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Please cite this paper as:

OECD (1995-06-01), “International Telecommunication Pricing Practices and Principles: A Progress Review, No. 36”, *OECD Digital Economy Papers*, No. 15, OECD Publishing, Paris.
http://dx.doi.org/10.1787/237413366320

OECD Digital Economy Papers No. 15

International Telecommunication Pricing Practices and Principles

A PROGRESS REVIEW, NO. 36

OECD

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INTERNATIONAL TELECOMMUNICATION PRICING PRACTICES AND PRINCIPLES

A PROGRESS REVIEW

INFORMATION COMPUTER COMMUNICATIONS POLICY

INFORMATION COMPUTER COMMUNICATIONS
POLICY

36

INTERNATIONAL TELECOMMUNICATION PRICING PRACTICES AND PRINCIPLES

A PROGRESS REVIEW

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Pursuant to Article 1 of the Convention signed in Paris on 14th December 1960, and which came into force on 30th September 1961, the Organisation for Economic Co-operation and Development (OECD) shall promote policies designed:

— to achieve the highest sustainable economic growth and employment and a rising standard of living in Member countries, while maintaining financial stability, and thus to contribute to the development of the world economy;
— to contribute to sound economic expansion in Member as well as non-member countries in the process of economic development; and
— to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

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Publié en français sous le titre :
LES PRATIQUES ET PRINCIPES DE TARIFICATION DES TÉLÉCOMMUNICATIONS INTERNATIONALES
RAPPORT D'ÉTAPE

FOREWORD

This report provides a review of progress in the examination of issues and problems concerning international pricing practices and procedures focusing, in particular, on improving transparency in the accounting rate system and in moving toward a wider consensus of the changes which may be needed in the existing international framework. The report reflects the considerations to date by an *ad hoc* group of experts on international telecommunications charging practices and procedures.

The report was prepared by Mr. Dimitri Ypsilanti of the OECD's Directorate for Science, Technology and Industry. It was derestricted by the Information, Computer and Communications Policy (ICCP) Committee at its meeting on 17-19 March 1993. It is published on the responsibility of the Secretary-General of the OECD.

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I. INTRODUCTION

In response to the concerns of a number of OECD countries, the Secretariat, in 1991, began to analyse the existing system of charging practices and procedures for international telecommunication services, using the public switched network, the economic underpinnings of this system, and the normative pricing principles on which this system is based.

The initial work was presented at a seminar held on 13-14 May 1991 at the OECD, and attended by government policy-makers, representatives of telephone companies, academics, and users. The results of this meeting were subsequently presented to the Working Party on Telecommunications and Information Services at its 7th Meeting held on 10-11 June 1991. The Working Party agreed to hold meetings at the expert level to continue examining the issue of international telephone tariffs, and in particular those proposals made by the Secretariat to reform the existing payments system used by international operators. It was also agreed that the work of this group should, at least in its initial stages, be limited to a consideration of voice telephony. This report includes the results from the four expert meetings which have been held to date (19-20 September 1991, 4 December 1991, 12-13 May 1992 and 2 December 1992). These meetings have been, in the view of most delegations, extremely positive in terms of improving the understanding of underlying issues and problems related to international telecommunication charging practices and procedures, in enhancing transparency in the area through the collection of data, and in moving toward a greater consensus on views as to the future structure of international charging practices and procedures.

The expert group felt that at this stage of their reflections the progress that had been made was sufficiently significant to be diffused more widely. As a result, the present report has been prepared to make available to a wider audience the findings and reflections which have taken place. In view of the fact that this issue remains under consideration, this report is considered to be an interim progress report. It complements an earlier report (published as ICCP 34) which provides an overview of the legal and administrative framework of accounting rates, international telephone pricing structures and trends, and an assessment of the international collection charge and bilateral accounting rate system.

II. BACKGROUND

1. International agreements

The provision of international telecommunications requires the interconnection of the domestic network of a country where the call originates through an international exchange to an international line and, through another international exchange to the domestic network of the country where the call terminates. Since international carriers have not been permitted to provide end-to-end services, it has been necessary for carriers of international traffic to reach agreements with carriers in call terminating or transit countries in order to ensure end-to-end connectivity. Such agreements, which include tariffication and revenue distribution issues, have resulted in a structure considered as one where there is joint provision of international telecommunication services and transmission of traffic.

i) Accounting rate

A number of systems are used for charging and settling inter-country telecommunication systems. The most common one is the bilaterally negotiated accounting rate system used for inter-continental relations. For relations within Europe and the Mediterranean Basin countries, the procedures and rates of remuneration are determined by the Tariff Group for Europe and the Mediterranean Basin (TEUREM). Accounting rate shares for TEUREM countries, which are determined on the basis of a questionnaire on costs, and negotiated within a multilateral framework, are distance related. (The TEUREM methodology for determining accounting rate shares is transparent: the questionnaire is contained in the CCITT Blue Book.) Between the United States and Mexico, settlements are based on the distance from the US-Mexico border. Other systems, such as "sender-keep-all", are also in use between some countries.

In the context of structural changes, arising from technological, regulatory and competitive developments, which have affected international telecommunication markets, there is widespread agreement among OECD countries that improvements can be made to the present framework of charging practices and procedures governing international switched telecommunication networks. In particular, there is agreement that accounting rates are too high and do not reflect costs. Moreover, they restrict the ability of operators to reduce customer collection charges and they can distort traffic flows. However, there is less consensus on how quickly change can be effected.

The process of improvement in the accounting rate framework has already begun with the adoption in 1992 of CCITT Recommendation D.140 (see Annex D). Several OECD countries have approved this Recommendation, although with some reservations regarding the non-discrimination and cost-oriented principles [Circular CCITT No. 169 (COM III/ST), 7.10.1992].

ii) Collection charges

There is increasing agreement that the present level of collection charges faced by the customers of international telecommunication operators are, in general, too high and do not reflect the cost of providing the service. There are also large discrepancies in bilateral collection charges. This situation has resulted mainly from the different pricing structures and pricing policies adopted in different countries. Nevertheless, significant improvements have been made for certain international relations over the last few years.

2. Proposals for reform

The Secretariat has argued that the underlying problem with international telecommunication pricing structures is that there is no competitive market place and subsequently no market pressures to align prices with costs. In the absence of competition there is a need to set up a payments system between public international operators which will be a proxy for a market and lead to a cost-oriented system. The existing accounting rate system has no mechanism to ensure that prices change as cost structures are altered, so that existing problems would continue without reform. The bilateral nature of the existing accounting mechanism also prevents a move toward a cost-oriented system which requires a transparent and non-discriminatory multilateral system.

In considering reforms of the current accounting rate framework, attention also needs to be given to the economic costs and distortions to trade in telecommunication services that arise at present. Because the current framework is not delivering appropriate price signals, it is adversely impeding growth in the volume of trade (to the detriment of all countries) and it is impeding the optimal utilisation and deployment of the telecommunications infrastructure. This situation would change if greater competition could be injected into the international telecommunications market.

Following its initial analysis, the Secretariat put forward a number of proposals for reform of the international telecommunication pricing system which would need to be implemented over time.The framework of the recommendations is based on a number of principles which are widely accepted in the Member countries, forming the basis of their adhesion to the OECD and for other international obligations. These principles include non-discrimination, transparency and national treatment. The principle of cost-related tariffs has also been accepted by a large number of Member countries: Nationally, in the context of their commitments to the International Telecommunication Regulations, and for twelve of their 24 Member countries in terms of policies of the Community of the European Communities. A number of elements were proposed as a means of reforming the existing system. These are elaborated below.

i) Transparency

It has been proposed that **Public Telecommunication Operators** (PTOs) **should make their bilateral accounting rates available.**

There is general agreement among OECD countries that transparency is a precondition for liberalisation, and is an important principle in ensuring that there is a certain amount of international discipline in international economic relations. Transparency is also viewed as a means to question countries on their actions and policies, of ensuring fair and equal treatment, and rational economic behaviour. Accounting rates are negotiated on a bilateral basis and this has led to a lack of transparency in rates between country pairs.

The Secretariat has argued that full disclosure of information (either publication on a restricted or non-restricted basis) on bilateral accounting rates would facilitate a more rapid movement to lower accounting rates between international telecommunication operators and towards a cost-oriented accounting rate system. Such transparency is also necessary to ensure that appropriate adjustments are taking place in collection charges, as well as accounting rates, in response to changes in underlying cost factors (which in the case of collection charges include accounting rates).

This view is supported by some delegates, while others consider that accounting rates are commercially confidential. The reluctance of most PTOs to disclose accounting rate information stems from a conviction that this information is commercially confidential. There are a number of reasons why this argument is not valid. There is little direct competition in international telephone services between any two relations. This in itself implies that "commercial" criteria do not constitute a factor. Second, most international operators have a monopoly concession from governments and therefore it is in the public interest to disclose any information (at least to governments) which plays an important role in the evaluation of the performance of the monopoly in meeting its obligations. Accounting rates fall into this category.

A further argument against the notion of "commercial confidentiality" is that accounting rates are known **not** to be based on costs in most cases. As such they do not reveal information on the cost structures of an operator. Furthermore, **even if** accounting rates are cost-based they represent the rate agreed for a given exchange of traffic between two terminal countries and are, in effect, a payment for facilities made available. As such, they reveal no more information on costs than does information on local call charges, national long distance charges or interconnection charges. In national systems where there are a number of operators who need to interconnect (*e.g.* mobile communications) there has never been any suggestion that access charges, which operators pay each other, need to be kept confidential. Revealing accounting rate information, even in competitive market conditions, would not reveal commercially confidential information any more than a quoted wholesale price by a manufacturer or service provider reveals information on the company's efficiency. It is indeed normal in economic transactions for companies to make their prices available to most potential customers. Irrespective of whether accounting rates are published or not, it is important that they are obtained by regulators to monitor the pricing and competitive behaviour of public operators.

Many European telecommunication operators who participate in TEUREM are aware of TEUREM accounting rate shares (these are published in the CCITT Blue Book). The issue of "commercial confidentiality" has not arisen in terms of TEUREM except directly in providing actual cost data in response to TEUREM questionnaires.

The Federal Communications Commission in the United States has argued that in its country, which has a highly competitive international long-distance market structure, there have been no detrimental effects from making accounting rates public. Similarly, in the United Kingdom, parallel accounting rate requirements mean that operators are aware of each other's accounting rates, and this does not seem to have affected their ability to compete. Moreover, where there are no parallel accounting rate requirements, such as with the United States, the accounting rates of the two UK international operators for US relations are known (and are different) and this has not been viewed as causing any difficulties. And yet their transatlantic traffic accounts for a considerable percentage of their international revenue.

Information on transit charges is also viewed by some operators as being commercially confidential because some competition to obtain transit traffic has been emerging over the past several years. There is no rationale for such confidentiality.

Transparency, in the context of the present system, would also avoid one of the disadvantages of bilateral negotiations: accounting rates become a function of effective bargaining ability and relative market power -- or in some cases unwillingness to enter into negotiations.

ii) International traffic terminating fee

The Secretariat considers that the present system of accounting rates, including the bilateral bargaining process, leads to an inefficient and **discriminatory** pricing system. It has proposed that **a multilateral system based on non-discrimination and national treatment be implemented.**

The Secretariat has suggested that countries adopt a system whereby operators implement an **international traffic terminating fee** (similar to an interconnection charge). This fee would, in the long term, reflect the cost of handling incoming international traffic from an international gateway and terminating this traffic within the national network. In that the cost to the operator of handling incoming international traffic from a gateway is usually invariant as to the origin of the traffic, the fee charged would be the same for all foreign international operators, irrespective of the origin of the traffic. In setting such a fee, consideration must be given to the fact that traffic from an originating country is often distributed in a terminating country through several different gateways, and by different transit routes, depending on circuit availability.

This proposal is in accordance with CCITT Series D Recommendations which indicate that Administrations should be remunerated on the basis of the facilities they make available.

In the **short term**, in view of the need to allow a number of countries adequate time to rebalance their telecommunication tariffs and reduce cross-subsidies, this fee could be based on the **lowest** accounting rate share a particular country has with a bilateral partner, as long as this lower rate is adequate to cover the costs of the national extension, transmission and international switching. Thus, if country A had its lowest accounting rate share of 0.5 SDR (half the accounting rate) with country B, then 0.5 would constitute the initial termination fee for all relations.

There should also be a commitment to reduce the international traffic terminating fee by a fixed percentage per year toward a cost-oriented fee.

This proposal does not preclude bilateral agreements between operators in order to agree on traffic promotion and marketing schemes, discounts on traffic volume generated, quality of service, and other commercial aspects which require bilateral negotiations.

iii) Collection charges

National collection charges need to be reduced to reflect the changes proposed in the accounting rate system, and in particular, to move toward a cost-oriented system.

iv) Structure of charges

International traffic terminating fees and collection charges should be structured to ensure efficient use of network resources, in particular, by using time-of-day pricing.

v) Transmission costs

The payment of international transmission charges should be the responsibility of the originator of traffic, but there are a number of exceptions. Transit traffic is usually transmitted via leased channels paid for by the originator and receiver of traffic. This practice could continue and leasing charges could be shared (reflected in the collection charge and in the termination fee for that particular relation). Inter-continental traffic is usually transmitted through leased satellite channels (costs can again be shared) or through cables where a number of operators invest together and own shares in the form of Indefeasible Rights of Use (IRUs). Cost-orientation may require cable consortia to form structurally separate cable companies, which would then set a transmission charge for users. It should be noted that many operators invest in cables which have no terminal points in their own country of origin. They also own shares in satellite systems such as INTELSAT, INMARSAT, and EUTELSAT.

* * *

The above proposals would be compatible with existing obligations, (article 29 and article 31 of the International Telecommunication Convention allow for Members to conclude arrangements on the settlement of international accounts through special arrangements) -- and would become compatible with other international obligations. This is not the case with the present system.

The delegations considered that the Secretariat proposals merited discussion and no delegation rejected them as being inappropriate in the long term. Nevertheless, these proposals needed more detailed examination from an economic, as well as a financial and regulatory perspective, and especially with regard to their implications for the cost accounting of operators. However, it was thought important that in the short term further discussion and more adequate information were required to assess the type and extent of reforms required. The discussions and information gathering have focused principally on the following themes:

- -- transparency of accounting rates;
- -- analysis of collection charges;
- -- cost-oriented international telephone prices;
- -- non-discrimination in pricing.

During the period that the OECD meetings took place, the International Telecommunication Union's International Telegraph and Telephone Consultative Committee's (CCITT) Study Group III was considering the possibility of revising the relevant Recommendations. OECD delegates found the work of the two Organisations to be complementary, and good co-ordination was ensured through the participation of the Chairmen of CCITT's Study Group III and Working Party III/4 of this group at OECD meetings, and through the attendance of delegates who were involved in both meetings. A proposal by a delegation to continue work on international telephone tariffication, which would be complementary to work remaining for the CCITT Study Group III during its next study period, has been discussed and accepted by the expert group.

III. TRANSPARENCY

The arguments used to persuade Member countries to increase transparency in accounting rates have been given above. There are different levels of transparency. Full transparency could mean that accounting rate information is made available to the public at large. At another level, accounting rate information could be made available only to international telephone operators; or the information could be made available to an international organisation on a confidential basis for analysis only. A further possibility is that only national regulators and/or governments obtain the information. Transparency can also be implemented in different degrees, ranging from full disclosure to some form of limited disclosure.

The OECD approach to the transparency of accounting rates has focused on examining to what extent accounting rate information is made available within PTOs and to governments, and on persuading PTOs (and governments) to provide accounting rate information on a wider basis. This has essentially taken three forms:

-- the availability of accounting rate information in countries;

-- providing information on accounting rates;

-- examining the distribution of accounting rates.

1. Availability of accounting rate information

A questionnaire was distributed to evaluate the extent to which information on accounting rates was available in Member countries. The results of this questionnaire are shown in Appendix A. The main findings are summarised below.

1.1 *Responsibility for negotiating accounting rates*

In all cases the responsibility for negotiating accounting rates in OECD countries rests with the telephone operator (Table A.1). Government involvement exists only to the extent that some operators are agencies of the Government or even government departments. Negotiation is usually the responsibility of a specific directorate or division within the public telecommunication operator, but in a number of cases other divisions take part, either because new products are involved or because accounting rates have long-term strategic planning and marketing implications.

1.2 *Diffusion of accounting rate information within an operator*

The extent to which other divisions/departments/branches of the public telecommunication operator are informed of accounting rate information varies considerably between operators (Table A.2). However, the replies given by operators partly reflect their internal corporate structure, and partly how accounting rate data is used internally to provide management with information (*e.g.* for new product development, strategic planning, etc.). From the responses received there are different perceptions as to the extent that the data on accounting rates is considered internally confidential.

1.3 *Communication of accounting rate information to governments*

Information on accounting rates is not provided to governments by the majority of OECD countries (Table A.3 with the exception of Italy, Japan, Germany, France, the United States and New Zealand. The reasons cited for providing this information is for approval. (ASST gave approval and harmonization as their reason.) The approval of accounting rates by governments appears to be an automatic procedure. In the case of one operator, accounting rate data is made available to the government "upon request". In a number of countries, governments do not have a statutory right to obtain accounting rate data.

1.4 *Providing accounting rate data to the regulatory body*

Most of the operators who returned the questionnaire come from countries where there is no independent, regulatory body (other than the relevant government department). Countries such as Canada and the United Kingdom, which have independent telecommunication regulators, accounting rate date is provided to the regulator (Table A.3). In the case of Canada this is for information purposes, in the United Kingdom it is to ensure compliance with the Code of Practice on International Accounting (largely to prevent "whipsawing"). Since negotiation of accounting rates is limited to participation of the relevant division of the operator, regulators do not get involved in approval of accounting rates (except after the fact).

1.5 Renegotiation of accounting rates

For a large number of mainly European operators, the renegotiation of accounting rates appears to be **infrequent** rather than **regular** (Table A.4). The recent revision of Recommendation D 300 R led to reductions in accounting rate shares on 1 January 1992, 1 January 1993 and the likelihood of a further reduction in mid-1994. For countries participating in TEUREM, accounting rate changes have to await TEUREM studies, which also tend to be periodic. According to the replies received, the UK carriers and Teleglobe (Canada) seem to have a more active programme of renegotiating accounting rates than do carriers from other countries. The replies from some operators seem to imply that they do not actively seek renegotiation of accounting rates.

1.6 Approval of collection charges

A number of operators require approval of their collection charges (Table A.5). It is surprising that a number of governments, which regulate collection charges, do so without any reference to accounting rates, a key cost factor underlying collection charges. As a result, approval of collection charges must be based on general criteria rather than on cost factors. This implies a certain policy incoherence since many governments (and the European Commission) have adopted policies of cost-orientation in telecommunication pricing. To implement and monitor a policy of tariff rebalancing and cost-orientation, accounting rate information should be available to governments. **Therefore, the *minimum* degree of transparency is that those governments which do not yet obtain data on accounting rates should do so.**

2. Providing information on accounting rates

The second way of promoting transparency was to discuss the possibility of making transparent the accounting rates which are in fact applied. In this context it was agreed that, at least in the initial stages, the OECD should concentrate on accounting rate information for its Member countries. At the same time, it was recognised that many developing countries have high accounting rates, which are not always justified given underlying costs and the rate of change in these costs.

A number of countries agreed to provide the Secretariat with accounting rate information on a confidential basis. This information could then be disclosed without revealing the countries of origin and terminal destination. In some cases countries undertook to consult each other before providing the Secretariat with information.

Several countries also indicated their willingness to release data only to those countries also willing to release information (*i.e.* those countries who did not provide data themselves would not be allowed access to any revealed information). Consequently, the information released relates only to participating countries and is therefore incomplete. At present about six of the 24 Member countries are willing to disclose to each other their accounting rate information. Other countries indicated that, in earlier meetings, they were in principle in favour of full transparency on an unconditional basis, but have yet to take action to implement this.

The stated positions of countries are as follows:

Australia: OTC (now AOTC) considers accounting rate information commercially confidential and will not supply data.

Austria: Data provided as follows:

OECD countries range: 0.379 to 1.96 SDR: Average 0.674.

Non-OECD countries range: 0.355 to 4.25.

Belgium: RTT (now Belgacom) have indicated their agreement to disclose accounting rates for OECD relations for 1.1.1985, 1.1.1988 and 1.9.1991. This agreement does not commit them in any way to future disclosure.

Canada: No reply.

Denmark: Provided data for all relations, but relations are not named.

Finland: Provided all relevant data on a confidential basis.

France: Provided CEPT range and aggregated data in graphic form.

Germany: Average values for TEUREM relations have been provided and the average for Japan, Australia, and New Zealand combined.

Greece: Only graphic information provided.

Iceland: No reply.

Ireland: No reply.

Italy: Italcable and ASST have provided the Secretariat with information on accounting rates applied in Italy for telephone services with OECD countries. This information was given on a confidential basis. For CEPT relations the data only show minimum and maximum figures.

