights over it to another unit, this constitutes the sale of the resource. Like land, mineral and energy resources can only be owned by resident units; if necessary a notional resident unit must be established to preserve this convention.

27.29 Most commonly, mineral and energy resources remain in the legal ownership of general government, with users extracting mineral or energy resources under an agreement where the payments made each year are dependent on the amount extracted. The payments (sometimes described as royalties) are recorded as rent. The full natural resource rent can be estimated using the residual value method, by deducting from output all costs related to the extractions of the resources, including services related to the capital used in production (for more details, see the annex to chapter 4). Natural resource rent paid on rights to use mineral and energy resources should be split between amount paid in relation to non-renewable mineral and energy resources and renewable energy resources. Where possible, the rent paid on specific high revenue generating resources (e.g. copper, oil) should be recorded separately.

27.30 The legal owner (in many but not all circumstances a government) often does not appropriate the full resource rent which can be derived from the exploitation of mineral and energy resources, and the asset in question may generate a future stream of natural resource rents (i.e. after accounting for returns to capital) beyond the payments of rent to the legal owner. In these cases, the unit having the rights to exploit the resources thus appropriates part of the resource rents, reflecting the future capital services derived from these assets by the unit having the exploitation rights. In these cases, the value of the resources in question is split between the legal owner and the unit exploiting the resources. (See also paragraphs 14.xxx (SNA). An example of this is provided in Section D below.

27.31 The generation of income from renewable energy resources does not require the extraction of minerals or energy resource but rather the construction and operation of produced assets which capture the energy from the renewable source. In this context, the relevant rights and permissions are directly associated with the location of the produced assets and the economic owner must secure the permissions before construction and operation. The treatment of any payments associated with the permissions will be the same as for payments for the use of land.

## **2.3. Timber resources**

27.32 Timber resources are a type of biological resource that are valued in terms of the expected harvesting of timber. Most commonly, timber resources are present in areas of forest land but the harvesting of timber, and hence the stock of timber resources, can occur in other areas of land, in particular agricultural land, for example through agro-forestry production systems. A clear distinction must be made between the value of timber resources and the value of the land, especially forest land, on which the stock of timber grows. By convention, the value of timber resources is measured in relation to the current, work-in-progress value of the stock of timber (both mature and immature trees that are expected to be harvested) while the value of forest and other land incorporates the value of future benefits from the harvesting of timber.

~~17.34~~27.33 If a unit is given permission to clear fell an area of ~~natural~~ forest land, or to fell at its discretion without any restriction in perpetuity, the payments made to the legal owner constitute the sale of an asset. ~~(The sale of forested land may be recorded as the~~The sale of the timber and the land separately, depending on the intended use of each.)~~forest land should be recorded as the sale of the timber resources and the land separately, where the value of the timber resources reflects the work-in-progress value of the current stock of timber, and the value of forest land reflects the value of future benefits from the land after deduction of the work-in-progress. In some countries, sales of standing timber are common where the owner of a forest manages the growth of trees but sells the stock of timber resources ahead of harvest with the purchaser taking on the task of felling the trees and selling the harvested timber. These transactions may provide a measure of the value of work-in-progress of the timber resources.~~

~~17.35~~27.34 The option to have a lease permitting felling at the lessee's discretion but subject to the restoration

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of the land, in an acceptable forested state, at some time in the future is improbable. It is more common for timber felling to be allowed under strict limits with a fee payable per unit volume of timber felled (stumpage). ~~The limits are usually such that the harvest of timber is sustainable and so the payments are recorded as rent in the case of a natural forest fee.~~ These payments to the legal owner are recorded as rent. Rent may also be recorded in relation to the forest or other land on which the timber resources grow. The treatment of these payments should align with the treatment of land as described above. Where the natural resource rent from harvesting timber is greater than the payments of rent, the total value of the timber resources and the forest land should be partitioned following the split-asset approach.

~~Forests may also be produced assets, in which case the extraction of timber is treated as the sale of a product.~~

~~17.37~~ 27.35 ~~Illegal logging across national borders~~ is prevalent in some countries. In such cases the quantity of timber extracted should be recorded as uncompensated seizure of a natural resource ~~or cultivated asset, as the case may be.~~

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### **3.4. Fish**

27.36 Natural stocks of fish with an economic value are an asset and the same considerations apply to them as to other natural resources. Generally, the water bodies in which fish are caught are under the administration or management of economic units (usually government) that are not the same units as those catching the fish. Consequently, the government may be considered the legal owner of the fish. This would include for example fish stocks within the exclusive economic zone (EEZ) of a country. Alternatively, access to specific stocks of fish (e.g. tuna) may be “managed” (again by government) using quotas and other techniques to control the extent of the catch, in which case again the government may be considered the legal owner. Where there is evidence of management, a total value of the fish stock is equal to the net present value of the future natural resource rent estimated using the residual approach.

27.37 In cases where there is no effective management of the fish stock or an associated water body, then there is no legal owner and consequently no asset is recorded on the balance sheet notwithstanding the resource rent that may be earned by fisherman. This treatment is consistent with economic theory where the resource rent in open access fishery contexts will tend to zero and hence there will be no balance sheet value of the stock to record in an SNA context.