Japan: Only graphic information. Japan has stated at meetings that it would consider providing information.

Luxembourg: No reply.

Netherlands: Provided TEUREM data on a confidential basis. PTT Telecom Netherlands is willing to disclose information to countries providing similar information.

New Zealand: Only graphic information provided, but has indicated a willingness to provide other data.

Norway: NTI has indicated its willingness to make its accounting rates available.

Portugal: Provided accounting rate information for OECD inter-continental relations without specifying country.

Spain: No reply.

Sweden: The Swedish Ministry of Communications has indicated that accounting rate information is considered as commercially confidential. The data shown in the table below were supplied.

Switzerland: No reply.

Turkey: No reply.

United Kingdom: British Telecom is willing to provide the data concerning the accounting rates between itself and another operator or country that agrees to participate in similar disclosures, on condition that BT receives equivalent data from all other participants, and that the results are not released to non-participants.

United States: All accounting rate data is considered as public information and published.

Hungary: Data for all relations with CEPT countries were given to the Secretariat.

Poland: Data for all relations with CEPT countries were given to the Secretariat.

Swedish Telecom

Aggregated accounting rate 1990 (SDR/minute)

Africa	1.85
Asia	2.12
Central America	2.72
Europe	0.41
North America	0.50
Nordic Countries	0.21
South America	2.60

Note: Aggregated by volume of outgoing minutes of traffic from Sweden.

Source: Swedish Ministry of Communications.

3. Examining the distribution of accounting rates

Delegations also agreed to provide data in graphic form showing the number of relations at different levels of accounting rates. There were 13 delegations who provided information in this form (Appendix B).

4. Graphic information

A number of conclusions from the graphic information shown in Appendix B are summarised below.

Belgium: Accounting rates for **inter-continental** relations vary from 1.0 SDR to 4.14 SDR; approximately 30 per cent of relations fall within the range of 1 to 2 SDR, but nearly half of relations take place at 2.94 SDR.

Denmark: Taking into account all relations, one-third of these have accounting rates under the 2.0 SDR level.

France: The **inter-continental** accounting rates of France Telecom decreased in terms of the simple average for North American relations from 1.45 in 1985 to 0.70 by 1991. Reductions of similar magnitude took place in accounting rates for relations with Australia, New Zealand, and Japan.

Germany: The data for Deutsche Bundespost Telekom indicate how static TEUREM rates have been. (A study period terminated in 1988 and it would have been reasonable to expect a change in TEUREM rates). Although accounting rates with Australia, New Zealand and Japan have been reduced by 38 per cent, this is a much smaller reduction than is true, for example, for France which by 1991 had an accounting rate of 1.07 SDR with the OECD Pacific countries, compared to 1.30 for Germany.

Greece: Over two-fifths of international telephone service relations with OTE have accounting rates above 2.90 SDR. However, these account for under 2 per cent of total minutes on international traffic (outgoing and incoming). The bulk of traffic is for relations for which accounting rates are 0.75 SDR and under (mainly TEUREM relations).

Italy: The average accounting rate for relations with the United States and Canada has been reduced by 26 per cent between 1985 and July 1992 (from 1.62 SDR to 1.20 SDR), by 37 per cent for the average accounting rate for relations with Australia, Japan, and New Zealand relations [from 2.08 to 1.32 SDR (see Annex B)]. For European relations accounting rates were relatively stable (from 0.358 to 0.349 SDR). The analysis of each single relation shows that the maximum accounting rate level is 1.9 SDR in July 1992 (2.61 in 1985) while the minimum is 0.349 SDR. For OECD relations, 61 per cent take place at a SDR level ranging from 0.36 to 0.73.

Netherlands: PTT Telecom has a level of accounting rates which appear on average lower than those operating in many other European countries. The distribution of accounting rates takes place in a narrower range and with a more even distribution, with one-fifth of relations taking place at under 0.91 SDR.

Japan: KDD has relatively high accounting rates spread over a wide range. One-third of relations are under 2.0 SDR and close to a third are at 2.94 SDR.

New Zealand: The relative level of accounting rates is low and, unlike a large number of OECD countries, approximately 70 per cent of relations are at accounting rates of 1.80 SDR and under. Given the geographic distance of New Zealand from its international correspondents for international telephone services, the New Zealand accounting rate distribution reveals just how high, in contrast, the accounting rates are in a number of OECD countries, especially those in the TEUREM group.

Norway: About one-third of Norwegian relations are close to or at 1.50 SDR. Nevertheless, there are a large number of relations with high accounting rates.

Portugal: Accounting rates with the non-European OECD countries appear fairly respectable given the relatively less developed infrastructure in the country.

United Kingdom: For over 50 per cent of BTs total accounting rates,relations are at 1.47 SDR and under, and close to 70 per cent are 1.50 SDR and less. BTs accounting rates are clustered within a narrow band comparing very favourably with other operators with low accounting rates.

United States: The accounting rates for OECD relations are spread between 0.24 SDR to 1.82. Since 1985 there has been a significant change in accounting rates, in particular for some relations. For example, relations with Japan and Sweden had high accounting rates in 1985 (2.14 SDR and 1.6 SDR respectively). These have been reduced to 1.13 and 0.50 SDR.

TEUREM relations: The table below shows the range of accounting rates for OECD-TEUREM relations based on data made available.

TEUREM range for OECD relations: 1991

(in SDR)

	High	Low
Austria		
Belgium	0.843	0.304
Denmark		
Finland		
France	0.585	0.303
Germany		
Iceland		
Ireland		
Italy	0.566	0.379
Luxembourg		
Netherlands		
Norway		
Portugal		
Spain		
Sweden		
Switzerland		
Turkey		
United Kingdom	0.506	0.326
Poland	0.6171	0.3888
Hungary	0.227	0.153
CSFR		

Improvements to this graphic presentation will be made by showing for each level of accounting rate the percentage of a country's total international traffic subject to that accounting rate. In addition, the evolution of accounting rates from 1985 will be indicated in order to show both the level and changes in the level. There are two main defects in the national data as so far presented: *i)* the gradation in accounting rates is different and this leads to a certain amount of inconsistency; *ii)* the other difference has arisen from the fact that some countries have provided information for all relations and others for only OECD relations, or have aggregated relations in terms of different international regional breakdowns. Improvements will also be made in these areas.

Although the provision of accounting rate data in graphic form has been useful, and its presentation can be viewed as significant progress in enhancing transparency, this form of presentation is clearly insufficient, especially as a means of ensuring greater progress towards the implementation of cost-oriented accounting rates. It should be noted that in its Draft Recommendation on Accounting Rate Principles for International Telephone Service, Study Group III of the CCITT has set guidelines, to be followed on a voluntary basis, regarding the provision of information relating to accounting rates. According to the guidelines, the distribution and the average variation should be shown as a percentage of the accounting rates, between the reference dates of January 1988 and January 1992, and that this should be subsequently brought up to date on an annual basis. Administrations can, alternatively, provide the information showing an average annual global accounting rate movement.

IV. ANALYSIS OF COLLECTION CHARGES

A collection charge is the charge established by a national administration and paid by its customers when they use international telecommunication services. These charges are transparent to the customer. Although the setting of these charges is a national matter, it has been recognised that they are of concern to public telecommunication operators in other countries. This is because the level and structure of the collection charge will affect the frequency, duration and calling pattern of nationals to international destinations. These charges can also affect the direction of calls between parties which are affiliated ("call me back effect") or by stimulating reverse charge calls through "call direct" charge cards. Since collection charges also have an impact on trade in services their international implications need to be examined.

A number of factors need to be taken into account when undertaking international comparisons of collection charges. The extent of infrastructure development is important in determining costs and should have an influence on collection charges. Nearly all OECD countries had over 95 per cent of main lines equipped for direct customer dialling to international destinations by 1985 and 100 per cent by 1988. The relative differences in collection charges between countries also depends on the initial level of collection charges in 1985. Some countries already had fairly low international charges in the mid-1980s so that the relative rate of adjustment in collection charges made by them in the ensuing period cannot be compared with that made in other countries. Lower relative charges may have arisen for a number of reasons. Competitive markets for international telephone service emerged in several OECD countries during the period and in some cases had an important impact on international charges. Since 1985, a number of OECD countries have also began to rebalance their telecommunications price structures, but the relative speed of this process has differed substantially between countries. While a number of OECD countries agree that one of the aims of tariff rebalancing will be a reduction in international telephone tariffs, and that it would be possible to implement this over a three to four-year period, it is recognised that the political constraints in adjusting subscription, rentals and local call charges might well slow down this process.

In some countries the international telecommunication service provider is separate from the national telephone operator. This reduces the possibilities of using the international telephone service to cross-subsidise national local telephone or long-distance services and thus lead to more rational pricing policies. There is evidence, however, that for both integrated and non-integrated operators that, within the framework of international charges, different degrees of cross-subsidisation exist.

The different geographic situations of countries has also influenced the pattern of international collection charges, for example in border relations within Europe and in relations between Scandinavian countries. Volume of traffic has also been an important factor in the setting, and the relative changes, of collection charges. The most obvious example here is for transatlantic traffic.

Accounting rates and adjustments to accounting rates have affected the level and evolution of collection charges, but accounting rate changes have in a number of cases been ignored and have, therefore, not played a role in the adjustment of collection charges. There have also been differences between countries as to how much other cost factors relevant to the delivery of international telephone service have been taken into account.

Collection charges were examined for the period 1985-91. This period, relatively short in terms of time-series analysis, is nevertheless important in terms of the number of significant developments which took place in telecommunications: these include increased competition, reduction in the scope of monopolies especially by allowing competition for value-added services, rapid growth in PSTN traffic, and significant transmission capacity build-up on inter-continental routes based on high capacity fibre-optic cables (especially transatlantic). Many of these developments had an impact on collection charges -- or on the costs which should underlie the setting of collection charges. They also had an impact on the price structures of operators, many of which began a process of rate rebalancing. The analysis of collection charge data was only undertaken for peak rates. Nevertheless, off-peak pricing is very important and a number of OECD countries have stressed that the lack of off-peak rates in other countries can lead to distortions in calling patterns and traffic flows.

There are important changes taking place in collection charges and their structure as a result of the introduction of new tariff packages by a number of operators. These packages are mainly aimed at important customers and consist of quantity discounts. It is too early to gauge their impact on accounting rates, but they are likely to have a positive impact by enhancing international competition.

1. National developments in collection charges

The national data on collection charges is presented in Appendix C. It is not intended here to examine in detail the development of each country's collection charges, but to highlight trends and developments and some major issues.

There is a serious lack of symmetry in collection charges in bilateral relations. As a result of different levels of technology, of other cost differences, and of different call routings, etc., some differences in bilateral collection charges are inevitable. But in a number of cases existing differences are large and result from deliberate pricing policies. Such dissymmetries can cause distortions in calling patterns, length of calls and consequently revenue flows; they can be considered as unfair treatment. As well, these dissymmetries are contrary to CCITT Recommendations.

An illustration of collection charge dissymmetry is given in Table C.28. Australia's collection charges for calls with other OECD countries is significantly lower than collection charges in the opposite direction. The table shows that in 1991 the bilateral collection charge between Australia (OTC) and the United Kingdom (BT) was symmetric, whereas with continental Europe bilateral differences were in some cases 50-100 per cent. New Zealand, like Australia, also faces dissymmetric collection charges for relations with most OECD countries.

In some countries the policy for setting collection charges appears to be one of differential pricing according to different markets, resulting in some cases in nominal increases in collection charges over the period under consideration. This policy is usually reflected in an increase in the number of IDD (international direct dial) charge bands. Two factors should be considered. First, the relative differences in accounting rates allowed countries to reduce collection charges with those countries with which low accounting rates had been negotiated. Second, capacity build-up on thick routes and relative cost declines on those routes allowed for the implementation of lower prices.

This has been the case in **Australia**, where, however, collection charges were maintained within a relatively narrow band, unlike many other countries where the dispersion of collection charges around the average is high. The minor decrease for call charges to New Zealand appears incoherent relative to inter-continental changes in charges.

Austria maintained collection charges unchanged for half of its TEUREM relations during the period 1985-91. One result of this, given downward price adjustments on inter-continental routes, is that the gap between average European collection charges and average inter-continental charges to OECD countries is much less than in many other countries. **Belgium** has followed a similar policy maintaining unchanged collection charges for a number of European relations, but, unlike Austria, the ratio between average European charges and inter-continental charges is high. **Canada** (Teleglobe), like Australia, has been characterised by low and declining collection charges which have been maintained within a narrow price band. The increase in the number of IDD charge bands would appear to reflect the fact that some collection charges have been maintained at relatively higher levels with those countries which apply higher charges themselves. In contrast to most other countries, the collection charges of **Denmark** increased in nominal terms except for inter-continental relations. Even in the latter case the decreases were much more modest than those implemented by a number of other OECD countries. However, the Danish case reflects the fact that the country used to have low collection charges relative to most European countries.

France began a process of rate rebalancing at a fairly early stage (mid-1980s) compared to a number of major European countries. This is reflected in the consistent reduction in collection charges between 1985-88. Following this period collection charges remained virtually unchanged (until the beginning of 1992, when a 18 per cent reduction took place for inter-continental tariffs with OECD countries). **Germany's** collection charges have been characterised by their immobility. Inter-continental collection charge adjustments were also relatively limited. The fact that Germany does not have off-peak call charges for inter-continental relations has also been viewed as problematic by a number of bilateral partners. New international tariffs to come into effect in June 1992 go some way in implementing appropriate changes. Collection charges for **Greece** to other OECD countries increased across the board between 1985 and 1988; between 1989 and 1991 further increases took place for a number of relations (although reductions were implemented for seven European relations and one inter-continental relation). Collection charges in **Italy** were reduced from 1985 to 1991 by 20 per cent (nominal terms in local currency) for the EC countries, and by about 23 per cent for non-EC Europe. A specific plan for tariff rebalancing was approved by the government at the end of 1992 with objectives to be met over 4-5 years.

Collection charges are high in **Japan** (KDD). Following the introduction of competition in international telephone service markets, significant reductions in collection charges have taken place for all relations. Nevertheless, relative, for example, to Australia and New Zealand, Japan's collection charges remain high. Collection charges for Japan are structured within a narrow band of three charge zones. **Portugal** followed the pattern of Greece in implementing increases in charges between 1985-88 and decreases between 1988-91. The net effect has been increased collection charges since 1985 especially for all inter-continental relations (except Australia). **Sweden**, where collection charges have been at relatively low levels, implemented fairly modest decreases in charges between 1985-91. There were no decreases in charges for relations with Scandinavian countries, since these were already low.

In the **United Kingdom**, Mercury, since it began to provide international service, has been making important reductions in collection charges in particular for intra-European services. Competitive factors had meant that collection charges for Mercury were consistently lower than those for BT, although the accounting rate of Mercury with US carriers is SDR 0.50 (a flat rate applied irrespective of time of day) compared to SDR 0.48 for BT. The relatively high collection charge for BT with Japan should be noted (although these charges compare favourably with other European prices). Both AT&T and MCI in the **United States** have been implementing a price-setting policy which is leading to one collection charge for each individual country. Unlike the UK case, the collection charges of MCI and AT&T track each other quite closely, at least for 1991. Differences are more apparent for collection charges in 1988. Changes in collection charges for the US carriers do not seem to depend only on changes in the underlying accounting rates, *e.g.* the collection charge of AT&T with Sweden ($1.21 per minute, based on a four minute call) is close to that of Austria ($1.23) despite considerable differences in accounting rates (SDR 0.5 with Sweden and SDR 1.0 with Austria).

2. Intra-European collection charges

Intra-European collection charges are, or should be, fundamentally determined by TEUREM, which meets in the context of the CCITT. TEUREM was set-up by the IVth Plenary Assembly of the CCITT in 1968 and began its meetings in 1969. The method used by TEUREM for establishing tariffs is based on cost studies. Information is collected from Administrations on the basis of a questionnaire sent out during the study periods (usually every four years) to the member countries. On average, 15 Administrations reply to the questionnaire. This questionnaire is aimed at collecting data on average costs in order to allow Administrations to determine standards that can be used to fix appropriate accounting rate shares for the remuneration of facilities made available.

The TEUREM **methodology** for determining accounting rate shares is transparent: the questionnaire is contained in the CCITT Blue Book (Volume II, Fascicle II.1, General Tariff Principles, Charging and Accounting in International Telecommunications Services, Part III, Supplement No. 1.). A description of the methodology is also contained in Supplement No. 2 of the latter reference.

The questionnaires are used to derive a standard reply for each question constituting the basic data for the cost study. The methodology is thought to have provided **fairly** reasonable data for the international network, the elements of which include the international circuit, international switching for incoming and outgoing calls, and the transit exchange. Increased competition for transit traffic may make the methodology less tenable in that Administrations may be reluctant to provide the necessary data. For the calculation of average national extension costs the method used is less accurate and based on costs calculated by the Administrations per traffic unit.

The TEUREM Recommendation, during the 1985-91 period under consideration in this paper, stated that in principle collection charges should be equivalent in national currency to the accounting rate. But the Recommendation also allowed Administrations to apply a multiplication factor (K) to the accounting rate to set the collection charge. It was recommended that this factor should not be more than 1.8. This K factor, and its different use according to the particular country, has played an important role in distorting the level of collection charges and introducing dissymmetries.

The collection charge data for TEUREM countries shown in the Appendix are based on the above methodology. The revised version of Recommendation D.300R (January 1992) introduced the following important changes: suppression of the K factor; determining the accounting rate share only for destination countries (and where necessary for transit countries) with the remuneration for the originating country being covered by the collection charge. The new version of Recommendation D.300R (January 1993) takes into account the extent of infrastructure development and cost differences by using the rate of digitalisation to adjust accounting rate shares.

The structure and developments in European collection charges do not appear to reflect a consistent application of a single and coherent methodology, as suggested by the group TEUREM. In the TEUREM methodology, for example, **standard** rates are applied for accounting rate shares with variability being introduced as a result of treating the transmission component as a variable to take into account distance. This is not evident from the collection charges of the TEUREM countries. The evolution in TEUREM collection charges needs to be evaluated over the next year to determine the extent to which revised measures are being effective in reducing collection charges.

Over the period 1985-91 the twelve European Community countries (all belonging to TEUREM) adjusted their collection charges so that from some Community countries the collection charge to all other Community countries became the same or very similar. This adjustment involved decreases in collection charges, as well as some significant increases. The adjustments did not imply, nor does it seem they were aimed at, obtaining bilateral symmetry in collection charges.

A policy of cost-orientation would seem to indicate (but not require) that collection charges from one Community country to the other eleven could differ if costs differed. For example, a call from Madrid to Athens would probably cost more than from Madrid to Lisbon -- the application of the TEUREM methodology would imply on the basis of transmission charges a difference in accounting rate shares. Non-discrimination would also imply a requirement for cost-orientation rather than for a single collection charge for all Community countries from any one country. Although harmonious tariff **principles** are important the attempt by each individual Community country to set harmonious collection charges to Community countries, in effect a single Community tariff zone, seems inconsistent with the stated policy goals of the Commission.

As can be seen from Table C.29, the net result of the tariff adjustment policy of the Community countries has been to create a greater degree of discrimination by creating significant dissymmetry in the price of bilateral calling between any two Community countries. These adjustments have also discriminated against non-EC TEUREM Members. Many of the adjustments appear to have been made without reference to traditional traffic flows (which influence costs).

3. Europe-North America collection charges

In most cases European countries implemented significant reductions in collection charges with North America as shown in Table C.30. Exceptions were Greece, Italy and Portugal. These significant reductions reflect the **high level** of collection charges to North America in the mid-1980s.

Despite the significant reductions in collection charges by European countries to North America, the gap between collection charges and half the accounting rate (equal to the settlement owed to foreign operators for outgoing calls) remains high (Table C.30). Given this significant gap, as well as the large differences in accounting rates with the United States, there appears to be still scope in a number of cases for reduction in collection charges for US relations.

For a large number of OECD countries the underlying factors, aims and structures in the setting of collection charges is unclear. Neither is it clear what role, if any, is played by governments in determining the structure and level of collection charges. Although a number of governments have competence in approving changes in collection charges, it is not clear what criteria are used to provide approval. Since many governments themselves do not have access to accounting rate information, they cannot take this important cost factor into account. Although collection charges are transparent, the underlying factors which have determined the present evolution in collection charges are not transparent and need to be clarified.

Most countries have implemented fairly significant nominal price reductions in collection charges for inter-continental relations, especially with North America. There is still scope for progress, however, given the divergences which exist between accounting rates and collection charges. For many European countries average collection charges for inter-continental relations were two to three times higher than the average for intra-European relations. Significant reductions in undersea transmission costs for telephone service, especially on transatlantic routes, as well as reductions in satellite transmission costs and the digitalisation of international switching facilities, bring into question the justification for such large differentials.

While a number of countries implemented overall reductions in collection charges between 1985-91, in many cases these were across the board reductions. This suggests that specific cost trends with particular countries have tended to be ignored through averaging. In several cases, countries implemented virtual across the board **increases** in collection charges (at least relative to 1985). This requires explanation.

V. COST-ORIENTED PRICING

OECD countries agree that, at present, collection charges and accounting rates are not based on costs. There is also agreement that these prices need to be adjusted to reflect the underlying cost of service provision. OECD countries in general have expressed a commitment to the principle of cost-orientation. There is also recognition that implementation of this principle requires a process of tariff rebalancing involving the reduction of cross-subsidies which exist between different telecommunication services. This is particularly the case where telephone services are provided by integrated operators serving the whole market. The process of tariff rebalancing is well underway in some OECD countries; in others it has hardly started.

At this stage, developed countries need to have a clear strategy and time frame for implementing tariff rebalancing. This process needs to include accounting rates. Two factors need to be taken into consideration: first the immediate need to lower existing prices and, second, the requirement to define a structure within which prices can be determined on objective cost criteria.

Exploratory work on cost-oriented pricing has aimed essentially at beginning a dialogue, to understand better the main elements that should be taken into account in the costs underlying the provision of international telephone service. From the outset it was made clear that the aim was **not** to try and develop an OECD-wide cost methodology for telecommunication pricing.

Semantic arguments regarding the appropriateness of using the term "cost-based" or "cost-oriented" pricing were avoided. It was recognised that the former term is more exact in economic terms, but the latter has been adopted in a number of international fora, and implies a degree of flexibility in price setting.

The notion of cost-oriented pricing implies that for each different service prices are objectively related to direct costs. There are two issues here: first, the idea that prices for services should be set on the basis of costs incurred in the provision of the services and, second, the need to determine the cost of a each service.

The principle objective of a collection charge is to recover the cost of providing service, including operating costs, depreciation and a reasonable return on capital investment. The cost may also include, where necessary, transit charges and the cost of terminating traffic. The objective of the accounting rate is to obtain remuneration for making facilities available and the costs incurred in so doing. The main cost elements derive from the provision of the infrastructure for international telephone services, their operation and related overhead costs.

The issue of cost-oriented pricing for international telephone calls would be relatively simple if there were only one service. The difficulty is that there are several telephone services (local calls, national long-distance and international calls) all using a number of common facilities. The problem is then how to allocate common costs to different services.

The allocation of common costs (most of which tend to be non-traffic sensitive) can be undertaken either using the Fully Distributed Cost approach or the Incremental Cost Approach. The fully distributed cost approach is often based on building up costs from historical accounting data. Costs are based on the actual mix of technologies in use (historic cost). The long run incremental cost approach is viewed as serving as a proxy for marginal costs and based on the notion of costs that would be incurred (or avoided) by adding or subtracting a unit of services (assuming existing levels of demand). Costs are derived on the basis of models of facilities required to provide a particular service, therefore costs tend to be more future oriented and may not represent embedded costs. Each approach has its advantages and disadvantages.

1. Cost elements

There are at least two important requirements for cost-oriented pricing: an internal cost-allocation system for public operators, and the elimination of a number of constraints some governments place on operators, in order to rebalance prices between the different telephone services, and to adjust prices closer toward costs. Consensus is of course required as to which appropriate cost elements need to be considered in a cost-allocation system, but it is equally necessary to ensure that certain indirect and inappropriate cost elements are not included by PTOs as a cost factor in the setting of prices and accounting rates.

What are the appropriate cost elements for collection charges? They include capital expenditure on exchanges, transmission equipment, land and buildings (annualised through depreciation, financial and interest charges); current expenditures, including network management and operation, other salaries and wages, intermediate goods and services, other overheads, maintenance and repair, research and development, etc. In terms of intermediate services, accounting rate shares paid to other countries are an important cost item for international telephone operators. For non-integrated international operators access charges need also to be considered as a cost item. Taxes are included as a cost of operation. Levies by government are a more controversial item. Since the public telecommunication carrier is a government-owned enterprise and such levies are "reasonable", then they can be considered as equivalent to a shareholder dividend. "Reasonable" would imply that the amount transferred is equivalent to some average rate of return to shareholder equity in the particular country.

In terms of accounting rates the following cost elements need to be taken into account:

i) costs associated with the international network and with the use of facilities (cable, space segment charges, leasing transit facilities);

ii) costs associated with international switching facilities;

iii) costs associated with terminating the call on the national network;

iv) costs associated with universal telephone service obligations (access deficit contributions).

In examining how incoming calls should be treated within a cost-oriented pricing framework it becomes clear that the same price must be charged for incoming international calls from different destinations, if they incur the same cost -- that is non-discrimination in pricing. In other words, a termination fee based on costs should be used for incoming calls and by definition this implies moving away from a bilateral bargaining system in setting accounting rates.

2. Cost differentials and structures

The costs of constructing and operating networks in different countries are not necessarily the same. Construction costs may differ because of different costs incurred in obtaining equipment. Any one of a number of factors may cause this: inefficient purchasing policies; procurement favouring local suppliers who may have higher cost equipment; lack of local suppliers, as well as costs associated with access to capital. Reported costs may also vary because of financial accounting practices (*e.g.* distinctions between classification of current expenditure and capital outlays), and differences in labour costs, fiscal requirements, etc.

Significant technological change over recent decades has considerably altered cost structures for the provision of telecommunication services, both nationally and internationally. National differences in the uptake of new technologies will also have cost implications. These changes are continuing and as a result a number of new factors altering cost **structures** which may come into play in future years.

Costs and cost structures are changing as a result of further developments in fibre-optic cable transmission technologies, multiplexing technologies, developments in switching technologies, and software development, which are extending network capabilities and enhancing operating efficiency.

A number of other factors can influence costs and their structure and introduce national divergencies. National geographic differences and demand characteristics may have cost implications. Differences in the regulatory environment can affect costs, in some cases to a significant degree. Differences in the relative efficiency of operators are also likely to be very influential in cost differentials. But these factors introduce differences in **levels** rather than determine which elements need to be taken into account in cost-oriented pricing.

3. Cost-oriented pricing in developing countries

OECD countries on the whole disagree with the notion that the accounting rate system should be used as a means of transferring funds, especially hard currency, to the developing economies for telecommunication development. It is viewed as a positive development that a number of developing countries have also accepted the notion of cost-orientation in collection charges and accounting rates. This is the case, for example, in several Latin American countries and some South-East Asian countries. However, the question of how long it will take for these countries to implement cost-oriented accounting rates is an important one. A number of these countries consider a long (5-10 years) adjustment period necessary. However, it also needs to be made clear that high costs associated with technologically backward, and especially inefficient telecommunication operations, should not provide the benchmark for these countries. This implies that general **trends** in the cost of providing international telephone service need to be taken into account as well.

4. Implications of cost-oriented pricing

With regard to the issue of cost-orientation in international telephone service, the Secretariat considers that OECD countries, who recognise that accounting rates are in general high, should agree to undertake an across-the-board reduction for inter-continental accounting rates. This would be viewed as an interim step towards implementing a cost-oriented pricing structure. The 10 per cent reduction by TEUREM Members on 1 October 1992 in accounting rate shares provides a precedent for such action.

It was also suggested that Member countries should agree on a number of principles:

i) cost-oriented pricing implies that the revenue of each service must cover its directly attributable costs and its share of common costs;

ii) these costs include the cost of investment and operation of the public switched telephone network, as well as corresponding overheads;

iii) these costs do not include non-telecommunication service costs;

iv) these costs do not include costs associated with the provision of other services not based on the PSTN;

v) these costs do not include costs associated with the provision of competitive services using the PSTN;

vi) the share of overhead expenses are those which only concern the provision of telephone service;

vii) the costs do not include fund transfers to other entities (government, private or state concerns) apart from those required for taxation or dividend payments (or levies in lieu of taxes).

Most countries appear to be ready to accept these concepts **in principle.** But there are some operators who view as "costs" any requirements imposed on them by governments. Thus, if a government requires an operator to cross-subsidise postal services, these operators view the subsequent transfer as a cost to them. There is, therefore, a need to clearly differentiate between the legitimate costs incurred in providing a service and other externally imposed "costs". Although the above principles are acceptable to most operators/governments, in most cases concrete steps have not been taken to implement them.

VI. NON-DISCRIMINATION

The earlier work by the Secretariat on international telephone charging practices was based on the notion of non-discrimination, as applied elsewhere, as an appropriate principle to ensure a fairer and more coherent way of determining accounting rates. Non-discrimination (or most-favoured nation treatment) is a basic GATT concept. Article I of the GATT refers to "...charges of any kind imposed on or in connection with importation or exportation or imposed on the international transfer of payments for imports and exports, ... any advantage, favour, privilege or immunity granted by any contracting party shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all other contracting parties." The draft text of the General Agreement on Trade in Services also provides for a non-discrimination clause whereby each party to the agreement would accord any other party treatment no less favourable than that accorded by the party in like circumstances to service providers of any other party. Non-discrimination in the GATT context normally applies to government measures and not to commercial agreements, but in the GNS the idea appears to extend to reserved service providers or those with a privileged position granted by governments. Moreover, in a draft provision covering "Exclusive service providers and monopolies" the idea that a monopoly will not use its position to engage in predatory pricing adversely affecting service providers of another party, was raised. These notions are relevant to international telephone service providers and their pricing procedures.

The Commission of the European Communities, Japan, and the United States all made submissions to the Uruguay Round Group of Negotiations on Services (GNS) where the notion of non-discrimination required that the exclusive service provider(s) provide public telecommunication service on equivalent terms and conditions to all users.

National treatment is also a basic concept in free trade arrangements which cover telecommunication services (such as the Canada-US Free Trade Agreement and the Australia-New Zealand Closer Economic Relations Trade Agreement). A number of countries have also explicitly or implicitly adopted these concepts in their telecommunication regulatory frameworks. In the context of the EC's Open Network Provision, which includes tariff principles, the following requirements were adopted: that tariffs should be cost-oriented, that they should be properly published, and should apply to all users on a non-discriminatory basis. Although accounting rates only have an indirect impact on internal Community trade they may result in national differentials insofar as they create differences between national users (not justified by cost differences) in terms of usage conditions for international public switched telecommunication systems.

In terms of competition policy high accounting rates (and the resulting high collection charges) could be viewed as an abuse of dominant position in that an end user is placed in a disadvantaged position in carrying out business.

In the context of OECD instruments, to which all Member countries adhere, non-discrimination is a fundamental concept. So is the notion that countries should not attempt to bargain with other countries individually to obtain reciprocal concessions on specific items. The principle could be interpreted as applying only to governments but in view of the privileged position of telecommunication operators, governments are intimately linked with the operating framework of such operators.

The International Telecommunication Convention and the International Telecommunication Regulations do not contain a notion of non-discrimination, but refer to the harmonization of actions. However, Recommendations dealing with charging practices and procedures put forward the avoidance of dissymmetry as an important factor. In discussing principles for charging, Recommendation D.101 refers to the fact that the use of different charging methods could lead to grave dissymmetry in charges made to users, and could provoke adverse reactions from the subscribers of one country, who would be less favourably treated than their correspondents in the other country.

The analysis of international tariffication procedures noted two forms of discrimination in the present accounting rate system. The first related to the 50:50 division of the accounting rate in bilateral inter-continental relations which does not distinguish between unequal costs and which, except where traffic flows are equivalent in both directions, places a greater cost burden on the country where the calls originate.

The second form of discrimination -- linked closely with the first -- is based on the fact that accounting rates may differ for each bilateral relation. Accounting rates are aimed at reimbursing public telecommunication operators for the facilities they make available and in this sense should only differ when they reflect differences in costs of handling calls, whereas in the present context they simply reflect the outcome of bilateral bargaining. A third, and related form of discrimination exists when the collection charges and accounting rates are determined on the basis of factors which in turn do not reflect cost differences.

For international telephone services, the application of the principle of non-discrimination would require that the accounting rate share, that is, the amount received by each country for the facilities it makes available in bilateral relations, should be the same for an identical service. This argument is valid if the provision of an identical service incurs the same cost.

The principle of non-discrimination does not necessarily require that charging, including accounting practices, be based on cost. But, it would imply that any differences in charging or accounting by a country relative to a number of other countries are justified in reference to differences in the cost of providing similar services.

Specifically, in terms of accounting rates, non-discrimination implies that bilateral negotiations, which determine accounting rates and accounting rate shares, are not required and cannot be justified. What is needed is a multilateral type system. In other words, a country (or a public telecommunication operator) should set the same charge for terminating calls of other countries as long as the cost incurred in providing these facilities is the same. Similarly charges for international transmission should vary between relations only with regard to distance and/or transit charges.

Earlier work by the Secretariat noted that one possible benchmark against which to judge discriminatory treatment is the price for the most expensive national long-distance call. Significant differences between that charge and the charge for terminating an international call would imply some form of discrimination (taking into account international gateway costs and international transmission shares).

In terms of collection charges, non-discrimination also implies that terminal relations are accorded similar treatment on the basis of objective criteria. Such criteria would normally be the cost of providing international telephone services to a particular country. For the OECD area there appear to be differences in treatment between, for example, TEUREM countries and inter-continental relations, and within TEUREM there are also special relations between European Commission countries, and also between Scandinavian countries.

What would non-discrimination imply in a cost-based international telephone pricing framework? In terms of charges between operators for the remuneration of terminating traffic, non-discrimination would require that any differences in charges would need to be based on cost-differences and not on non-cost related factors. On this basis, if charges for terminating traffic are based on costs, then they would be determined in reference to these costs and not arrived at through bilateral bargaining procedures. This would then imply a multilateral framework to agree on international transmission charges and ensure that any one country is not charging excessively for termination of traffic.

The application of non-discrimination in the present international charging framework, on the assumption that operators are adjusting their collection charges and accounting rates to a cost-oriented environment, would benefit from a number of steps:

i) the reduction of dissymmetries in bilateral collection charges;

ii) the elimination of differences in accounting rates where they are clearly not based on cost differentials;

iii) the elimination of special regional collection charges which have no basis in terms of underlying costs.

VII. CONCLUSIONS

In its work on international telephone charging practices and procedures, the Expert Group reached agreement in a number of areas relating to cost-oriented pricing, non-discrimination and transparency. To a large extent there was acceptance that these principles should form the basis of international telecommunication pricing.

There was general agreement that collection charges and accounting rates need to become **cost-oriented**. There was no agreement on a schedule of reductions: some delegations indicated that they would require an adjustment period in the region of five years, others indicated that within several years accounting rates and collection charges would be close to a level where they could be considered as cost-oriented. Some delegations also thought that there should be a committed schedule for changes in accounting rates and collection charges. However, delegations did acknowledge that there are two important requirements for cost-oriented pricing: *i)* an internal cost allocation system for public telecommunication operators; and *ii)* the need to reduce and/or eliminate a number of constraints that some governments place on operators to rebalance prices between the different telephone services, and to adjust prices closer to costs. A consensus began to emerge on the major cost elements which need to be taken into account in the context of a cost-oriented pricing system.

There was general agreement among participants that the concept of non-discrimination, as applied to the pricing of international telephone calls and the underlying settlements mechanism, is important. Nevertheless, there remain different nuances in terms of the definition of non-discrimination. There is agreement with the principle that the charges for incoming calls should only differ if the cost incurred in handling the call differ. It is also recognised that the notion of non-discrimination does not preclude bilateral agreements between operators.

The work of the Expert Group was highly successful in implementing greater transparency in accounting rates between Member countries. The initial reluctance to divulge any information on accounting rates has partly disappeared and a large number of participants have supplied aggregate information on their accounting rates with other OECD countries (as shown in Appendix B). There was also agreement that the monitoring of accounting rate changes is important and should continue. A number of public telecommunication operators have agreed to release information on accounting rates to those operators who are also willing to release such information. However, the argument that the publication of accounting rates (a system operating in the United States) would have no detrimental effects, was not accepted.

Analysis based on the United States' accounting rate data with TEUREM relations has shown a clear trend in reduction in accounting rates (at least for US relations) and an increase in the frequency of reductions:

	1986	1987	1988	1989	1990	1991
Number of AR changes	10	5	12	17	11	21
Av. Change in US$	0.15	0.22	0.44	0.26	0.08	0.22
Av. Accounting Rate in US$	2.30	2.28	2.23	2.18	2.13	2.06

Source: Stanley, K.B., *A Review of I MTS Accounting Rates from 1985 to 1991*, Industry Analysis Division, FCC, United States, 1992.

Despite this positive trend there is widespread acknowledgement that accounting rates are still high relative to costs. The significant differences in the range (as shown in the graphs) of accounting rates among OECD countries indicates the extent to which countries have differed in the actions they have taken. Some have adjusted accounting rates to costs and taken advantage of lower costs to negotiate lower accounting rates and ensure that customer collection charges in turn are low. Others have made no changes. There is, therefore still a need to continue to reduce the levels of accounting rates and determine whether fundamental structural changes need to take place in the international accounting rate and settlement system.

A number of delegations believe that the existing bilateral negotiating system for accounting rates should be maintained. At the same time these delegations have accepted the principle that accounting rate shares should be based on costs. The Secretariat considers that a cost-oriented inter-continental accounting rate system would essentially be equivalent to its proposals for reform. Delegations have not taken a position on these propositions. The Secretariat has also argued that the existing bilateral accounting system for inter-continental telephone relations and the principle of cost-orientation are only compatible **in the present**

context where accounting rate shares are adjusted toward costs. By definition, once a cost-oriented pricing system is attained, there will no longer be a need for bilateral bargaining. There will be a need, however, to make sure that there are adequate mechanisms so that prices are adjusted as costs change, and that ongoing review is carried out to ensure that there are fair and equitable conditions.

The CCITT has moved quickly to adjust the relevant Recommendations regulating telephone accounting rates. It needs to be recalled, nevertheless, that the requirement for cost and cost trends to be taken into account when revising accounting rates are already contained in ITU Regulations. Implementation of the CCITT Recommendation will depend on transparency, and adequate review procedures.

There are still a number of areas where further agreement will be necessary. These include:

-- the need for agreement on the details underlying the concept of cost orientation, especially the common elements which should be taken into account in a cost-oriented framework.

-- the need to examine whether it is necessary to implement more rapid adjustments in accounting rates for international telephone service between OECD countries, taking into account the CCITT's Recommendation D.140.

-- the need to examine possibilities of adopting more liberal resale and refile arrangements.

Many delegates also recognised that the issue of cost-oriented accounting rates and collection charges is closely linked with the lack of competition and the underlying problems this generates.