27.38 Depending on the organizational arrangements different accounting entries will be required. In some cases, the unit undertaking the fishing activity may be required to pay an annual fee to the legal owner. These payments should be recorded as rent. Where the natural resource rent is greater than this payment then a partitioning of the value of the fish stock can be made following the split asset approach.

27.39 In other cases, the legal owner may issue fishing quotas in perpetuity or for extended periods to particular institutional units, for example, where fishing is an established way of life and there may be little alternative economic employment. If the quotas are issued in perpetuity, either free of charge or for a fee, this is treated as the sale of an asset and the entire value of the fish stock is attributed to the holder of the quota (assuming that the holder is also undertaking the fishing activity). The difference between the sale price (potentially zero) and the full value of the fish stock should be recorded as the appearance of an asset in the other changes in the volume of asset account.

27.40 If quotas are issued for a certain period of time and have an associated price (perhaps established using an auction), then the value of the fish stock should be partitioned using the split-asset approach where the amount paid for the quota reflects the share of the value of the fish stock attributable to the legal owner (i.e. the unit issuing/selling the quota) and the remaining part of the net present value of the future natural resource rent is attributed to the quota holder. Depending on the quota pricing arrangements, the price (e.g. the auction price) may represent a good approximation of the net present value at the time of the transaction noting the need for re-assessment of the value in future periods.

27.41 Payments made in relation to the quota are treated as payments of rent. If these payments are annual, then no additional consideration is required. However, if a payment relates to more than one year, then entries in the financial account will be required to reflect the prepayment of rent as part of accounts payable and receivable.

27.2

~~27.42~~ If the quotas, after issuance or sale, can be transferred by the original holder, then a market in quotas may be established. Although they have a market value, these quotas do not have additional or separate value beyond the total value of the fish stock as measured using the net present value of the natural resource rent. In concept, there should be a good alignment between the value of the marketed quotas and the value of the fish stock.

~~27.43~~ In the event that the quota is held by an economic unit other than the unit undertaking the fishing activity, then the total value of the fish stock should be partitioned using the split asset approach with the share attributable to the quota holder equal to the market value of the quota and the remaining value attributable to the unit undertaking the fishing activity.

~~17.38~~~~27.44~~ It is not realistic to consider that permission would be given to exhaust fish stocks but illegal fishing may either reduce the stock below the point of sustainability or exhaust them altogether. In these cases, uncompensated seizure of the stock should be recorded.

~~27.41~~ Fishing quotas may be allocated in perpetuity or for extended periods to particular institutional units, for example, where fishing is an established way of life and there may be little alternative economic employment. In such circumstances the quotas may be transferable and if so, there may be a well developed market in them. Fishing quotas may therefore be considered as permits to use a natural resource that are transferable. They are thus assets in the SNA.

~~27.42~~

~~27.43~~ An alternative regime is to issue a permit for a strictly limited period of time, less than a year, to a nominated institutional unit, often a non resident. This is a common practice in some islands in the South Pacific, for example. In these cases the revenue from the licences should be recorded as rent as under a resource lease.

~~27.44~~

~~17.41~~~~27.45~~ A licence for recreational fishing has long been considered, by convention, as payment of a tax- (see para 9.xx). This treatment is not changed by the wider considerations for commercial fishing.

~~27.45~~

## **4.5. Water**

~~17.42~~~~27.46~~ A body of water with an economic value can be sold in its entirety either as part of the land that surrounds it or as a separate entity.

~~17.43~~~~27.47~~ ~~As is the case for fish, it~~ It is unlikely that economic ownership would be ceded under a long lease with no preconditions on the quantity and state in which a similar amount of water should be returned available to the legal owner in which case payments would generally be treated as rent. However, it is possible that surface water could be leased under a long lease for recreational purposes, say. The treatment of such leases should be as for land.

~~17.44~~~~27.48~~ ~~Of increasing concern is~~Concerning the extraction of water from water bodies-~~Regular, regular~~ payments to the legal owner for the ~~extraction of~~right to abstract water (as opposed to ~~payments for~~ the delivery or supply of ~~#water~~) should be treated as rent.

~~27.46~~

## **4.6. Radio spectra**

~~27.49~~ Payment for a mobile phone licence constitutes the sale of an asset, not payment for rent, when the licensee acquires effective economic ownership rights over the use of the spectrum. To decide whether ownership is effectively transferred or not, the ~~criteria quoted above are to be considered.~~

~~17.28~~~~27.50~~ When sale of an asset applies and when the life span of the licence and of the spectrum coincide, the payment for a licence is treated as the sale of the spectrum itself. The latter situation applies always when licences are granted indefinitely.

~~17.29~~~~27.51~~ When sale of an asset applies, and when the life span of the licence is different from the life span of the spectrum, the payment for a licence is treated as the sale of a permit to use a natural resource by the legal owner (licensor) to the economic owner (licensee).

27.2

~~17.30~~27.52 When the licence agreement is treated as the sale of an asset in its own right, its value is established at the time of its sale. It declines with the expiration of the period of validity to fall to a value of zero at the point of the expiry of the licence. Symmetrically, the value of the spectrum to the lessor falls when the licence acquires a value and is progressively re-established as the licence expires. This is consistent with a potential further sale of the right to use the spectrum for another period. This procedure also ensures a neutral effect on the net worth of the overall economy during the life of the licence.