Appendix A

Table A1. **Responsible for negotiating accounting rates**

Operator	Responsible Directorate/Division	Other Divisions involved	Government involved
RTT (Belgium)	Public Relations and Commercial Services	No	No
Tele Danmark	Telecom Denmark	--	No
Telecom Finland	International Services	No	No
OTE (Greece)	International Communications Dept.	Board of Directors	No
Italcable	Marketing Foreign Correspondents	No	No
P.T. Ministry ASST (Italy)	Commercial Ministry	Tariffs Division	P.T. Ministry
KDD (Japan)	International Service Agreements Divisions	Corporate Planning/ Service/Dept/ Development	No
Norwegian Telecom International	Prices and Accounting Dept.	No	No
CPRM (Portugal)	Public Switched Services and Leased Lines Direction	No	No
Swedish Telecom	Swedish Telecom International	--	No
Mercury (UK)	International Business Group	Marketing Directorate (new products)	No
BT (UK)	Worldwide Networks Finance	International Affairs	No
Teleglobe (Canada)	Product Management Division	Marketing and Business Devel. Dept.	No
Telecom Canada	Carriers Relations	--	No
OTC (Australia)	International Business	No	No
DBP Telekom	General Directorate/ Management Division 222	No	Federal Ministry may reserve right to conduct negotiations in particular cases
PTT Telecom BV (Netherlands)	PTT Telecom	No	No
France Telecom	Direction de l'Internationale	--	Ministry of Posts Telecommunications (Direction du Service Public)
United States (All common carriers not classified as non-dominant)			FCC
Telecom Corporation of New Zealand (TCNZ) and Clear Communications Ltd (CCL)			No

Table A2. **Diffusion of accounting rate information within operator**

Operator	Accounting Rate Information Provided To:
RTT (Belgium)	Technical Departments
Tele Danmark	Not made available
Telecom Finland	Not made available
OTE (Greece)	Division responsible for settlement of accounts
Italcable	Accounting Dept./Business Units/Operating Control Unit/Auditing
P.T. Ministry -- ASST (Italy)	Accounting Division/Operating Division/Traffic Division
DD (Japan)	International Accounting Division
Norway Telecom International	Not made available
CPRM (Portugal)	To senior company officials
Swedish Telecom	Corporate Planning/International Affairs
Mercury (UK)	Product Managers (Telephone, Telex, Data) and Finance, Billing and Computer Departments
BT (UK)	If reasonable need to know demonstrated
Teleglobe (Canada)	Finance and Regulatory Affairs Department
Telecom Canada	Not provided -- available upon request
OTC (Australia)	Not made available
DBP Telekom	General Directorate, Management Division 211 and Technical Engineering Center
PTT Telecom (Netherlands)	Not made available
France Telecom	Cabinet of the Director General of FT
United States	Not as a general rule

Table A3. **Provision of accounting rate data to government and/or regulator (as of December 1991)**

Operator	Government Ministry obtaining data	Reason	Regulator obtaining data
RTT (Belgium)	No	--	No
Tele Danmark	No	--	No
Telecom Finland	No	--	No
OTE (Greece)	No	--	No
Italcable	P.T. Ministry (Ispettorato Generale delle Telecomunicazioni) ASST-- Commercial Directorate	For information	No Independent Regulator
P.T. Ministry -- ASST (Italy)	P.T. Ministry (Ispettorato Generale delle Telecomunicasioni) ASST -- Commercial Directorate	For approval and harmonisation	No Independent Regulator
KDD (Japan)	Ministry of Posts and Telecommunications (Tariff Division, Telecommunications Bureau)	For Approval	--
NTI (Norway)	Upon Request	--	--
CPRM (Portugal)	No	--	--
Swedish Telecom	No	--	--
Mercury (UK)	No	--	Oftel -- under International Accounting Code of Practice
BT (UK)	No	--	Oftel -- under International Accounting Code of Practice
Teleglobe (Canada)	No	--	CRTC -- for information purposes
Telecom Canada	Upon request	--	CRTC -- part of contract approval
OTC (Australia)	No	--	No
DBP Telekom	Federal Ministry of Posts & Telecommunications	For Approval	No independent regulator
PTT Telecom (Neth)	No	--	No
France Telecom	Ministry of Posts & Telecommunications	For Approval of collection charges	No
United States	All Executive Branches	For Information	FCC
TCNZ/CCL (New Zealand)	Ministry of Commerce (Communications Division)	For compliance under 1989 Regulations	No independent regulator

Table A4. **Review of accounting rates**

Operator	Are Accounting Rates Reviewed on a Regular Basis?
RTT (Belgium)	Yes: bilateral negotiations
Tele Danmark	Yes: following changes in TEUREM recommendation
Telecom Finland	Not on a regular basis: as need arises
OTE (Greece)	Renegotiated on OTE's initiative or that of terminal country
Italcable	Yes: following cost trends on a case-by-case
P.T. Ministry ASST (Italy)	Yes: according to TEUREM studies
KDD (Japan)	Internal review by KDD on a regular basis, taking into account cost trends. Whether they are reviewed regularly depends on bilateral negotiations
NTI (Norway)	Only within Department of Prices and Accounting
CPRM (Portugal)	Yes: at least once a year while in the process of preparing medium-term budget and action plan
Swedish Telecom	Reviewed in negotiations between operators. Bilateral agreements negotiated when both parties consider it necessary. Multilateral agreements (TEUREM) renegotiated on a fairly regular basis
Mercury (UK)	Yes: ongoing continuously in tandem with BT
BT (UK)	Yes: active and continuous programme to renegotiate accounting rates downward, and currently reaching agreement at a rate of about 5 relations per month
Teleglobe (Canada)	Constantly under negotiation. Reduction were successfully negotiated with over 200 administrators over the last five years and negotiations are active with more than 100 Administrators currently
Telecom Canada	Yes: when market or traffic trends justify renogiations
OTC (Australia)	Yes: continously reviewed. Administrations with high accounting rates and high settlements payments visited annually in effort to move these toward cost-based
DBP Telekom	Cost situation for traffic-relations reviewed yearly. Ministry will also review rates on regular basis
PTT Telecom (Netherlands)	No reply
France Telecom	Yes: for some relations on an annual basis, for others on a regular basis. For TEUREM every 4 years
United States	Accounting Rates reviewed on an on-going basis by Common Carrier Bureau (FCC) to ensure non-discriminatory treatment
TCNZ/CCL (New Zealand)	Yes: according to mutual agreement between carriers concerned

Note: For TEUREM relations review depends on TEUREM study cycle and subsequent changes

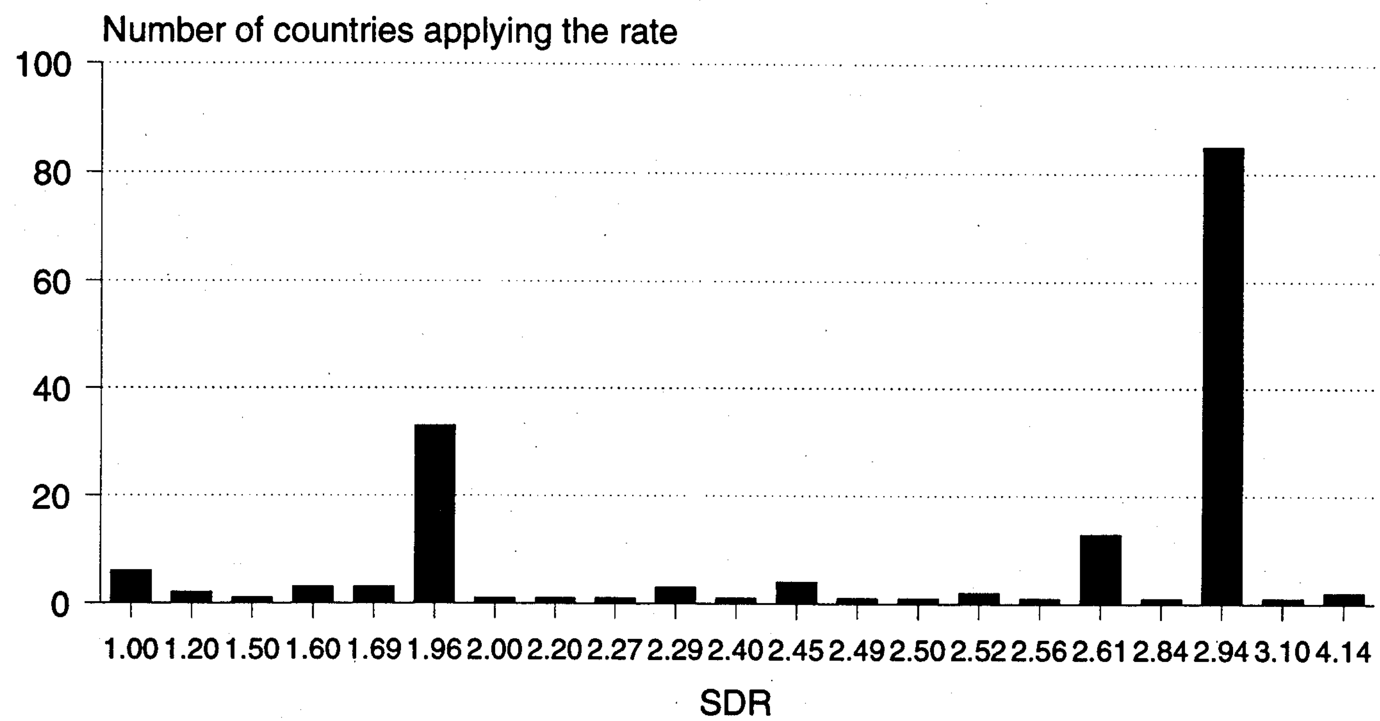
Table A5. **Approval of collection charges**

Operator	Do Collection Charges Need Approval?	By whom?
RTT (Belgium)	Yes	PTT Ministry
Tele Danmark	Yes	Ministry
Telecom Finland	No (certain domestic charges require approval)	--
OTE (Greece)	Yes	Tariff and Revenue Committee attached to the Ministry of National Economy on the basis of proposals the Ministry of Transport and Communications
Italcable	Yes	P.T. Ministry
P.T. Ministry ASST (Italy)	Yes	P.T. Ministry
KDD (Japan)	Yes	Ministry of Posts and Telecommunications
NTI (Norway)	Total level of income is approved	Ministry of Communications
CPRM (Portugal)	Yes	Ministry
Swedish Telecom	No	Price cap or all tariffs. From 1/1/92 all tariff decisions delegated to Swedish Telecom.
Mercury (UK)	No	--
BT (UK)	No	--
Teleglobe (Canada)	Yes	CRTC
Telecom Canada	Yes	CRTC
OTC (Australia)	No (but no changes)	Austel responsible for ensuring IDD price changes in order to meet government's price control arrangements
DBP Telekom	Yes	Ministry
PTT Telecom (Neth)	Not specific Collection charges	Private cap for aggregate licensed activities
France Telecom	Yes	Ministry (Direction du Service Public)
United States	Yes	International tariffs must be filed with FCC and are subject to its approval
TCNZ/CCL (New Zealand)	No	

Appendix B

Figure 1: Belgium: Regie des Telegraphes et des Telephones de Belgique (RTT)

I. Intercontinental Rates:



II. European Rates:
Rates based on Teurem norms and varying from 0.304 to 0.843 SDR.

Figure 2: Denmark: Accounting Rates
for All Relations (as of 1.1.91)

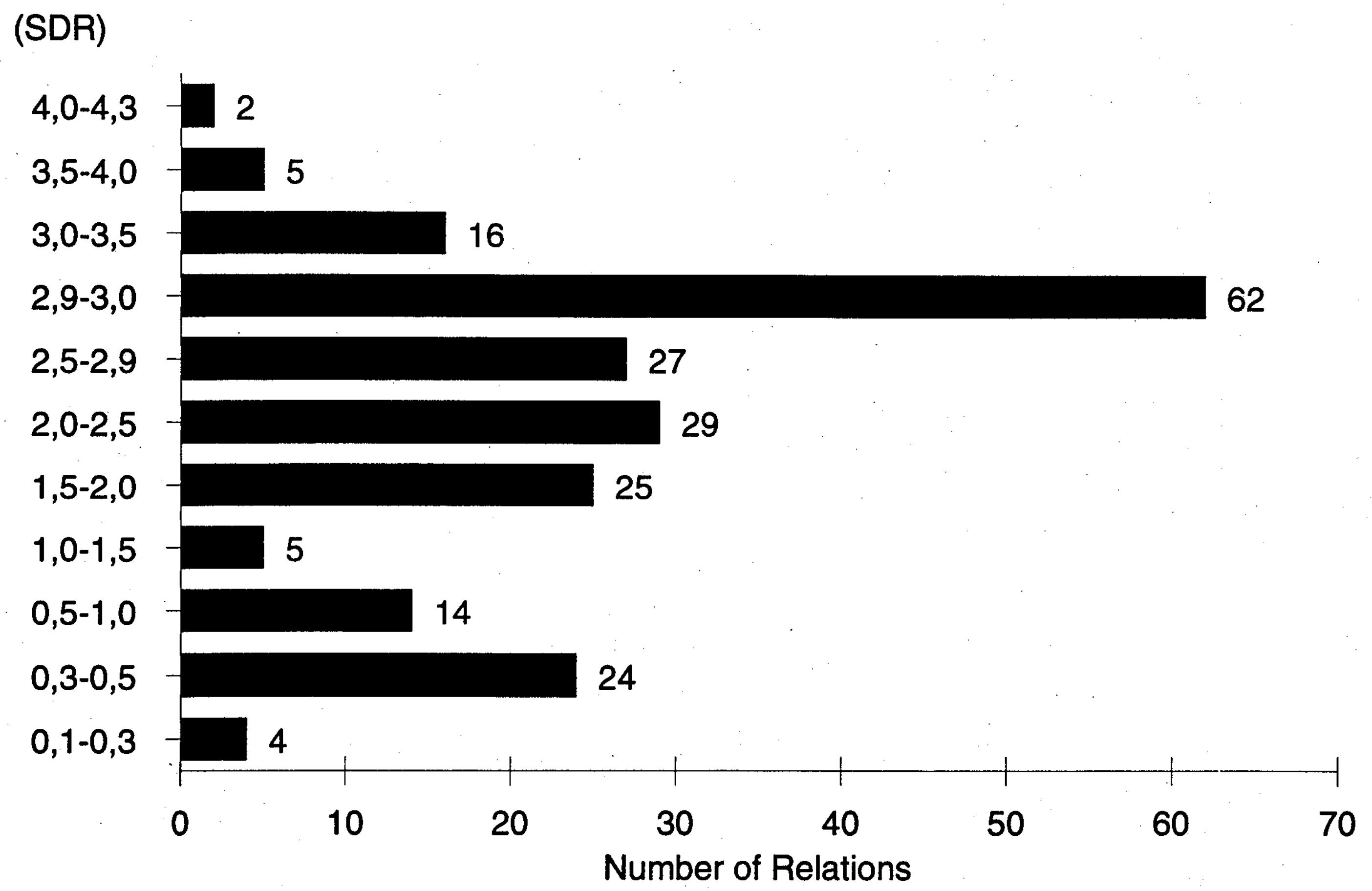
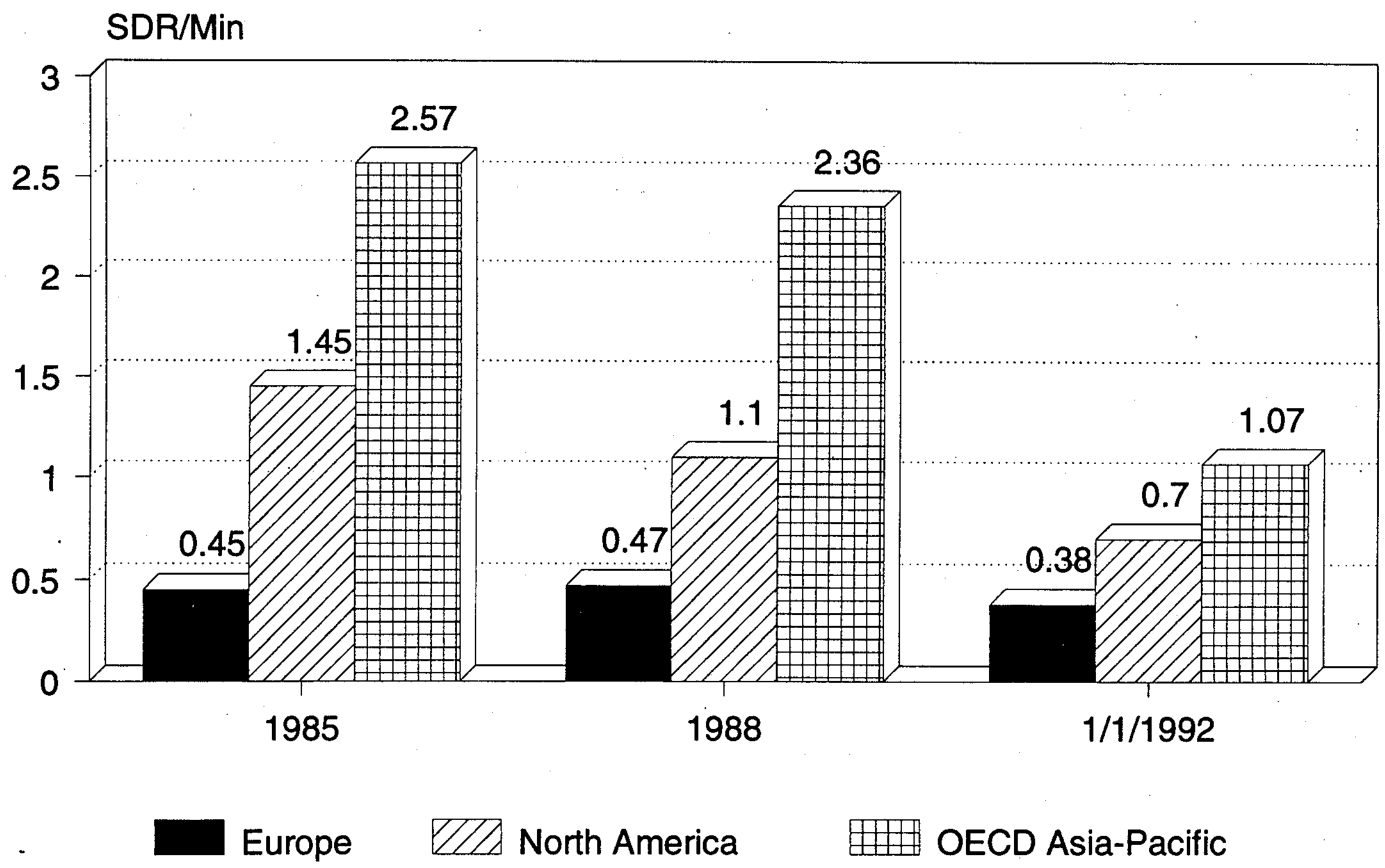
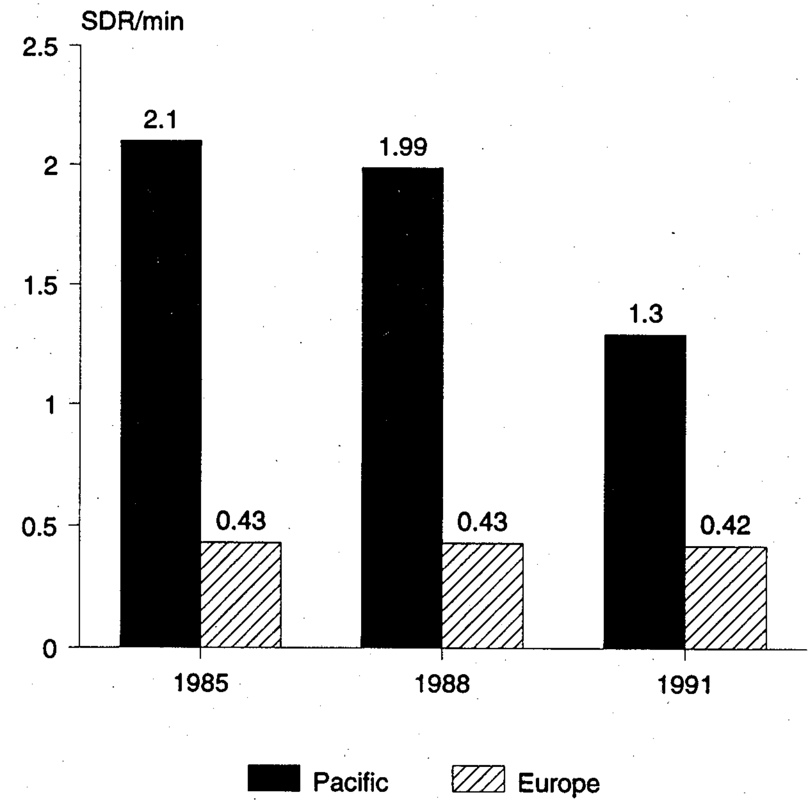


Figure 3: France
Evolution of Telephone Accounting Rates



Nov. 91

Figure 4: Germany
Accounting Rate Evolution
4 December 1991



Note: The values shown are arithmetical averages of accounting rates for European & Pacific OECD member coutries.