~~27.47~~~~27.48 Mineral resources~~~~27.49~~

~~17.45~~27.1 Mineral resources differ from land, timber and fish in that although they also constitute a natural resource, there is no way of using them sustainably. All extraction necessarily reduces the amount of the resource available for the future. This consideration necessitates a slightly different set of recommendations for how transactions relating to their use should be recorded.

~~27.50~~ When a unit owning a mineral resource cedes all rights over it to another unit, this constitutes the sale of the resource. Like land, mineral resources can only be owned by resident units; if necessary a notional resident unit must be established to preserve this convention.

~~27.51~~

~~27.52~~ When a unit extracts a mineral resource under an agreement where the payments made each year are dependent on the amount extracted, the payments (sometimes described as royalties) are recorded as rent.

~~27.53~~

~~27.54~~ The owner (in many but not all circumstances government) does not have a productive activity associated with the extraction and yet the wealth represented by the resource declines as extraction takes place. In effect, the wealth is being liquidated with the rent payments covering both a return to the asset and compensation for the decline in wealth. Although the decline in wealth is caused by the extractor, even if the resource were shown on the balance sheet of the extractor, the rundown in wealth would not be reflected in the extractor's production account because it is a non-produced asset and thus not subject to consumption of fixed capital. (The SEEA 2003 describes a form of satellite account where such a deduction from national income can be made for minerals as well as for other natural resources used unsustainably.) For these reasons, simple recording of payments each year from the extractor to the owner as rent and changes in the size and value of the resource as other changes in the asset accounts of the legal owner is recommended.

27.55

## **L.D. Sharing assets**

~~17.49~~27.53 There are two ways in which assets may be shared. The asset may be wholly owned by two or more units, each at different points in time, through successive purchases or transfers. Alternatively, the risks of and benefits from the asset may be shared by two or more units at a single point in time. The two cases require different treatments.

~~17.50~~27.54 Within the SNA, even though the asset may be owned by different units at different times, when a balance sheet is drawn up, in most cases the whole of the value of the asset is attributed to one unit. (The exceptions relate to unincorporated joint ventures and split assets for certain natural resources, which are discussed below.) For an asset subject to an operating lease, there is no ambiguity. The legal owner is also the economic owner and is the unit that shows the asset on its balance sheet. For an asset subject to a financial lease, the unit showing the asset on its balance sheet is the economic owner. The value of the asset is the present value of the future payments due to the legal owner plus the value of the asset at the end of the lease as specified in the lease agreement. This is consistent with the view that the value of the asset represents the stream of future benefits coming from the asset and the economic owner is the unit entitled to receive these benefits in return for accepting the risks associated with using the asset in production. For an asset subject to a resource lease, the value is shown on the balance sheet of the legal owner.

~~17.51~~27.55 When licences rights to use natural resources such as radio spectra, land, timber and fish and land satisfy

27.4

the “mobile phone” criteria, described in Section C above such that a sale of an asset is recorded then a separate asset, described as a permit to use a natural resource, is established. These assets are part of the subclass of contracts, leases and licences. They are then shown on the balance sheet of the licensee.

~~17.52~~27.56 ~~Sharing the risks and rewards of an asset between different units at a point in time is unusual.~~

~~The~~Regarding the use of assets, the most common occurrence is that a single unit undertakes the activity in which the asset is used and that unit shares the returns among the owners in the form of distributed property income. However, occasionally it is possible such a single unit does not exist and it is not meaningful to try to create it statistically. This is most common when the participating units are resident in different economies, as may be the case with an airline, or in the case of some unincorporated joint ventures (UJVs). The terms under which UJVs are established are diverse but one form allows that all members share the assets equally. In such cases, the SNA records the assets shared between the owners in proportion to their ownership shares.

~~17.53~~27.57 In some joint ventures, one party may contribute an asset as its share of the costs. If this happens, an injection of capital equal to the value of the asset should be recorded followed by the purchase of the asset in question with the ownership of the asset then shared by all parties to the arrangement.

27.58 ~~Permits~~In relation to the use of natural resources, as described in Section C above, there will be instances where the future stream of benefits in the form of natural resource rent are shared between the legal owner and the extractor of the resources. The recording in these situations should follow the split asset approach as discussed above and in chapters 4 and 11.

27.59 To illustrate the split-asset approach the following example is provided. It shows the range of entries that are associated with a full implementation of the approach, including accounting for depletion as a cost of production and allocation of depletion in line with the allocation of income generated by the extraction of natural resources. The production account of the extractor records output of 100 and costs of remuneration of employees (35) and depreciation (20) resulting in net operating surplus of 0 with natural resource rent equal to 45. Rent on natural resources of 30 is paid to the government as recorded in the distribution of income account and this is all considered depletion such that net saving of both the government and the extractor is zero. In the capital accounts of the extractor depreciation (20) and the remaining share of depletion (15) are deducted to derive net lending of 35. For government, the depletion of resources derives a net lending of 30.

~~27.56~~27.60 In terms of changes in the balance sheet, it is assumed that the natural resource rent (45) from exploiting the natural resources (valued at 750 at the beginning of the period) are split between government (30) and the extractor (15). Effectively, this means that government is giving up 1/3 of the natural resources. The latter is recorded, in the accounts of the legal owner, as a negative other change in volume of natural resources with a value of (minus) 250. This recording follows economic reality, with government foregoing part of the future natural resource rents. Even though governments may receive a steady flow of future income, if it only represents part of the potential benefits from the natural resources, then the recording of a reduction in balance sheet value makes evident that government is redistributing wealth.

Table 27.1: Entries for the split-asset approach

Accounts for the extractor of natural resources				Accounts for the government							
<b>Production and generation of earned income account</b>				<b>Production and generation of earned income account</b>							
Remuneration of employees	35	Output	100	Remuneration of employees	0	Output	0				
Depreciation	20			Depreciation	0						
Depletion/degradation of natural resources	45										
Net operating surplus	0			Net operating surplus	0						
<b>Allocation of earned income account</b>				<b>Allocation of earned income account</b>							
Natural resource rent	30	Net operating surplus	0			Net operating surplus	0				
Depletion/degradation borne by government	-30					Natural resource rent	30				
						Depletion/degradation borne by government	-30				
Net saving	0			Net saving	0						
<b>Capital account</b>				<b>Capital account</b>							
Acquisition of assets	0	Net saving	0	Acquisition of assets	0	Net saving	0				
Depreciation	-20	Net capital transfers received	0	Depreciation	0	Net capital transfers received	0				
Depletion/degradation of natural resources	-15			Depletion/degradation of natural resources	-30						
		Changes in NW due to saving and CT	0			Changes in NW due to saving and CT	0				
Net lending/borrowing	35			Net lending/borrowing	30						
<b>Financial account</b>				<b>Financial account</b>							
Cash	35	Net lending/net borrowing	35	Cash	30	Net lending/net borrowing	30				
<b>Other changes in the volume of assets and liabilities account</b>				<b>Other changes in the volume of assets and liabilities account</b>							
Depletion/Degradation of natural resources	0	(Dis) appearance or other change n.e.c.	250	Depletion/Degradation of natural resources	0	(Dis) appearance or other change n.e.c.	-250				
		Changes in NW due to other changes in assets	250			Changes in NW due to other changes in assets	-250				
<b>Balance sheet</b>				<b>Balance sheet</b>							
Cash	0	35	Net worth	200	450	Cash	0	30	Net worth	750	500
Fixed assets	200	180				Fixed assets	0	0			
Natural resources	0	235				Natural resources	750	470			
Total	200	450	Total	200	450	Total	750	500	Total	750	500

## **B.E. Permission to undertake a specific activity**

~~27.57~~27.61 In addition to ~~licences and leases~~ and rights to use an asset as described in the previous sections, permission may be granted to engage in a particular activity, quite independently of any assets involved in the activity. Thus ~~permission rights~~ to extract minerals in return for the payment of rent, for example, is not covered by this type of ~~permit~~. ~~The permits~~permission. Permissions are not dependent on a qualifying criterion (such as passing an examination to qualify for permission to drive a car) but are designed to limit the number of individual units entitled to engage in the activity. Such ~~permissions, often in the form of permits or licences~~, may be issued by government or by private institutional units and different treatments apply to the two cases. In general however, it is noted that the accounting entries should follow the treatment explained in 13.34 concerning valuation, revaluation and other changes in volume.

### **1. PermitsPermissions issued by government**

~~17.55~~27.62 When governments restrict the number of cars entitled to operate as taxis or limit the number of casinos permitted by issuing licences, for example, they are in effect creating monopoly profits for the approved operators and recovering some of the profits as the fee. In the SNA these fees are recorded as taxes, specifically as other taxes on production. This principle applies to all cases where government issues ~~licences~~permissions to limit the number of units operating in a particular field where the limit is fixed arbitrarily and is not dependent only on qualifying criteria.

~~17.56~~27.63 In principle, if the ~~licence~~permission is valid for several years, the payment should be recorded on an accrual basis with an other account receivable or payable entry for the amount of the ~~licence fee~~payment covering future years. However, if government does not recognize a liability to repay the ~~licence~~user in the case of a cancellation, the whole of the fee payable is recorded at the time it is paid.

27.64 The incentive to acquire such a ~~licence~~permission is that the ~~licence~~user believes that ~~he~~they will thereby acquire the right to make monopoly profits at least equal to the amount ~~he~~ paid for the ~~licence~~permission. This stream of future income is treated as an asset if the ~~licence~~user can realize this by on-selling the ~~asset~~rights. The type of asset is described as a permit to undertake a specific activity. The value of the asset is determined by the value at which it can be sold or, if no such figure is available, is estimated as the present value of the future stream of monopoly profits. If the payment for the ~~licence~~permission is being recorded by government on an accrual basis, the ~~licence~~user has an asset in ~~his~~the balance sheet under accounts receivable or payable equal to the value of the future payments and so the value of the ~~licence~~permission itself should cover simply the excess of the monopoly profits over the cost. If the ~~licence~~permission is on-sold, the new owner assumes the right to receive a refund from the government if the ~~licence~~permission is cancelled as well as the right to earn the monopoly profits. If the ~~licence~~permission was recorded as a single tax payment, the value of the asset is determined by the value at which it can be sold or, if no such figure is available, is estimated as the value of all the future monopoly profits without deduction. ~~The asset first appears in appearance of the asset, as well as the changes in value over time, are recorded in the~~ other changes in the volume of assets and liabilities ~~account and changes in value, both up and down, are recorded in the revaluation account.~~