Figure 5: Greek Telephone Accounting Rates (in SDR/MIN)

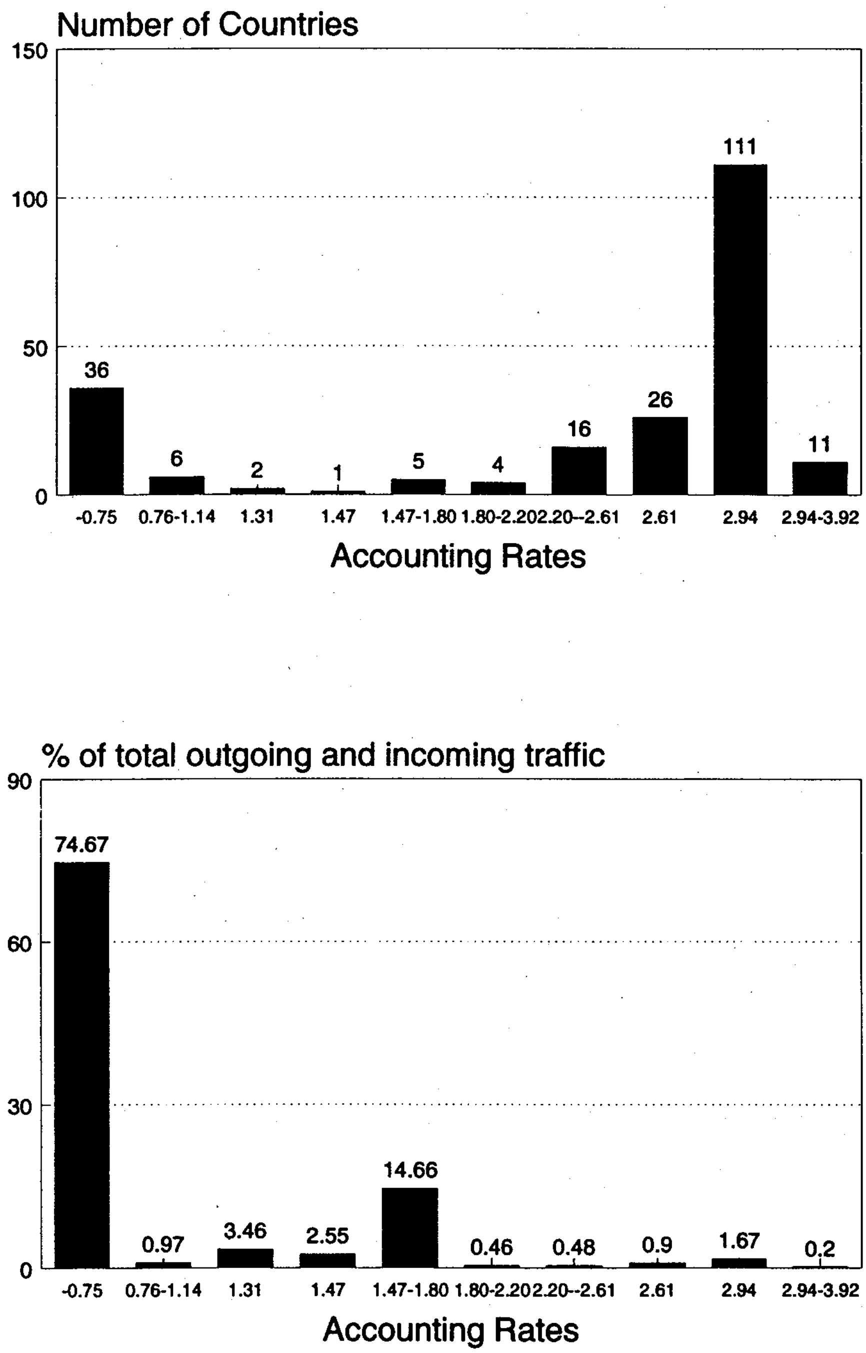


Figure 6: PTT Telecom Netherlands
Distribution of Accounting Rates by
number of relations (per 1/12/91)

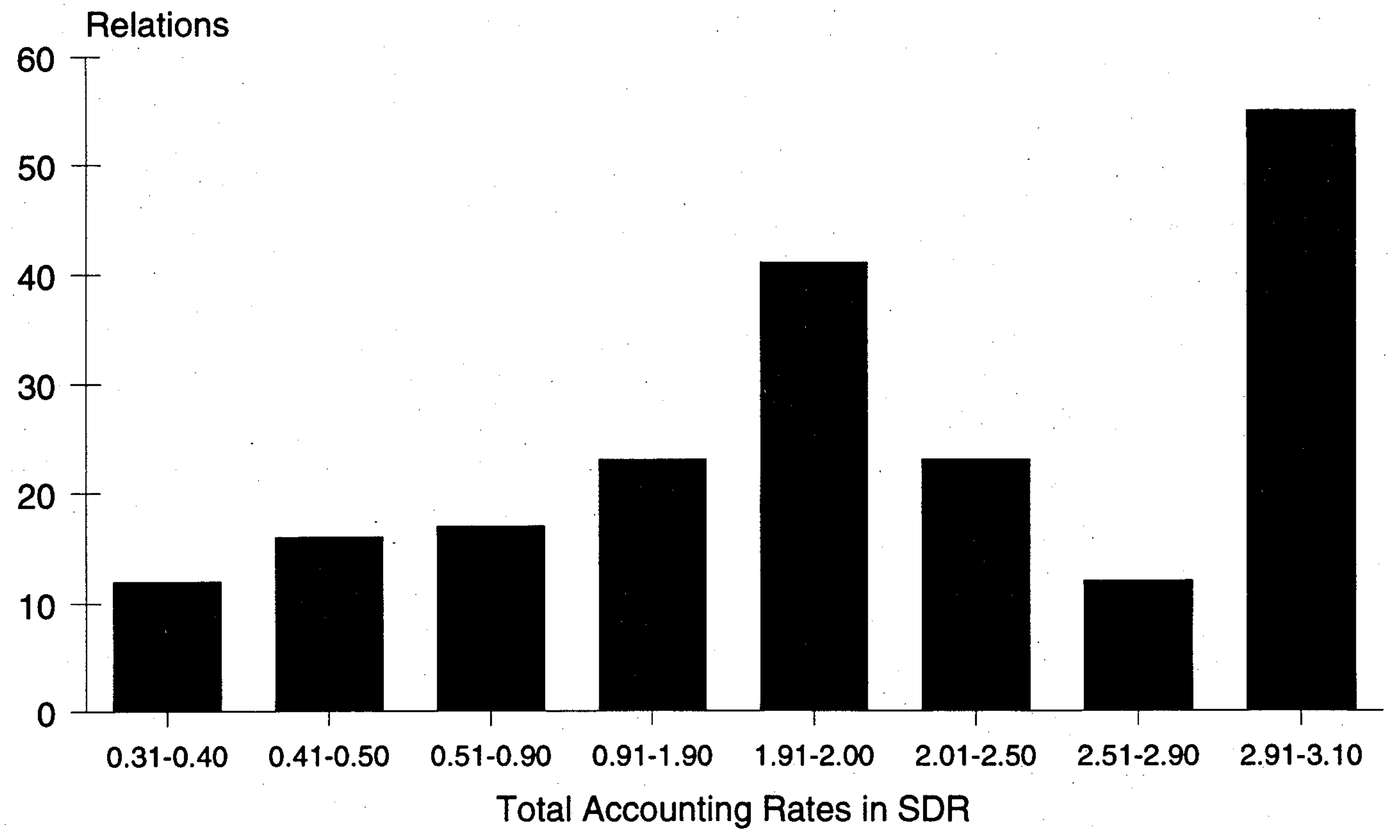


Figure 7: Japan
Distribution of Accounting Rates by
Number of Relations

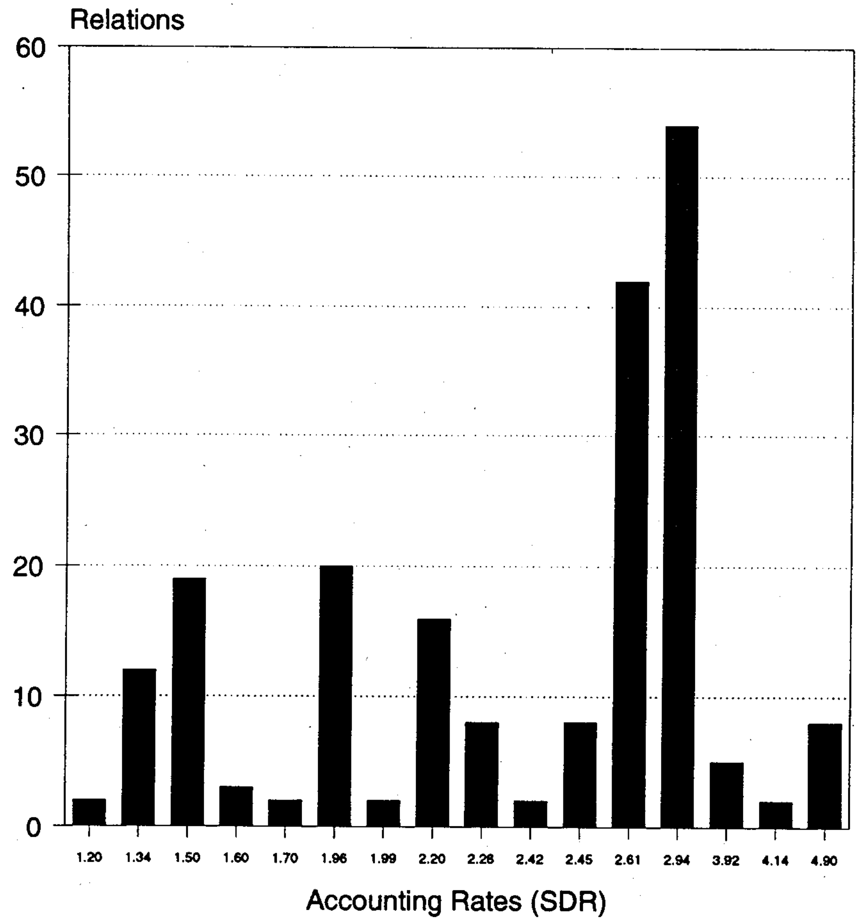
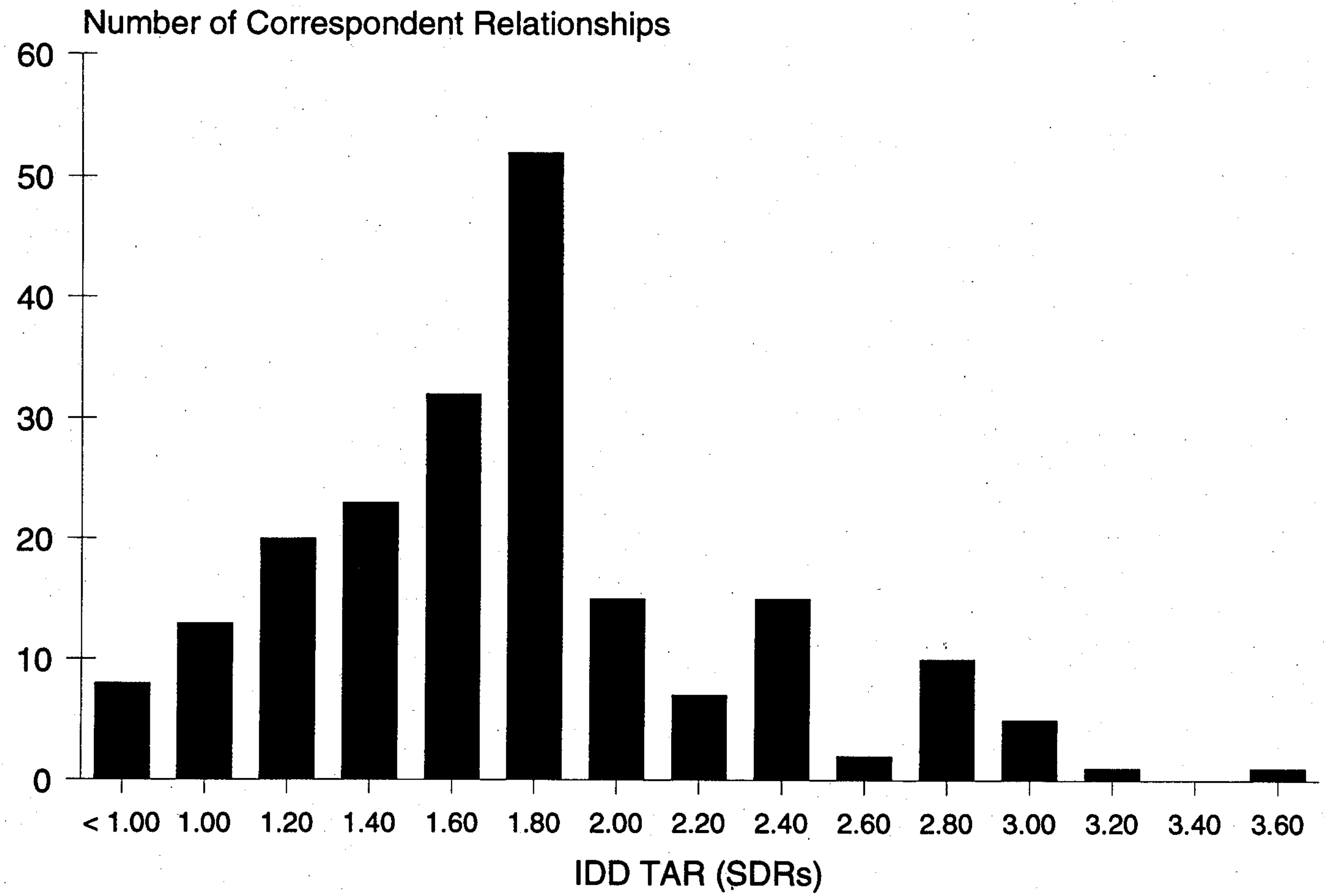
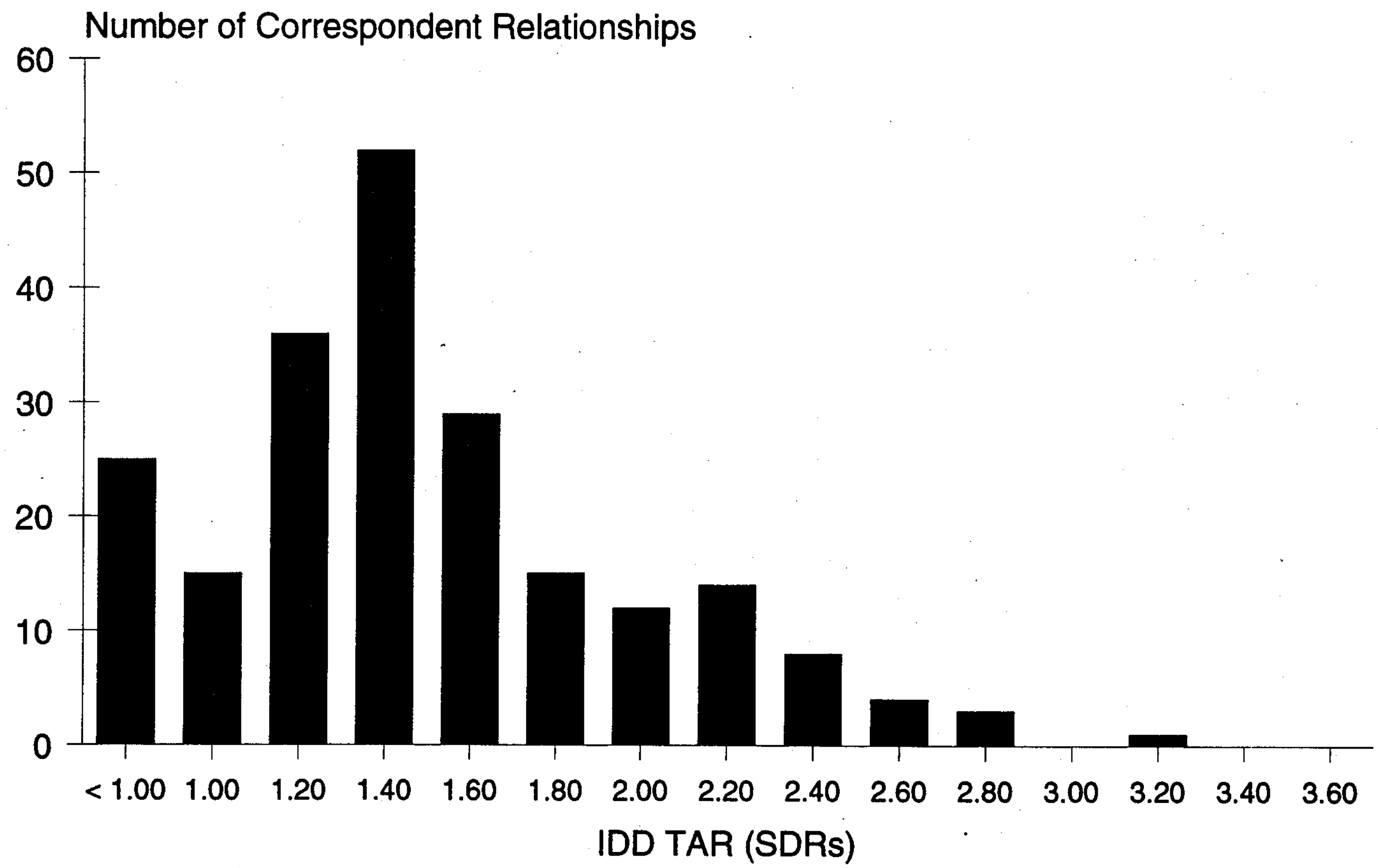


Figure 8: TNZI Accounting Rates



Source: Ministry of Commerce, New Zealand

Figure 9: TNZI Accounting Rates
Excluding Switched Transit Earnings



Source: Ministry of Commerce,
New Zealand

Figure 10: Norway
Accounting Rate Distribution 1991

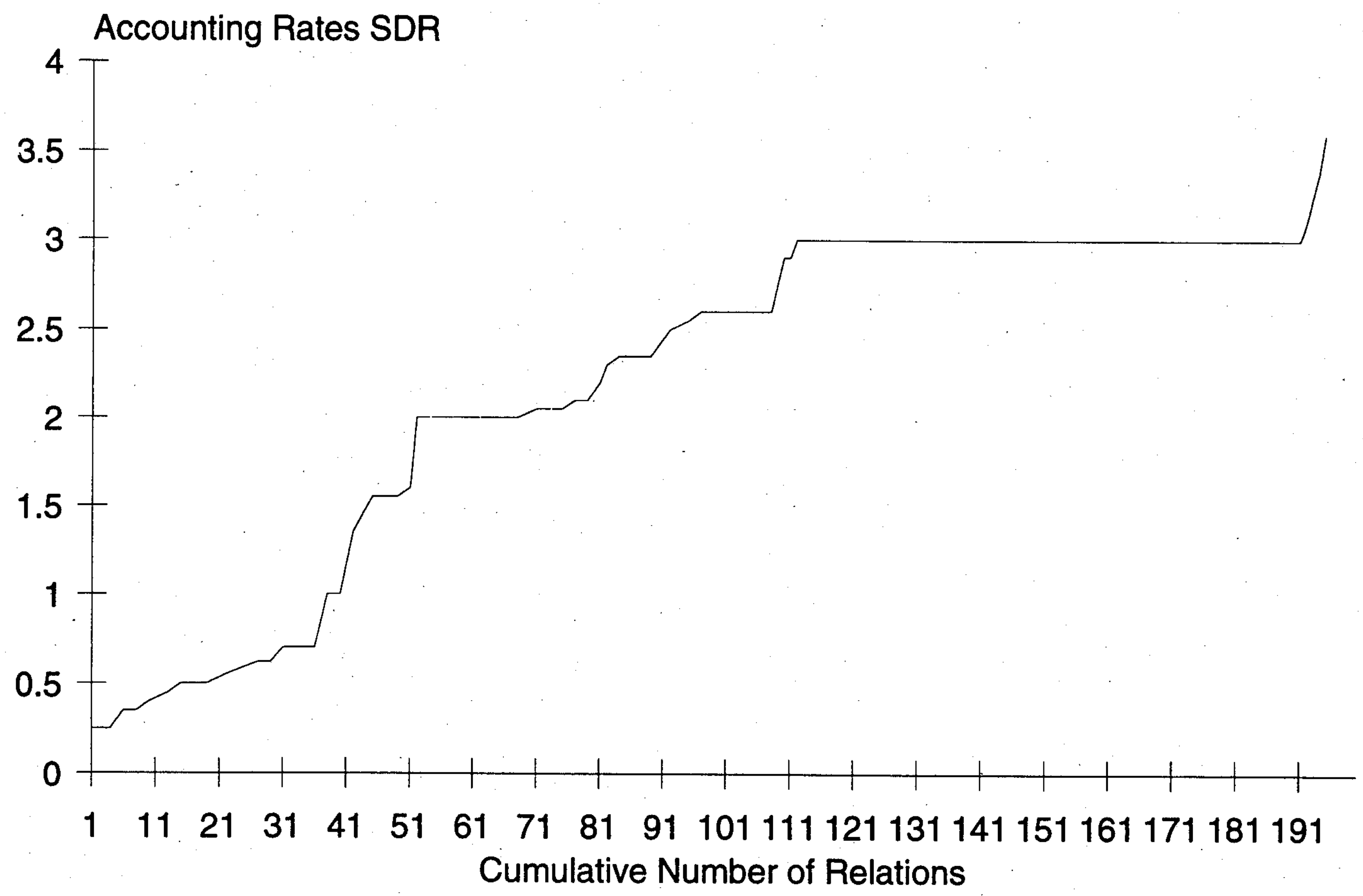


Figure 11: Portugal Accounting Rates with OECD Countries (except for Teurem; as of 1991)