~~17.57~~

### **An example**

~~17.58~~27.65 Suppose a unit, A, contracts with government to buy a permit to operate a casino for 3 years at a total cost of 12. ~~He~~The unit expects to make monopoly profits of 7 per year because the permit excludes many other casinos from operating. The government may or may not be prepared to make a refund if A ~~relinquished~~relinquishes the permit. A may utilize the permit for the whole of the 3 years for which it is valid or ~~he~~ may sell it to unit B at the end of year 1. The recordings under these four possibilities are examined below.

27.58

*Case 1: Government does not offer a refund and A keeps the permit for 3 years*

~~17.59~~27.66 At the start of year 1, A pays tax of 12 and has an asset worth 21 initially. By the end of the year, the value of the asset has reduced by 7 as an other volume change, because one of the three years for which the permit was initially valid has expired. At this point the asset is contributing 14 to ~~his~~A's net worth. By the end of the second year ~~he~~A writes off another 7 as an other volume change, leaving a contribution to net worth of 7. By the end of the third year the asset is worth zero.

27.59

*Case 2: Government does not offer a refund and A sells the permit to B after one year*

~~17.60~~27.67 At the start of year 1, A pays tax of 12 and has an asset worth 21 initially. By the end of the year the value of the asset has reduced by 7 as an other volume change, because one of the three years for which the permit was initially valid has expired. At this point ~~he~~A values the asset at 14. However, B is only prepared to pay 13 for the asset and A accepts this. A therefore reduces the value of the asset by 1 as a revaluation change. B then acquires the asset and reduces its value by 6.5 in the other change in volume of assets account in each of the two following years.

27.60

*Case 3: Government does offer a refund and A keeps the permit for 3 years*

~~17.61~~27.68 At the start of year 1, A makes a payment of 12 to government but this is recorded as a payment of tax of 4 during the year and at the end of the year government has an account payable to A of 8. The value of the permit to A is only the excess of the monopoly profit over the total amount that A will have to pay to government. This starts at 9 (the difference between 7 and 4 for three years) but by the end of year 1 is worth only 6. At the end of the year A's net worth includes an account receivable from government of 8 and 6 as the remaining value of the permit. The total is 14 as in case 1. During the second year, A's account receivable from government is reduced by 4 which is used to pay the tax due in year 2. In that year the value of the permit also reduced by 3 from 6 to 3. At the end of the year, A's net worth includes an account payable from government of 4 and a permit worth 3, total 7 as in case 1. At the end of year 3, both the account payable and the value of the permit are reduced to zero.

27.61

*Case 4: Government does offer a refund and A sells the permit to B after one year*

~~17.62~~27.69 At the start of year 1, A makes a payment of 12 to government but this is recorded as a payment of tax of 4 during the year and at the end of the year government has an account payable to A of 8. The value of the permit to A is only the excess of the monopoly profit over the account payable. This starts at 9 (the difference between 7 and 4 for three years) but by the end of the year is worth only 6. At the end of the year A's net worth includes an account receivable from government of 8 and 6 as the remaining value of the permit. The total is 14 as in case 1. As in case 2, A has to reduce the value of ~~his~~the permit (in this case from 6 to 5) when ~~he~~A appears to sell the asset to B for 13. In fact, the account payable from government of 8 is transferred to B and the asset is sold for 5. B's net worth is unchanged. ~~He~~B has paid A 13 but received the account payable of 8 and an asset valued at 5 in return. In year 2, the account payable is reduced by 4 and a tax payment of 4 is recorded and the permit declines in value from 5 to 2.5.

27.62

**Government ~~permits~~permissions as assets**

~~17.63~~27.70 A ~~permit~~permission issued by government to undertake a specific activity may be treated as an asset ~~by the holder of the permission~~ only when all the following conditions are satisfied:

- a. The activity concerned does not utilize an asset belonging to government; ~~if it does the permission to use the asset is treated as an operating lease, a financial lease, a resource lease or possibly the acquisition of an asset representing permission to use the asset at the discretion of the licensee over an extended period;~~
- b. The ~~permit~~permission is not issued subject to a qualifying criterion; ~~payments for~~ such

~~permits~~ permissions are treated as ~~either taxes or payments for services;~~

- c. The number of permissions is limited and so allows the holder to make monopoly profits when undertaking the activity concerned;

~~a.d.~~ The ~~permit~~ holder must be legally and practically able to sell the permission to a third party.

~~17.64~~ 27.71 ~~Even if all these conditions are satisfied, if in~~ In practice, ~~if~~ the permissions are not on-sold, it is not relevant to record the permissions as assets, ~~even if all of these conditions are satisfied.~~ If any of the conditions is not satisfied, the payments are treated as taxes without the creation of an asset in the category of contracts, leases and licences. (There may be an account payable as shown in cases 3 and 4 of the example.)