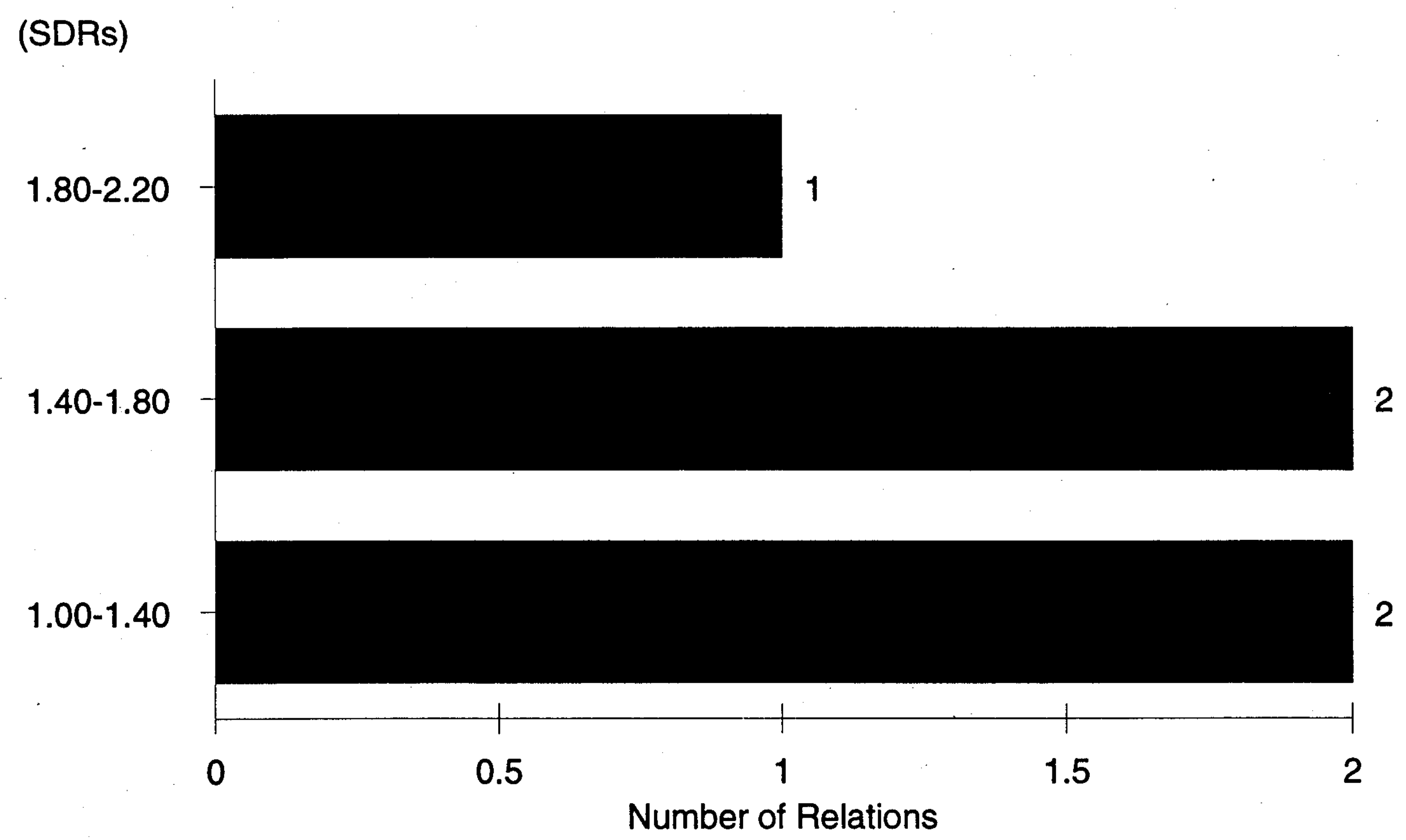
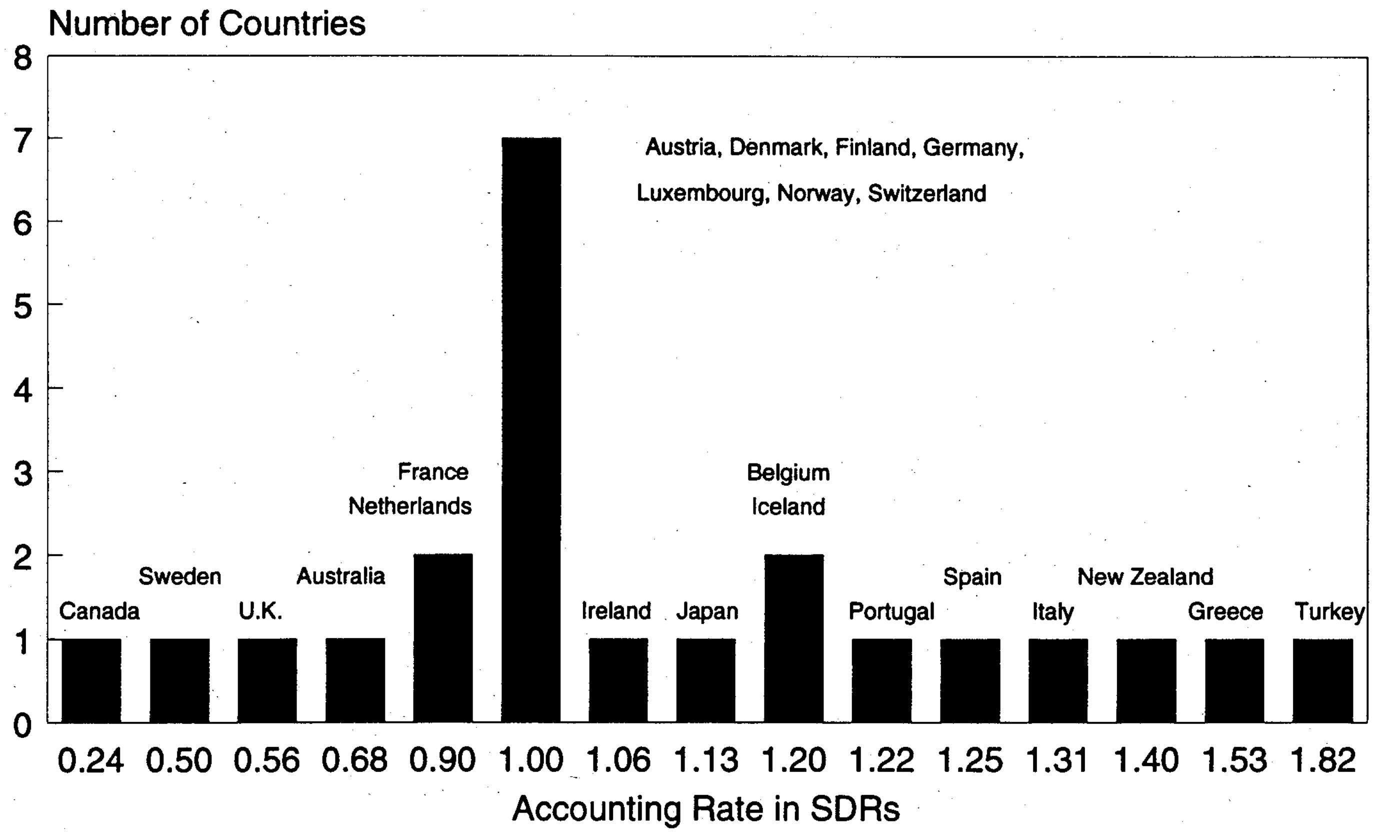


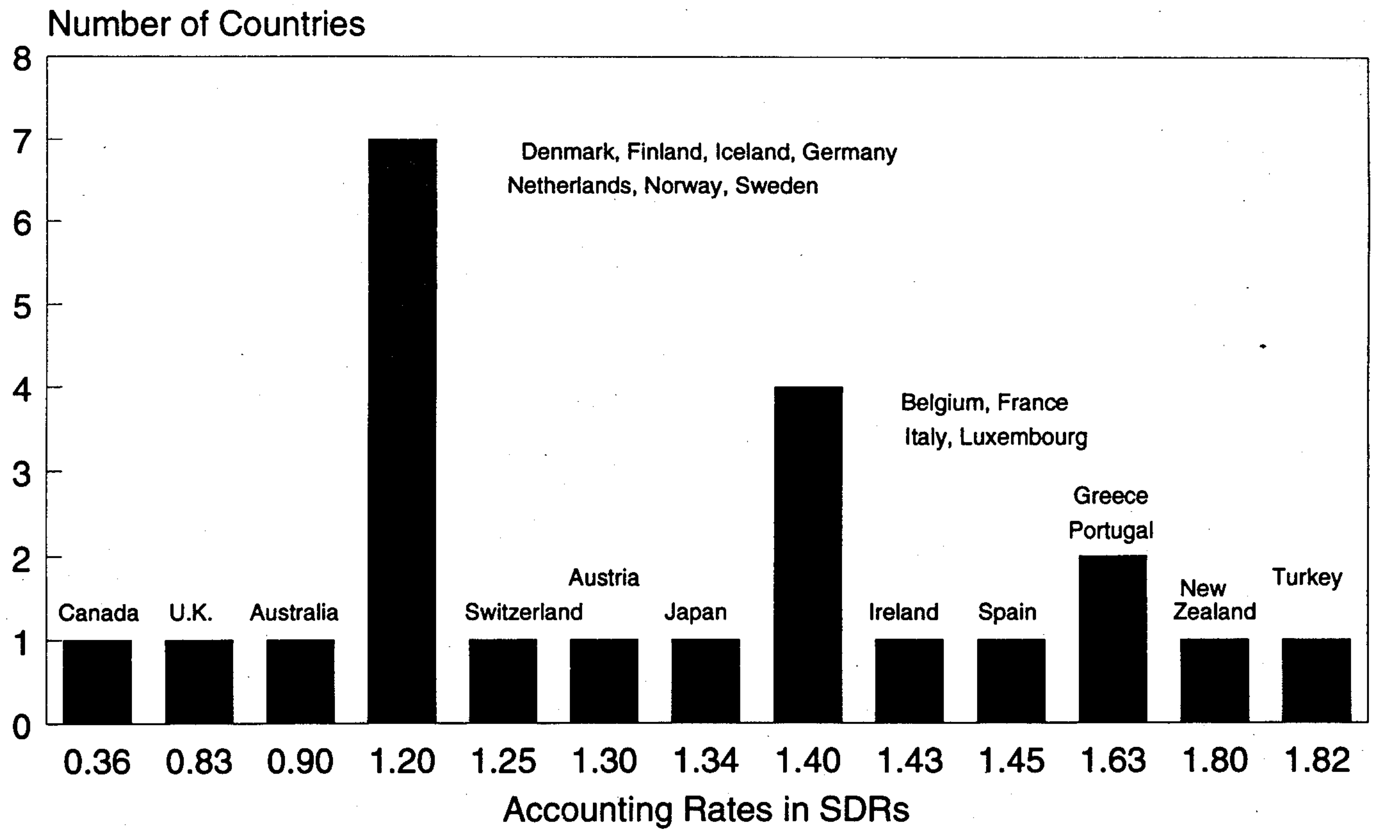
Figure 12: IMTS Accounting Rate Distribution U.S.-OECD Countries in 1991



Accounting Rates for Canada, Ireland and Turkey are converted to SDRs using a value of 1SDR = $1.09842

Accounting Rates for Canada, France, Ireland, Italy and Spain are average values of two rates; The U.K. three rates.

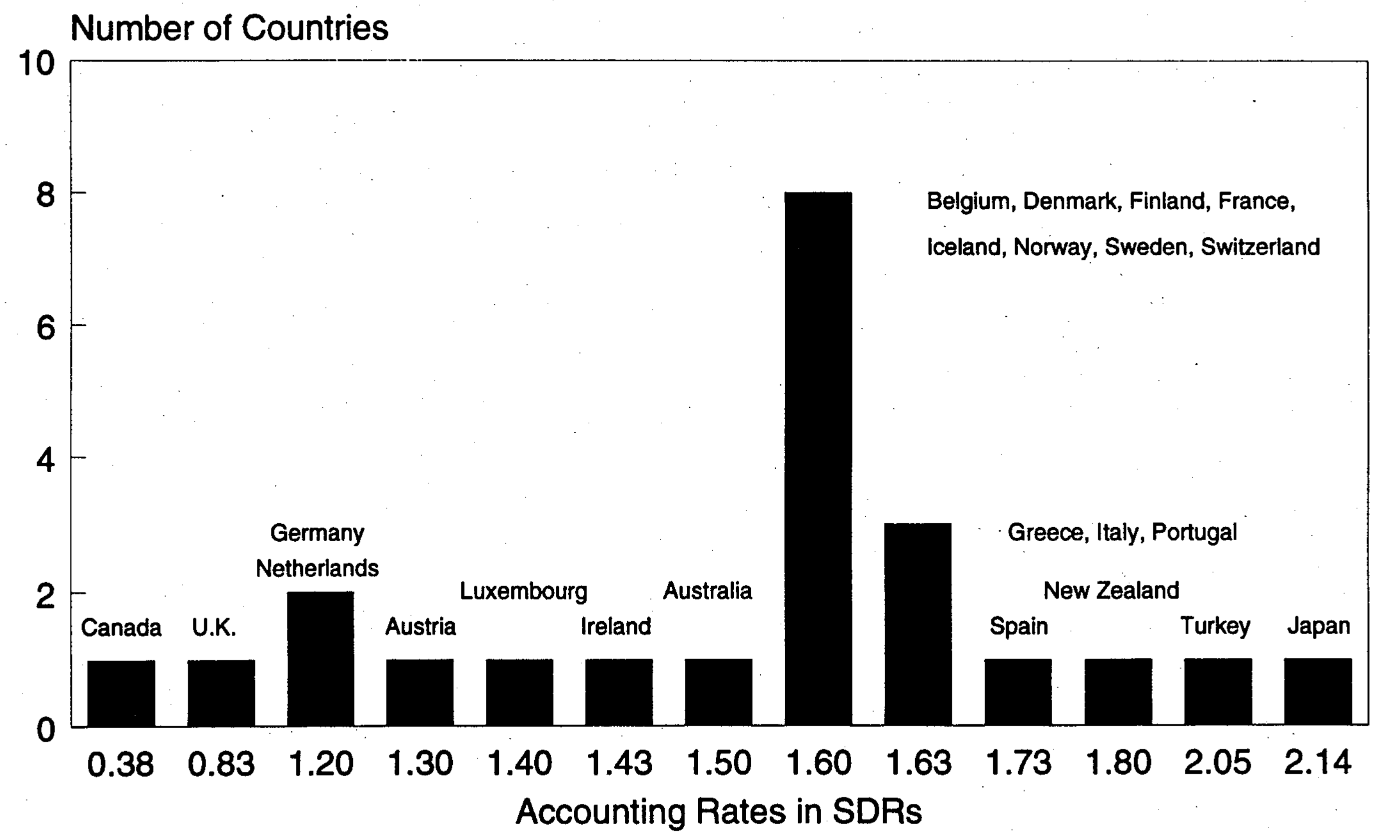
Figure 13: IMTS Accounting Rate Distribution U.S.-OECD Countries in 1988



Accounting rates for Canada, Ireland, Turkey and the U.K. are converted to SDRs using a value o1SDR = $1.09842.

Accounting Rates for Australia, Canada, Ireland, Italy, Spain and the U.K. are average values of two rates.

Figure 14: IMTS Accounting Rate Distribution
U.S.-OECD Countries in 1985



Accounting Rates for Canada, Ireland and the U.K. are converted to SDRs using a value of 1SDR = $1.09842.

Accounting Rates for Ireland and the U.K. are average values of two rates.

Figure 15: IMTS Accounting Rate Distribution
Non-OECD Countries in 1991

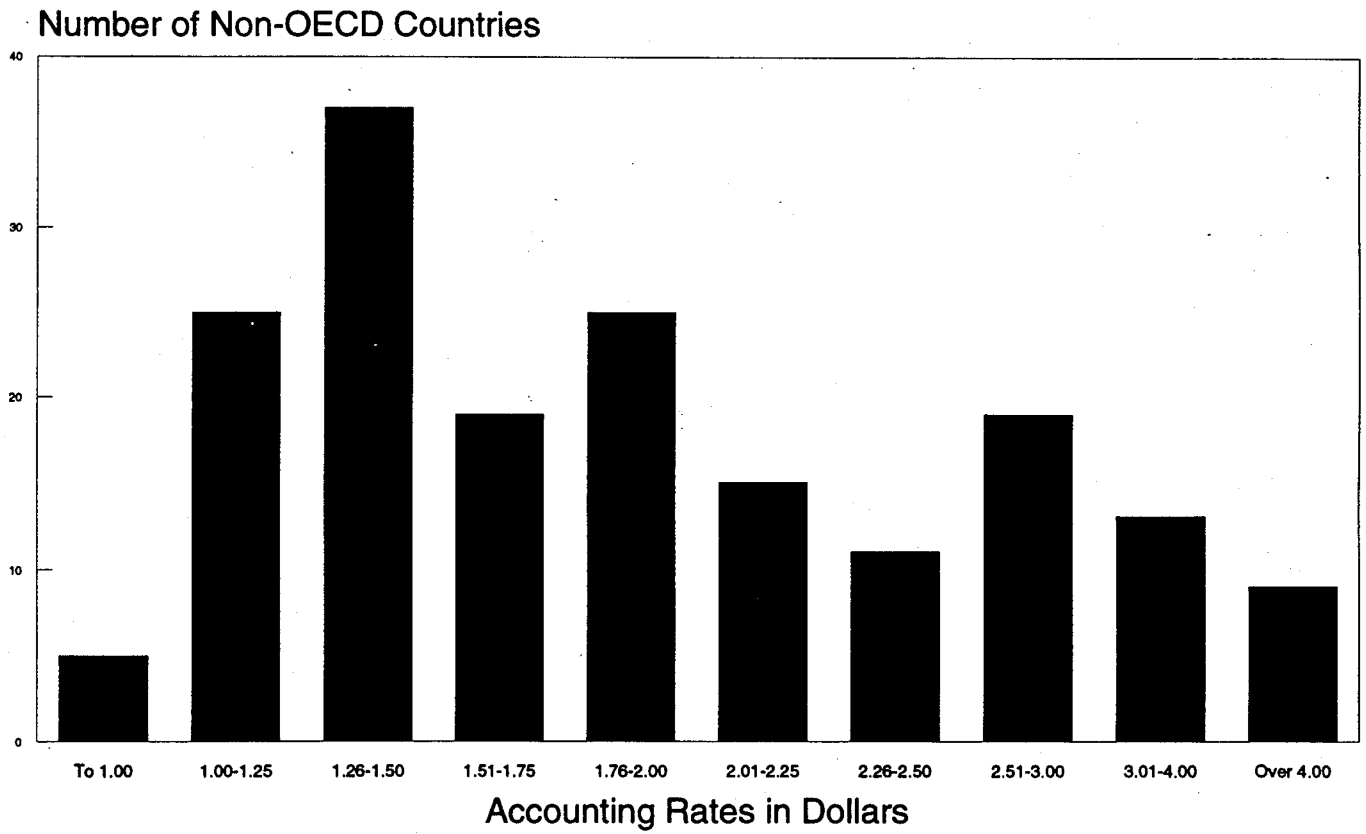


Figure 16: IMTS Accounting Rate Distribution
U.S.-OECD Countries in 1985, '88 and '91