27.63

## 2. Permits Permissions issued by other units

~~17.65~~ 27.72 It is less common for units other than government to be able to limit the participation in a given activity. One instance may be when it is either compulsory or desirable to belong to a professional association but in this case there is seldom a limit on numbers participating. Another example could be where the owner of property limits the numbers of units allowed to operate on ~~his~~ the property for example a hotel with a policy of only allowing one taxi firm to pick up guests. In these sorts of cases, ~~the permits any related payments~~ are treated as payments for services. In principle the payment should be recorded on an accrual basis throughout the period for which the permission is valid. There is no reason in principle why such permissions could not be treated as assets if they were marketable though this may not be a common situation.

27.64

### Non-government permissions as assets

~~17.66~~ 27.73 A permission issued by a unit other than government to undertake a specific activity may be treated as an asset by the holder of the permission only when all the following conditions are satisfied:

- a. The activity concerned does not utilize an asset belonging to the permission-issuer; if it does the permission to use the asset is treated as an operating lease, a financial lease or a resource lease;
- b. The number of permissions is limited and so allows the holder to make monopoly profits when undertaking the activity concerned;
- c. The ~~permit~~ holder must be legally and practically able to sell the permission to a third party.

~~17.67~~ 27.74 ~~Even if all these conditions are satisfied, if in~~ In practice, ~~if~~ the permissions are not on-sold, it is not relevant to record the permissions as assets, ~~even if all of these conditions are satisfied.~~ If any of the conditions is not satisfied, the payments are recorded as payments for a service.

27.65

### 2.3. Permits Permissions to use natural resources the environment as sinks a sink

27.75 Governments are increasingly ~~turning to the~~ issuing of emission permits as a means of controlling total emissions. ~~These~~ An emissions permit (cap-and-trade) system is a flexible market mechanism that establishes a maximum level of pollution - a cap. Companies must have a permit to cover each unit of pollution they produce. Each permit stipulates the amount of emissions, for example greenhouse gases) that can be emitted (the quota). As such, each company must have a permit with a sufficient quota of units of emissions to cover their needs.

27.76 In the initial stages of some cap-and-trade schemes, permits are given to non-financial corporations freely. As a result, firms do not involve the use of a natural incur any additional production costs, unless they exceed their quota and are required to purchase additional permits from others. Increasingly, governments are auctioning permits rather than giving them freely. In these auctions, the purchase of a permit is not restricted to the emitting entity - permits can be purchased by any market participant - individuals, investors, governments, non-profit institutions, financial and non-financial companies.



- 27.77 Nonetheless, the schemes are structured primarily for non-financial corporations, who are most likely to emit. If companies exceed their quota of emissions, they can purchase unused permits from others, adjust their production or in the longer-term, install technology that reduces emissions. Depending on the adaptability of firms' production functions, some firms will be able to adjust to the limits more easily than others.
- 27.78 The recommended approach for recording emission permit systems in the SNA is to record the issuing of the emissions permit as a financial asset ~~(/ liability~~ valued at the auction price. Thus, the issuance of permits is regarded as the purchase of a financial asset – accounts receivable / payable - where the payment grants the acquirer the right to emit a pre-specified quantity of emissions sometime in the future. This approach aligns with the recording of permits in company financial statements where the emitting corporation incurs an expense at the time of surrender of the permit, which impacts their net lending/ borrowing. In the SNA treatment, when the company surrenders the permit, it is recorded as taxes on production. Any change in price from the issuance date is "written off" in the revaluation account each time there is ~~no~~ a transaction. This ensures that the flow of taxes will always reflect the original issuing price and not the current market value ~~placed on the atmosphere~~ of the permit which could include holding gains or losses.
- ~~17.68~~27.79 Emission permits provided freely to corporations do not have an associated tax cashflow. If taxes are maintained at issuance price (i.e. at zero), this implies that freely provided emission permits have zero value. ~~In so # cannot doing,~~ emission permits auctioned or provided freely will follow the actual cash revenue received by governments. However, the market value of emission permits (including freely provided ones) is clearly not zero. When emission permits are transacted amongst corporations, domestically or with non-residents they should be recorded in the accounts. If a corporation exceeds its quota and requires additional permits, it will purchase them from the market some of which could have been initially provided freely. ~~Although, these are good arguments that could be considered to be an economic asset) and are therefore classified as taxes even though the permitted "activity" is one of creating an externality. It is inherent in the concept that the permits will be tradeable and that there will be an active market in them. The permits therefore constitute assets and should be valued at the market price for which they can be sold for emission permits issued freely to be assigned a value, it may be difficult to consistently assign values and countries may need to resort to imputations. Given the complexity, conceptual and practical difficulties, and notwithstanding the need for imputations, compilers should preferably not record any asset/liability for freely issued emission permits, and instead revalue them back to zero every time there is a transaction with an emission permit that was freely issued.~~
- 27.80 ~~The~~It is important for users to be able to easily identify all transactions of emission permits in the accounts. In order for emission permits to be visible, it is recommended that a separate classification for emission permits be assigned that aligns with the new environmental classifications.
- 27.81 Methodologies and assumptions are needed to allow for time of recording, valuation, and other adjustments. It is assumed that the time the emission permit is surrendered corresponds to the time that emissions occurred. This assumption implies that the payments for emission permits issued by the government in year t will be recorded as tax revenue in year t+n. Adjustments are also needed to align corporate expenses reported in business accounts with government revenue and to record cross border transactions and stocks in relation to international or multi-country permit schemes / arrangements, such as the European Union Emission Trading Scheme (EU ETS).
- 27.82 To illustrate these concepts the following numerical example is provided. The starting point for the numerical example is that corporation A and corporation B have liquid assets (currency) of \$1000 and \$1500, respectively. The government then issues 100 emission permits at a price of \$10 each. The recording of the purchase of these permits by corporation A is rather straightforward. Government receives cash of \$1000 with the equivalent increase of liabilities (other accounts receivable/payable) representing the prepaid taxes on production, while corporation A pays \$1000 in cash with a concomitant increase in claims towards the government.
- 27.83 Next corporation A sells the permits to corporation B at a price of \$15 for each permit. To arrive at an appropriate recording, the claims are first revalued from \$1000 (= 100 \* \$10) to \$1500 (= 100 \* \$15), after which the claims are sold at the agreed market price, in exchange for cash, to corporation B. At this point the value of the financial claims of the government differs from the value of the corresponding claims in the books of corporation B. Since the treatment is that the value in the government accounts does not change (consistent with the surrender of the permits being recorded at issuance prices at a later moment in time), the

claims in the books of corporation B need to be revalued downwards. In the last stage of the example, half of the permits are surrendered. Here taxes on production are recorded with a counterpart decrease in the value of the financial claims.

27.84 It is noted that where emissions concern emissions to the atmosphere, an alternative recording may be envisaged if the atmosphere itself was treated as an asset. The SNA research agenda includes further consideration of the treatment of the atmosphere as an asset and, depending on the outcomes of that research, the treatment of emission permits may be revisited.

~~17.69~~27.85 Governments may also issue permissions to use the environment as sink without the use of trading schemes as described above. Payments may be made for these permissions. To describe the different ways of treating the payments, the case of payments for discharging water may be considered as an example of the different. Four alternatives are possible ways of treating the payments:

27.51• If a payment to discharge water is a fine intended to inhibit discharge, it should be treated as a fine.

27.52• If a limited number of permits is issued with the intent to restrict discharges, the payment should be treated as a tax if the medium into which the water is discharged is not regarded as an asset in the SNA.

- If the discharge medium is an asset and the necessary conditions are met concerning the terms on which the discharge is permitted, then the payment for the permit should be treated in the same way as the payment for a licence to use the radio spectrum for mobile phones.

- If the chargepayment is linked to remedial action, the payment is a payment for a service unless the amount levied is out of all proportion to the costs involved in subsequent water treatment in which case the payment should be then it is treated as a tax.

27.66

## **N.F. Contracts for future production**

~~17.73~~27.86 Although human capital is not recognized as an asset in the SNA, there are cases where a contract that entitles the holder to limit the ability of a named individual to work for others may be regarded as an asset. The most prolific and lucrative contracts may be for sports players where, for example, a football club can “sell” a player to another. In fact they are not selling the person, they are selling the exclusive right to have that person work for them. Similar contracts exist for the rights to publish literary works or musical performances. All such contracts are treated as assets of the type entitlement to goods and services on an exclusive basis within the asset class of contracts, leases and licences.

~~17.74~~27.87 It is possible to imagine that similar contracts may exist for the production of goods in future. ~~An examination of~~For example, airlines may purchase the practice of purchasing the options of option to buy future aircraft production ~~revealed, however, that in this case. However, if~~ there is no transferable asset and a change of mind on the part of the potential purchaser or failure to deliver on the part of the supplier is settled by a change in the arrangements between the two parties ~~and, it~~ does not lead to the sale of ~~the an~~ option to a third party ~~if and hence no asset is created. Nonetheless, if~~ an instance arises where the option to purchase goods is treated in the same way as a contract for a named individual’s performance, the same ~~classification~~treatment would apply.

## **O.G. Leases as assets**

~~17.75~~27.88 As stated at the beginning of this ~~part~~chapter, contracts underlie many transactions recorded in the SNA and it is important to understand ~~what~~ the implications ~~are~~ for the time of recording and classification of transactions arising from a contract. It has been noted that permits or licences to use natural resources may constitute an asset as may permits to undertake specific activities and contracts for future production. There is one other condition that may lead to a contract being considered as an asset, which is another circumstance when the contract is transferable to a third party (that is, a unit other than the two specified in the original contract).

~~17.76~~27.89 Suppose a lease on an apartment agreed some time ago specifies the rental at 100 per month but if the same apartment were to be leased currently it would fetch 120 per month. From the lessor's point of view, the apartment is "encumbered" by the existing lease, that is, it carries a penalty (in this case of 20 per month) because of the existence of the lease. The encumbered value of the apartment is based on the present value of future rental payments taking the existence of the lease into account, that is, the future income stream is 100 for as long as the lease lasts and 120 thereafter (ignoring any allowance for inflation). The unencumbered value of the apartment is a present value based on an income stream of 120 per month from the current period forward. The value to be entered in the landlord's balance sheet is the encumbered value. If he wishes to sell the apartment and the existing tenant had the right to remain at the agreed rental, the encumbered value is all the landlord (lessor) could hope to realize. If he wished to realize the unencumbered value he would have to pay the tenant the difference between the unencumbered value and the encumbered value to be free of the lease. This amount, the encumbrance, can in some circumstances be treated as an asset of the tenant. The circumstances are that it is both legally possible and is practicable for the tenant to sublet the apartment to a third party. Because of the difficulty of identifying when such assets may exist, it is recommended that in practice these assets be recorded only when there is evidence that they have been realized.