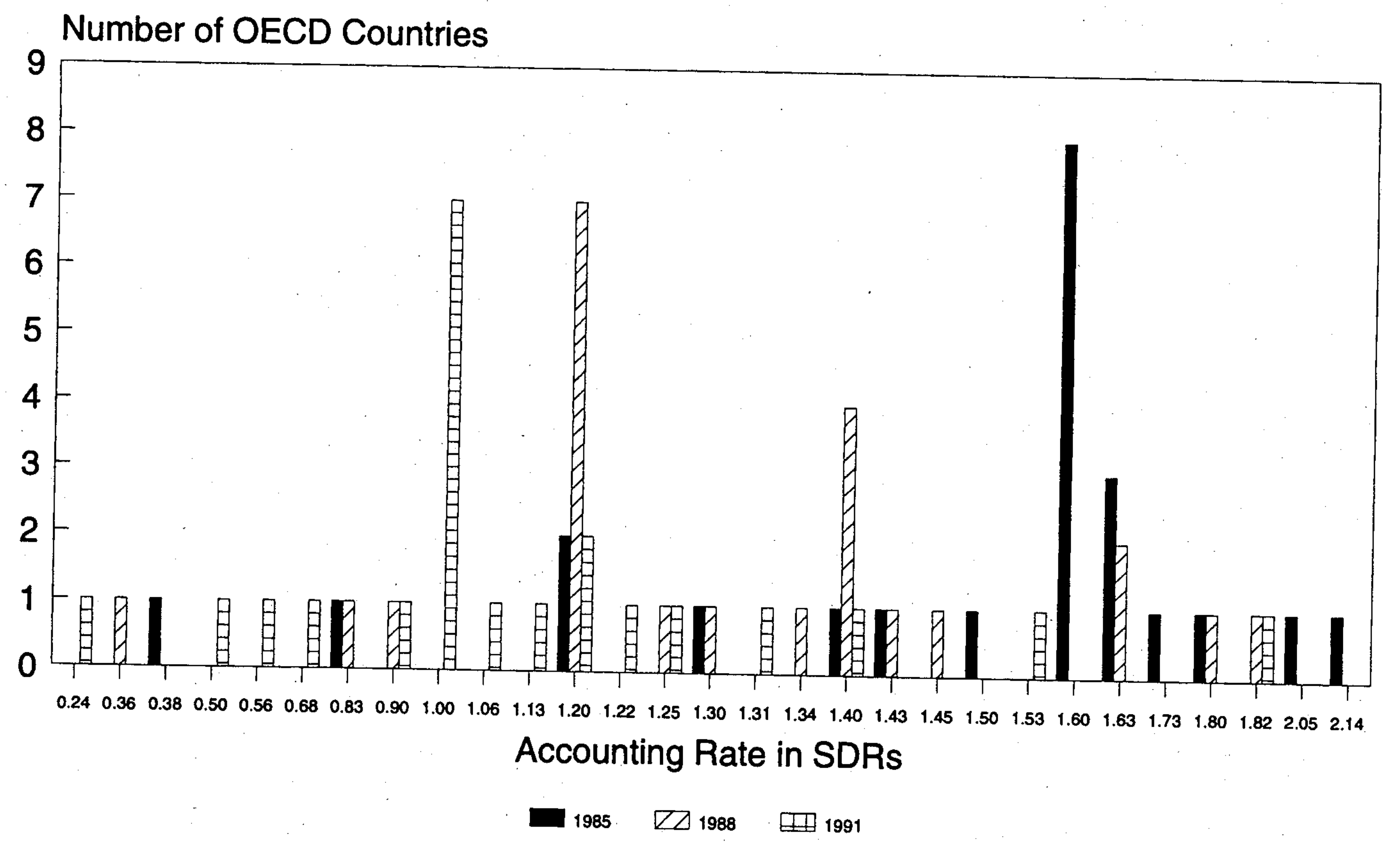
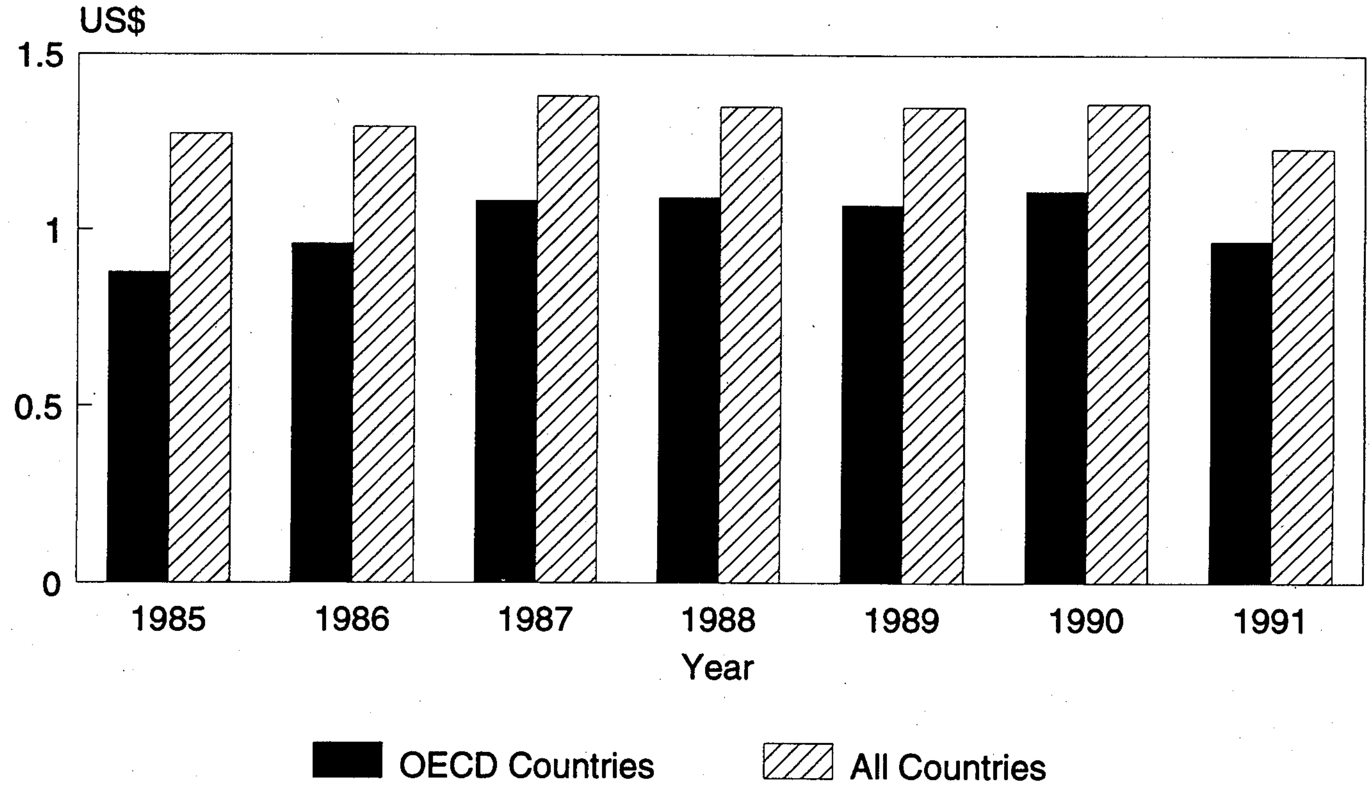


Figure 17: IMTS Average Accounting Rates of the U.S., 1985 - 1991 OECD Countries and Other Countries



Minutes of service between the U.S. and each other country are used as weights to compute the averages rates.

Conversions from SDRs to dollars are based on IMF annual values.

Appendix C

Table C1. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Australia: OTC

Tax: No tax

Percentage change 1985/91

To:	**1985**	**1988**	**1991**	**Nominal** (1985=100)	**Real** (1985=100)
Australia	--	--	--	--	--
Austria	1.90	1.80	1.79	-5.8	-35.6
Belgium	1.90	1.80	1.79	-5.8	-35.6
Canada	1.90	1.80	1.49	-21.6	-42.6
Denmark	1.90	1.80	1.59	-16.3	-42.8
Finland	1.90	1.80	1.59	-16.3	-42.8
France	1.90	1.80	1.59	-16.3	-42.8
Germany	1.90	1.80	1.79	-5.8	-35.6
Greece	1.90	2.10	1.99	4.7	-28.5
Iceland	1.90	2.10	2.79	46.8	0.3
Ireland	1.90	1.80	1.49	-21.6	-42.8
Italy	1.90	2.10	1.59	-16.3	-42.8
Japan	1.90	1.80	1.99	4.7	-28.5
Luxembourg	1.90	2.10	1.99	4.7	-28.5
Netherlands	1.90	1.80	1.79	-5.8	-35.6
New Zealand	1.30	1.40	1.29	-0.8	-32.2
Norway	1.90	1.80	1.59	-16.3	-42.8
Portugal	1.90	2.10	1.99	4.7	-28.5
Spain	1.90	2.10	2.19	15.3	-21.3
Sweden	1.90	1.80	159	-16.3	-42.8
Switzerland	1.90	1.80	1.79	-5.8	-36.6
Turkey	1.90	2.10	1.99	4.7	-28.5
United Kingdom	1.90	1.80	1.49	-21.6	-42.8
United States	1.90	1.80	1.59	-16.3	-42.8
Number of International Direct Dial charge bands with OECD	2	3	7		
Average EC-12	1.90	1.93	1.84		
Average non-EC Europe	1.90	1.89	1.79		
Average non-Europe OECD	1.75	1.70	1.62		

Table C2. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Austria

Tax: No tax

Percentage change 1985/91

To:	**1985**	**1988**	**1991**	**Nominal** (1985=100)	**Real** (1985=100)
Australia	--	53.33	28.0	--	--
Austria	n.a.	--	--	--	--
Belgium	11.0	8.67	8.67	-21.2	-59.2
Canada	38.9	18.0	18.0	-53.7	-38.5
Denmark	11.0	8.67	8.67	-21.2	-29.2
Finland	13.3	13.33	13.33	0.0	-10.0
France	11.0	8.67	8.67	-21.2	-29.2
Germany	9.85	8.67	8.67	-11.9	-20.9
Greece	13.3	13.33	13.33	0.0	-20.9
Iceland	--	13.33	13.33	--	--
Ireland	13.3	13.33	13.33	0.0	-10.0
Italy	9.85	8.67	8.67	-11.9	-20.9
Japan	--	53.33	28.0	--	--
Luxembourg	11.0	8.67	8.67	-21.2	-21.2
Netherlands	11.0	8.67	8.67	-11.9	-29.2
New Zealand	--	53.33	28.0	--	--
Norway	13.3	13.33	13.33	0.0	-10.0
Portugal	13.3	13.33	13.33	0.0	-10.0
Spain	13.3	13.33	13.33	0.0	-10.0
Sweden	13.3	8.67	13.33	0.0	-10.0
Switzerland	8.7	13.33	8.67	-0.3	-10.5
Turkey	--	13.33	13.33	--	--
United Kingdom	13.3	13.33	13.33	0.0	-10.0
United States	38.9	18.0	18.0	-53.7	-58.5
Number of International Direct Dial charge bands with OECD	6	4	4		
Average EC-12	--	10.6	10.6		
Average non-EC Europe	--	12.5	12.5		
Average non-Europe OECD	--	39.2	20.0		

Table C3. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Belgium: RTT

Tax: 18% TVA (19% in 1985) Percentage change 1985/91

To:	**1985**	**1988**	**1991**	**Nominal** (1985=100)	**Real** (1985=100)
Australia	166.67	125.0	111.11	-33.3	-39.9
Austria	33.33	33.33	33.33	0.0	-9.9
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.
Canada	120.00	71.43	40.00	-66.7	-70.0
Denmark	33.33	33.33	30.00	-10.0	-18.9
Finland	13.3	33.33	33.33	0.0	-9.9
France	11.0	21.43	21.43	0.0	-9.9
Germany	23.08	23.8	21.43	-7.1	-16.3
Greece	33.33	33.33	30.00	-10.0	-18.9
Iceland	33.33	33.33	33.33	--	-9.9
Ireland	33.33	33.33	21.43	-7.1	-42.1
Italy	33.33	33.33	30.00	-10.0	-18.9
Japan	166.67	125.00	75.00	-55.0	-59.5
Luxembourg	15.00	15.00	15.00	0.0	-9.9
Netherlands	15.00	15.00	17.65	-17.7	-6.0
New Zealand	166.67	125.00	111.11	-33.3	-39.9
Norway	33.33	33.33	33.33	0.0	-9.9
Portugal	33.33	33.33	30.00	-10.0	-18.9
Spain	33.33	33.33	30.00	-10.0	-18.9
Sweden	33.33	33.33	33.33	0.0	-9.9
Switzerland	21.43	21.43	21.43	0.0	-9.9
Turkey	33.33	33.33	33.33	0.0	-9.9
United Kingdom	21.43	21.43	21.43	0.0	-9.9
United States	120.00	71.43	40.00	-70.00	-58.5
Number of International Direct Dial charge bands with OECD	6	6	10		
Average EC-12	26.90	26.90	24.40		
Average non-EC Europe	31.63	31.63	31.63		
Average non-Europe OECD	148.00	103.57	75.44		

Table C4. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Canada: Teleglobe

Tax: Provincial tax and Federal tax of 7%

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	2.75	1.53	1.37	-50.2	-59.9
Austria	2.0	2.04	1.75	-12.5	-29.6
Belgium	2.0	1.93	1.75	-12.5	-29.6
Canada	n.a.	n.a.	n.a.	n.a.	n.a.
Denmark	2.0	1.68	1.48	-26.5	-40.9
Finland	2.0	1.68	1.48	-26.5	-40.9
France	2.0	1.53	1.53	-31.5	-44.9
Germany	2.0	1.93	1.75	-12.5	-38.1
Greece	2.0	2.04	1.86	-7.0	-25.2
Iceland	2.0	1.53	1.37	-31.5	-44.9
Ireland	2.0	1.68	1.54	-23.0	-38.1
Italy	2.0	2.25	1.86	-7.0	-25.2
Japan	2.75	2.68	1.86	-32.4	-45.6
Luxembourg	2.0	1.68	1.54	-23.0	-38.1
Netherlands	2.0	1.68	1.48	-26.05	-40.9
New Zealand	2.75	1.68	1.54	-44.0	-38.1
Norway	2.0	1.68	1.48	-26.0	-40.9
Portugal	2.0	2.25	2.09	4.5	-16.0
Spain	2.0	2.25	1.96	-2.0	-16.0
Sweden	2.0	1.68	1.37	-31.5	-44.9
Switzerland	2.0	1.93	1.54	-23.0	-38.1
Turkey	2.5	2.25	2.09	-16.4	-32.8
United Kingdom	2.0	1.53	1.37	-31.5	-44.9
United States	--[1]	--[1]	--[1]		
Number of International Direct Dial charge bands with OECD	3	7	10		
Average EC-12	2.00	1.87	1.67		
Average non-EC Europe	2.07	1.83	1.58		
Average non-Europe OECD		1.62			

1. Calls to the United States are distance sentitive: Ottawa-New York C$ 0.51 per minute.

Table C5. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Denmark

Tax: 22%

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	9.84	10.66	10.66	8.3	-10.6
Austria	3.03	3.44	3.44	13.5	-6.3
Belgium	2.87	2.87	2.87	12.1	-7.5
Canada	9.84	10.66	8.20	-16.7	-31.2
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.
Finland	1.85	2.05	2.46	33.0	9.7
France	3.03	3.44	3.44	13.5	-6.3
Germany	2.56	2.87	2.87	12.1	-7.5
Greece	3.03	3.44	3.44	13.5	-6.3
Iceland	4.92	4.92	4.92	0.0	-17.5
Ireland	3.03	3.44	3.44	13.5	-6.3
Italy	3.03	3.44	3.44	13.5	-6.3
Japan	20.49	16.39	13.11	-36.0	-47.2
Luxembourg	2.56	2.87	2.87	-12.1	-7.5
Netherlands	2.56	2.87	2.87	-12.1	-7.5
New Zealand	20.49	16.39	16.39	-36.0	-34.0
Norway	1.85	2.05	2.46	-33.0	9.7
Portugal	3.03	3.44	3.44	13.5	-6.3
Spain	23.03	3.44	3.44	13.5	-6.3
Sweden	1.85	2.05	2.46	33.0	9.7
Switzerland	3.03	3.44	3.44	13.5	-6.3
Turkey	4.92	4.92	4.92	0.0	-17.5
United Kingdom	3.03	3.44	3.44	13.5	-6.3
United States	9.84	10.66	8.20	-16.7	-31.2
Number of International Direct Dial charge bands with OECD	6	6	8		
Average EC-12	2.86	3.23	3.23		
Average non-EC Europe	3.06	3.27	3.44		
Average non-Europe OECD	14.10	12.95	11.97		

Table C6. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Finland

Tax: 17.5% VAT (16% in 1985-88) Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	10.28	4.60	--	--
Austria	4.07	4.07	1.53	-62.4	-70.5
Belgium	4.07	4.07	2.98	-26.8	-42.5
Canada	10.28	10.28	4.60	-55.2	-64.8
Denmark	1.86	1.86	1.53	-17.7	-35.4
Finland	n.a.	n.a.	n.a.	n.a.	n.a.
France	4.07	4.07	2.98	-26.8	-42.5
Germany	4.07	4.07	2.98	-26.8	-42.5
Greece	5.55	5.55	2.98	-46.3	-57.8
Iceland	--	2.16	1.53	--	--
Ireland	4.07	4.07	2.98	-26.8	-42.5
Italy	5.55	5.55	2.98	-46.3	-57.8
Japan	--	17.07	7.74	--	--
Luxembourg	4.07	4.07	2.98	-26.8	-42.5
Netherlands	4.07	4.07	2.98	-26.8	-42.5
New Zealand	--	10.28	4.60	--	--
Norway	1.86	1.86	1.53	-17.7	-35.4
Portugal	5.55	5.55	2.98	-46.3	-57.8
Spain	5.55	5.55	2.98	-46.3	-57.8
Sweden	1.86	1.86	1.53	-17.7	-35.4
Switzerland	4.07	4.07	2.98	-26.8	-42.5
Turkey	5.55	5.55	2.98	--	--
United Kingdom	4.07	4.07	2.98	-26.8	-42.5
United States	10.28	10.28	4.60	-55.2	-64.8
Number of International Direct Dial charge bands with OECD	4	5	4		
Average EC-12	4.38	4.38	2.86		
Average non-EC Europe		3.26	2.01		
Average non-Europe OECD		11.54	5.23		

Table C7. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: France

Tax: 16% (from 1/11/87)

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	23.10	16.09	16.09	-30.3	-40.2
Austria	6.70	5.54	5.54	-17.3	-28.9
Belgium	4.6	3.79	3.79	-38.6	-29.3
Canada	12.88	7.89	7.89	-17.6	-47.3
Denmark	4.6	3.79	3.79	-17.6	-29.3
Finland	6.7	5.54	5.54	-17.3	-28.9
France	n.a.	n.a.	n.a.	n.a.	n.a.
Germany	4.6	3.79	3.79	-17.6	-29.3
Greece	4.6	3.79	3.79	-17.6	-29.3
Iceland	6.70	5.54	5.54	-17.3	-28.9
Ireland	4.6	3.79	3.79	-17.6	-29.3
Italy	4.6	3.79	3.79	-17.6	-29.3
Japan	23.10	16.09	16.09	-30.3	-40.2
Luxembourg	4.6	3.79	3.79	-17.6	-29.3
Netherlands	4.6	3.79	3.79	-17.6	-42.5
New Zealand	23.10	18.45	16.09	-30.3	-40.2
Norway	6.7	5.54	5.54	-17.3	-28.9
Portugal	4.6	3.79	3.79	-17.6	-29.3
Spain	4.6	3.79	3.79	-17.6	-29.3
Sweden	6.7	5.54	5.54	-17.3	-28.9
Switzerland	4.6	3.79	3.79	-17.6	-29.3
Turkey	6.70	5.54	5.54	-17.3	-28.9
United Kingdom	4.6	3.79	3.79	-17.6	-29.3
United States	12.85	7.89	7.89	-38.6	-47.3
Number of International Direct Dial charge bands with OECD	4	5	4		
Average EC-12	4.6	3.8	3.8		
Average non-EC Europe	6.4	5.3	5.3		
Average non-Europe OECD	12.85	13.3	13.3		

Table C8. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Germany

Tax: No tax

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	4.66	3.67	16.09	-33.0	-37.4
Austria	1.15	1.15	1.15	0.0	-6.5
Belgium	1.15	1.15	1.15	0.0	-6.5
Canada	4.66	3.67	3.12	-33.0	-37.4
Denmark	1.15	1.15	1.15	0.0	-6.5
Finland	1.29	1.29	1.29	0.0	-6.5
France	1.15	1.15	1.15	0.0	-6.5
Germany	n.a.	n.a.	n.a.	n.a.	n.a.
Greece	1.15	1.15	1.15	0.0	-6.5
Iceland	1.29	1.29	1.29	0.0	-6.5
Ireland	1.15	1.15	1.15	0.0	-6.5
Italy	1.15	1.15	1.15	0.0	-6.5
Japan	4.66	3.67	3.12	-33.0	-37.4
Luxembourg	1.15	1.15	1.15	0.0	-6.5
Netherlands	1.15	1.15	1.15	0.0	-6.5
New Zealand	4.66	3.67	3.12	-33.0	-37.4
Norway	1.29	1.29	1.29	0.0	-6.5
Portugal	1.29	1.15	1.15	-10.8	-16.7
Spain	1.29	1.15	1.15	-10.8	-16.7
Sweden	1.29	1.29	1.29	0.0	-6.5
Switzerland	1.15	1.15	1.15	0.0	-6.5
Turkey	1.29	1.29	1.29	0.0	-6.5
United Kingdom	1.15	1.15	1.15	0.0	-6.5
United States	4.66	3.67	3.12	-33.0	-37.4
Number of International Direct Dial charge bands with OECD	3	3	3		
Average EC-12	1.18	1.15	1.15		
Average non-EC Europe	1.25	1.25	1.25		
Average non-Europe OECD	4.66	3.67	3.12		

Table C9. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Greece

Tax: 18% VAT

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	436.6	498.2	383.50	-9.5	-59.3
Austria	106.0	124.7	118.50	11.8	-49.8
Belgium	116.5	137.1	153.50	31.8	-40.8
Canada	336.1	395.3	383.50	14.1	-48.7
Denmark	127.2	149.8	153.50	20.7	-45.8
Finland	159.1	187.1	167.50	5.3	-52.7
France	116.5	137.1	153.50	31.1	-40.8
Germany	116.5	137.1	153.50	31.8	-40.8
Greece	n.a.	n.a.	n.a.	n.a.	n.a.
Iceland	408.2	249.5	279.00	-31.6	-69.3
Ireland	159.7	187.1	153.50	-3.2	-56.8
Italy	90.1	105.9	153.50	70.4	-23.5
Japan	477.2	561.2	488.00	2.3	-54.0
Luxembourg	116.5	137.1	153.50	31.8	-40.6
Netherlands	116.5	137.1	153.50	32.1	-40.6
New Zealand	423.6	498.2	488.00	15.4	-48.2
Norway	159.1	187.1	169.80	6.7	-52.1
Portugal	159.1	187.1	153.50	-3.5	-56.5
Spain	127.4	149.8	153.50	-20.5	-45.8
Sweden	159.1	187.1	167.05	5.3	-52.7
Switzerland	106.0	124.7	118.50	11.8	-49.8
Turkey	90.1	105.9	118.50	31.5	-40.9
United Kingdom	127.4	149.8	153.50	20.5	-45.8
United States	336.1	395.3	383.50	14.1	-48.7
Number of International Direct Dial charge bands with OECD	10	9	6		
Average EC-12	124.80	146.82	153.50		
Average non-EC Europe	169.66	166.59	162.76		
Average non-Europe OECD	399.32	469.94	425.30		