~~17.77~~27.90 It is possible that the encumbered value of the apartment may be higher than the unencumbered value if rentals have fallen since the lease was agreed. In this case it is the landlord that benefits from the discrepancy between the contract price and the market price because the value of the apartment in ~~his~~the balance sheet is still the encumbered value. If the tenant wishes to cancel the lease, ~~he~~they may have to pay the landlord the difference between the encumbered value and the unencumbered value. Only in the exceptional case where the tenant pays a third party to assume the lease at the price specified in the lease, does this payment represent realizing an asset of negative value to the tenant. Once the lease expires or is cancelled, the value of the apartment returns to its unencumbered value.

~~17.78~~27.91 Assets reflecting such third-party property rights are always transitory. They exist only for the length of the lease and where there is a difference between the encumbered and unencumbered values. As each year passes, they reduce in value because the period during which the difference exists is reduced but may increase if the new rental price increases.

~~17.79~~27.92 The market price of the rental of an apartment is the price actually paid by the existing tenant. If, in this example, the original tenant remains in situ and pays 100 per month, this is the market price despite the fact that a new lease would fetch a rental of 120. Only if the original tenant sublets the apartment for 120 would the market price be recorded as 120. Of this, 100 will be paid to the landlord and 20 to the original tenant.

~~17.80~~27.93 The example above shows when a marketable operating lease may acquire a value as an asset. Permits to use natural resources and contracts for future production may also give rise to these sorts of third-party property rights assets. So may permits to undertake specific activities even though the original payment was treated as a tax if payable to government. Financial leases do not give rise to these sorts of assets. If the value of the asset being leased increases by more than the payments due under the financial lease, the lessee always has the option of selling the asset, repaying the loan and keeping the difference.

#### ~~27.67~~ Marketable operating leases as assets

~~17.81~~27.94 A marketable operating lease may be treated as an asset only when the two following conditions are satisfied:

- a. The lease specifies a predetermined price for the use of an asset that differs from the price the asset could be leased for at the current time, and
- b. The lessee is able legally and practically to realize this price difference by subcontracting the lease to a third party.

~~17.82~~27.95 In practice, it is recommended that such assets should be recorded only when the lessee does actually exercise ~~his~~their right to realize the price difference.

## **P.H. Other considerations**

## 1. Time-share arrangements

~~17.83~~27.96 One way of sharing an asset offering accommodation is by means of a “time-share” arrangement. The same expression, though, may be used for a number of different arrangements.

~~17.84~~27.97 One arrangement is similar to purchasing a house except that “ownership” is restricted to a particular period each year but in perpetuity. Exactly the same physical space is available to the owner each year. Another arrangement guarantees accommodation at a given time each year but not necessarily in the same physical space. Other arrangements consist of buying “points” in a scheme that the owner can use to purchase accommodation at different locations and times subject to availability.

~~17.85~~27.98 All time-share arrangements have a unit that is responsible for upkeep, maintenance, insurance and so on but there are variations in whether this unit is the ultimate owner of the complex and the subscribers are lessees or whether the unit acts as agent for the group of owners or subscribers. Similarly there are variations in whether the owner or subscriber may sell or bequeath ~~his~~their ownership to another unit permanently and whether they can sublet occasionally.

~~17.86~~27.99 The issue of whether participation in the time-share scheme gives rise to an asset will depend on the answers to these sorts of questions. If the owner has a nominated space, available in perpetuity, is eligible to act as part of the management committee for the scheme, can sell or bequeath the allocation at will, then the holding is most likely to be an asset of the same type as a house. If the owner has a fixed agreement to have some form of accommodation available at a given period for a fixed length of time, it is likely that this represents a prepaid lease but one that could be sublet occasionally or sold for the rest of the period of the lease as a transferable operating lease. A participant in a points-based scheme may have only an account receivable by way of an asset.

~~17.87~~27.100 Where time-share arrangements are significant, the conditions pertaining to them should be examined in the light of the general principles described in this ~~section~~chapter to determine how to record the transactions involved and classify the assets.

## ~~3.2.~~ Lost deposits

~~27.68~~27.101 Under any form of contract, it is possible that one party makes a payment and the other does not deliver the goods, services or assets promised in the contract. In many cases this gives rise to an account payable or receivable that the first party may reclaim from the second. In some circumstances this may not be possible. For example, cheap airline tickets are often offered on a non-refundable basis. The fact that prepayments are non-refundable is part of the business plan of the company concerned. Their output should be measured as the value of sales without reduction for the payments by clients who did not avail themselves of the services to which they were entitled. Volume measures of output will depend on the services actually delivered and the impact of the non-refundable deposits will show up as a price effect. It will also be reflected in the consumption expenditure figures of those paying for services they did not in the end take delivery of.