Table C10. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Iceland

Tax: Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	113	140.57	--	--
Austria	--	66	81.93	--	--
Belgium	--	66	81.93	--	--
Canada	--	90	91.57	--	--
Denmark	--	50	57.83	--	--
Finland	--	55	60.23	--	--
France	--	66	81.93	--	--
Germany	--	66	67.07	--	--
Greece	--	74	91.57	--	--
Iceland	n.a.	n.a.	n.a.	n.a.	n.a.
Ireland	--	66	81.93	--	--
Italy	--	74	91.57	--	--
Japan	--	189	211.23	--	--
Luxembourg	--	66	81.93	--	--
Netherlands	--	55	60.23	--	--
New Zealand	--	153	189.57	--	--
Norway	--	50	57.83	--	--
Portugal	--	66	81.93	--	--
Spain	--	66	67.07	--	--
Sweden	--	50	57.83	--	--
Switzerland	--	66	81.93	--	--
Turkey	--	74	91.57	--	--
United Kingdom	--	57	67.07	--	--
United States	--	103	91.57	--	--
Number of International Direct Dial charge bands with OECD		9	8		
Average EC-12	--	59.3	71.0		
Average non-EC Europe	--	60.2	71.9		
Average non-Europe OECD	--	129.6	144.9		

Table C11. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Ireland

Tax: 12.5% VAT

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	2.47	1.73	--	--
Austria	0.85	0.89	0.89	4.7	-10.9
Belgium	0.85	0.76	0.61	-28.2	-38.9
Canada	--	1.49	1.12	--	--
Denmark	0.85	0.76	0.61	-28.2	-38.9
Finland	0.85	0.76	0.61	4.7	-10.9
France	0.85	0.76	0.61	-28.2	-38.9
Germany	0.85	0.76	0.61	-28.2	-38.9
Greece	0.85	0.76	0.61	-28.2	-38.9
Iceland	--	0.89	0.89	--	--
Ireland	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	0.85	0.76	0.61	-28.2	-38.9
Japan	--	2.47	1.73	--	--
Luxembourg	0.85	0.76	0.61	-28.2	-38.9
Netherlands	0.85	0.76	0.61	-28.2	-38.9
New Zealand	--	2.47	1.73	--	--
Norway	0.85	0.89	0.89	4.7	-10.9
Portugal	0.85	0.89	0.61	-28.2	-38.9
Spain	0.85	0.76	0.61	-28.2	-38.9
Sweden	0.85	0.89	0.89	4.7	-10.9
Switzerland	0.85	0.89	0.61	-28.2	-38.9
Turkey	--	0.76	0.89	--	--
United Kingdom	0.57	0.60	0.48	-16.7	-29.1
United States	1.66	1.49	1.12	-32.5	-42.6
Number of International Direct Dial charge bands with OECD	3	5	5		
Average EC-12	0.83	0.75	0.60		
Average non-EC Europe	--	0.87	0.85		
Average non-Europe OECD	--	2.08	1.49		

Table C12. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Italy

Tax: 19% business users (1991)

9% residential subscribers (1991)

Percentage change 1985/91

To:	**1985**	**1988**	**1991**	**Nominal** (1985=100)	**Real** (1985=100)
Australia	--	4 722	3 486	--	--
Austria	1 060	1 219	991	-6.5	-29.1
Belgium	1 211	1 398	1 134	-6.4	-28.9
Canada	2 852	3 660	3 212	12.6	-14.5
Denmark	1 211	1 398	1 134	-6.4	-28.9
Finland	1 514	1 604	1 308	-13.6	-34.4
France	1 060	1 219	991	-6.5	-29.1
Germany	1 060	1 219	991	-6.5	-29.1
Greece	1 060	1 219	991	-6.5	-29.1
Iceland	--	1 604	1 308	--	--
Ireland	1 368	1 604	1 308	-4.4	-27.5
Italy	n.a.	n.a.	n.a.	n.a.	n.a.
Japan	--	4 722	4 104	--	--
Luxembourg	1 060	1 219	991	-6.5	-29.1
Netherlands	1 211	1 398	1 134	-6.4	-28.9
New Zealand	--	4 722	4 104	--	--
Norway	1 368	1 604	1 308	-4.4	-27.5
Portugal	1 368	1 604	1 308	-4.4	-27.5
Spain	1 211	1 398	1 134	-6.4	-27.5
Sweden	1 368	1 604	1 308	-4.4	-27.5
Switzerland	1 060	1 219	991	-6.5	-29.1
Turkey	--	1 219	1 308	--	--
United Kingdom	1 211	1 398	1 134	-6.4	-27.5
United States	2 852	3 660	3 212	12.6	-14.5
Number of International Direct Dial charge bands with OECD	5	6	6		
Average EC-12	1 184	1 265	1 010		
Average non-EC Europe	--	1 370	1 217		
Average non-Europe OECD	--	4 297	3 623		

Table C13. **International call charges: public switched telephone network**

Collection charges per minute, based on a 4 minute call, in **local currency,** excluding tax.

Country: Japan

Tax:

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	560.0	477.5	260.0	-53.6	-56.2
Austria	710.0	570.0	332.5	-53.2	-56.2
Belgium	710.0	570.0	332.5	-53.2	-56.6
Canada	560.0	477.5	260.0	-53.6	-56.2
Denmark	710.0	570.0	332.5	-53.2	-56.2
Finland	710.0	570.0	332.5	-53.2	-56.2
France	710.0	570.0	332.5	-53.2	-56.2
Germany	710.0	570.0	332.5	-53.2	-56.2
Greece	710.0	570.0	332.5	-53.2	-56.2
Iceland	710.0	570.0	332.5	-53.2	-56.2
Ireland	710.0	570.0	332.5	-53.2	-56.2
Italy	710.0	570.0	332.5	-52.2	-56.2
Japan	n.a.	n.a.	n.a.	n.a.	n.a.
Luxembourg	710.0	570.0	332.5	-53.2	-56.2
Netherlands	710.0	570.0	332.5	-53.2	-56.2
New Zealand	560.0	477.5	260.0	-53.6	-56.6
Norway	710.0	570.0	332.5	-53.2	-56.2
Portugal	710.0	570.0	332.5	-53.2	-56.2
Spain	710.0	570.0	332.5	-53.2	-56.2
Sweden	710.0	570.0	332.5	-53.2	-56.2
Switzerland	710.0	570.0	332.5	-53.2	-56.2
Turkey	710.0	570.0	332.5	-53.2	-56.2
United Kingdom	710.0	487.5	332.5	-53.2	-56.2
United States	560.0	402.5	212.5	-62.0	-50.6
Number of International Direct Dial charge bands with OECD	2	4	3		
Average EC-12	710.0	563.1	332.5		
Average non-EC Europe	710.0	570.0	332.5		
Average non-Europe OECD	560.0	458.7	248.1		

Table C14. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Luxembourg

Tax: No tax

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	125.0	125.0	--	--
Austria	18.75	18.75	20.88	11.1	1.9
Belgium	12.5	12.5	14.58	16.6	7.0
Canada	--	125.0	75.0	--	--
Denmark	18.75	18.75	20.83	11.1	1.9
Finland	33.33	33.33	33.33	0.0	-8.3
France	18.75	18.75	20.83	11.1	1.9
Germany	18.75	18.75	20.83	11.1	1.9
Greece	18.75	18.75	20.83	11.1	1.9
Iceland	--	33.33	50.0	--	--
Ireland	18.75	18.75	20.83	11.1	1.9
Italy	18.75	18.75	20.83	11.1	1.9
Japan	--	125.0	125.0	--	--
Luxembourg	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	12.5	12.5	14.58	16.6	7.0
New Zealand	--	125.0	125.0	--	--
Norway	27.03	27.03	27.09	0.2	-8.0
Portugal	33.33	33.33	20.83	-37.5	-42.7
Spain	33.33	33.33	20.83	-37.5	-42.7
Sweden	27.03	27.03	27.09	0.2	-8.0
Switzerland	18.75	18.75	20.83	11.1	1.9
Turkey	--	18.75	50.0	--	--
United Kingdom	18.75	18.75	20.83	11.1	1.9
United States	88.24	88.24	75.00	-15.0	-22.0
Number of International Direct Dial charge bands with OECD	5	6	7		
Average EC12	20.3	20.3	19.7		
Average non-EC Europe	--	25.3	32.7		
Average non-Europe OECD	--	117.6	105.0		

Table C15. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Netherlands

Tax: No tax

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	6.7	4.2	--	--
Austria	1.41	1.45	1.45	2.8	-0.8
Belgium	1.1	1.1	1.1	0.0	-3.6
Canada	4.74	3.95	2.6	-45.5	-47.0
Denmark	1.1	1.1	1.1	0.0	0.0
Finland	1.8	1.8	1.8	0.0	-3.6
France	1.1	1.1	1.1	0.0	-3.6
Germany	1.1	1.1	1.1	0.0	-3.6
Greece	1.8	1.8	1.45	-19.4	-22.3
Iceland	--	1.8	1.8	--	--
Ireland	1.41	1.45	1.45	2.8	-0.8
Italy	1.41	1.45	1.45	2.8	-0.8
Japan	--	6.7	4.2	--	--
Luxembourg	1.1	1.1	1.1	0.0	-3.6
Netherlands	n.a.	n.a.	n.a.	n.a.	n.a.
New Zealand	--	6.7	4.2	--	--
Norway	1.41	1.45	1.45	2.8	-0.8
Portugal	1.8	1.8	1.45	-19.4	-22.3
Spain	1.8	1.8	1.45	-19.4	-22.3
Sweden	1.41	1.45	1.45	2.8	-0.8
Switzerland	1.1	1.1	1.1	0.0	-3.6
Turkey	--	1.8	1.8	--	--
United Kingdom	1.1	1.1	1.1	0.0	3.6
United States	4.74	3.95	2.6	-45.5	-47.0
Number of International Direct Dial charge bands with OECD	4	5	5		
Average EC-12	1.35	1.35	1.26		
Average non-EC Europe	--	1.55	1.55		
Average non-Europe OECD	--	5.60	3.50		

Table C16. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: New Zealand

Tax: 12.5%

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	1.54	1.58	--	--
Austria	--	3.0	3.0	--	--
Belgium	--	3.0	3.0	--	--
Canada	--	3.0	2.85	--	--
Denmark	--	3.0	3.0	--	--
Finland	--	3.0	3.0	--	--
France	--	3.0	3.0	--	--
Germany	--	3.0	3.0	--	--
Greece	--	3.0	3.3	--	--
Iceland	--	3.0	3.3	--	--
Ireland	--	3.0	3.0	--	--
Italy	--	3.0	3.0	--	--
Japan	--	3.0	3.0	--	--
Luxembourg	--	3.0	3.3	--	--
Netherlands	--	3.0	3.0	--	--
New Zealand	--	n.a.	n.a.	n.a.	n.a.
Norway	--	3.0	3.0	--	--
Portugal	--	3.0	3.3	--	--
Spain	--	3.0	3.3	--	--
Sweden	--	3.0	3.0	--	--
Switzerland	--	3.0	3.0	--	--
Turkey	--	3.0	3.3	--	--
United Kingdom	--	3.0	2.85	--	--
United States	--	3.0	2.85	--	--
Number of International Direct Dial charge bands with OECD	--	2	4		
Average EC-12	--	3.0	3.09		
Average non-EC Europe	--	3.0	3.09		
Average non-Europe OECD	--	2.64	2.57		

Table C17. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Norway

Tax: 20% VAT (1985 to 1991)

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	15.66	15.63	15.32	-2.2	-27.7
Austria	4.75	4.81	4.44	-6.5	-31.0
Belgium	4.75	4.81	4.44	-6.5	-31.0
Canada	12.92	11.63	7.42	-42.6	-57.6
Denmark	1.87	2.5	2.22	18.7	-12.3
Finland	1.87	2.5	2.22	18.7	-12.3
France	4.75	4.81	4.44	-6.5	-31.0
Germany	4.75	4.81	4.44	-6.5	-31.0
Greece	4.75	4.81	4.44	-6.5	-31.0
Iceland	4.75	4.81	4.44	-6.5	-31.0
Ireland	4.75	4.81	4.44	-6.5	-31.0
Italy	4.75	4.81	4.44	-6.5	-31.0
Japan	24.17	20.83	15.32	-13.8	-53.0
Luxembourg	4.75	4.81	4.44	-6.5	-31.0
Netherlands	4.75	4.81	4.44	-6.5	-31.0
New Zealand	15.66	20.83	15.32	-2.2	-27.7
Norway	n.a.	n.a.	n.a.	n.a.	n.a.
Portugal	4.75	4.81	4.44	-6.5	-31.0
Spain	4.75	4.81	4.44	-6.5	-31.0
Sweden	1.87	2.5	2.2	18.7	-12.3
Switzerland	4.75	4.81	4.44	-6.5	-31.0
Turkey	4.75	4.81	4.44	-6.5	-31.0
United Kingdom	4.75	4.81	4.44	-6.5	-31.0
United States	12.92	11.63	7.42	-42.6	-57.6
Number of International Direct Dial charge bands with OECD	5	5	4		
Average EC-12	4.51	4.62	4.3		
Average non-EC Europe	3.79	4.04	3.7		
Average non-Europe OECD	16.27	15.07	12.2		

Table C18. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Portugal

Tax: No tax

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	471.43	425.45	346.0	-26.6	-57.1
Austria	123.0	161.0	144.4	17.4	-31.4
Belgium	123.0	161.0	144.4	17.4	-31.4
Canada	275.0	360.0	346.0	25.8	-26.5
Denmark	123.0	161.0	144.4	17.4	-31.4
Finland	144.0	199.0	168.5	17.0	-31.6
France	123.0	161.0	144.4	17.4	-31.4
Germany	123.0	161.0	144.4	17.4	-31.4
Greece	144.0	188.0	144.4	0.0	-41.4
Iceland	--	199.0	168.5	--	--
Ireland	123.0	161.0	144.4	17.4	-31.4
Italy	123.0	161.0	144.4	17.4	-31.4
Japan	412.5	585.0	455.0	10.3	-31.4
Luxembourg	123.0	161.0	144.4	17.4	-31.4
Netherlands	123.0	161.0	144.4	17.4	-31.4
New Zealand	412.5	585.0	500.0	21.2	-29.2
Norway	144.0	188.0	168.5	17.0	-31.6
Portugal	n.a.	n.a.	n.a.	n.a.	n.a.
Spain	87.0	125.0	144.4	66.0	-3.3
Sweden	144.0	188.0	168.5	17.0	-31.6
Switzerland	123.0	161.0	144.4	17.4	-31.4
Turkey	--	181.0	168.5	--	--
United Kingdom	123.0	161.0	144.4	17.4	-31.4
United States	275.0	360.0	346.0	25.8	-26.5
Number of International Direct Dial charge bands with OECD	7	8	5		
Average EC-12	121.6	160.2	144.4		
Average non-EC Europe	111.0	183.4	161.6		
Average non-Europe OECD	369.3	463.1	398.6		

Table C19. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Spain

Tax: 12%

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	486.26	407.0	--	--
Austria	127.6	144.26	142.67	11.8	-18.3
Belgium	126.6	144.26	121.33	-4.9	-30.5
Canada	--	166.26	295.67	--	--
Denmark	127.6	144.26	121.33	-4.9	-30.5
Finland	127.6	144.26	142.67	11.9	-18.3
France	104.7	124.26	121.33	15.9	-15.3
Germany	127.6	144.26	121.33	-4.9	-30.5
Greece	127.6	144.26	121.33	-4.9	-30.5
Iceland	--	144.26	142.67	--	--
Ireland	127.6	144.26	121.33	-4.9	-30.5
Italy	127.6	144.26	121.33	-4.9	-30.5
Japan	--	486.26	407.00	--	--
Luxembourg	127.6	144.26	121.33	-4.9	-30.5
Netherlands	127.6	144.26	121.33	-4.9	-30.5
New Zealand	--	486.26	407.00	--	--
Norway	127.6	144.26	142.67	11.8	-18.3
Portugal	85.9	110.26	121.33	41.2	3.2
Spain	n.a.	n.a.	n.a.	n.a.	n.a.
Sweden	127.6	144.26	142.67	11.8	-18.3
Switzerland	127.6	144.26	142.67	11.8	-18.3
Turkey	--	144.26	142.67	--	--
United Kingdom	127.6	144.26	121.33	-4.9	-30.5
United States	362.4	388.26	295.67	-18.4	-40.4
Number of International Direct Dial charge bands with OECD	4	6	4		
Average EC-12	121.7	139.3	121.3		
Average non-EC Europe	--	144.3	142.7		
Average non-Europe OECD	--	402.7	362.5		

Table C20. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Sweden: Televerket

Tax: No tax

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	--	15.35	--	--
Austria	5.35	5.35	4.95	-7.5	-31.6
Belgium	4.45	4.45	4.1	-7.9	-31.8
Canada	9.75	9.75	6.9	-29.2	-47.7
Denmark	2.25	2.25	2.25	0.0	-26.0
Finland	2.25	2.25	2.25	0.0	-26.0
France	5.35	5.35	4.95	-7.5	-31.6
Germany	4.45	4.45	4.1	-7.9	-31.8
Greece	6.9	6.9	6.35	-8.0	-31.9
Iceland	6.9	6.9	6.35	-8.0	-31.9
Ireland	5.35	5.35	4.95	-7.5	-31.6
Italy	5.35	5.35	4.95	-7.5	-31.6
Japan	--	--	15.35	--	--
Luxembourg	5.35	5.35	4.95	-7.5	-31.6
Netherlands	4.45	4.45	4.1	-7.9	-31.8
New Zealand	--	--	15.35	--	--
Norway	2.25	2.25	2.25	0.0	-26.0
Portugal	6.9	6.9	6.35	-8.0	-31.9
Spain	6.9	6.9	6.35	-8.0	-31.9
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.
Switzerland	5.35	5.35	4.95	-7.5	-31.6
Turkey	8.2	8.2	6.35	-22.6	-42.7
United Kingdom	5.35	5.35	4.95	-7.5	-31.6
United States	9.75	9.75	6.9	-29.2	-47.07
Number of International Direct Dial charge bands with OECD	6	6	6		
Average EC-12	5.25	5.25	4.86		
Average non-EC Europe	5.05	5.05	4.52		
Average non-Europe OECD	--	--	11.97		

Table C21. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Switzerland

Tax: No tax

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	5.6	3.2	--	--
Austria	1.47	1.2	1.13	-23.1	-32.1
Belgium	1.47	1.2	1.13	-23.1	-32.1
Canada	4.8	3.2	2.0	-33.3	-63.2
Denmark	1.8	1.47	1.4	-22.2	-31.3
Finland	2.4	1.47	1.4	-41.7	-48.5
France	1.47	1.2	1.13	-23.1	-32.1
Germany	1.47	1.2	1.13	-23.1	-32.1
Greece	2.4	1.2	1.4	-22.2	-48.5
Iceland	--	1.47	2.0	--	--
Ireland	2.4	1.47	1.4	-41.7	-48.5
Italy	1.47	1.2	1.13	-23.1	-32.1
Japan	--	5.6	3.2	--	--
Luxembourg	1.2	1.2	1.13	-5.8	-16.8
Netherlands	1.47	1.2	1.13	-23.1	-32.1
New Zealand	--	5.6	3.2	--	--
Norway	2.4	1.47	1.4	-41.7	-48.5
Portugal	2.4	1.47	1.4	-41.7	-48.5
Spain	2.4	1.47	1.4	-41.7	-48.5
Sweden	2.4	1.47	1.4	-41.7	-48.5
Switzerland	n.a.	n.a.	n.a.	n.a.	n.a.
Turkey	--	1.47	1.4	--	--
United Kingdom	1.8	1.47	1.4	-22.2	-31.3
United States	4.8	3.2	2.0	-33.3	-63.3
Number of International Direct Dial charge bands with OECD	5	4	4		
Average EC-12	1.8	1.3	1.3		
Average non-EC Europe	--	1.4	1.5		
Average non-Europe OECD	--	4.6	2.7		

Table C22. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: Turkey

Tax: No tax

Percentage change 1985/91

To:	**1985**	**1988**	**1991**	**Nominal** (1985=100)	**Real** (1985=100)
Australia	--	4 300	10 750	--	--
Austria	--	2 200	6 250	--	--
Belgium	--	2 200	6 250	--	--
Canada	--	4 300	10 750	--	--
Denmark	--	2 200	6 250	--	--
Finland	--	2 200	6 250	--	--
France	--	2 200	6 250	--	--
Germany	--	2 200	6 250	--	--
Greece	--	2 200	6 250	--	--
Iceland	--	2 200	6 250	--	--
Ireland	--	2 200	6 250	--	--
Italy	--	2 200	6 250	--	--
Japan	--	4 300	10 750	--	--
Luxembourg	--	2 200	6 250	--	--
Netherlands	--	2 200	6 250	--	--
New Zealand	--	4 300	--	--	--
Norway	--	2 200	6 250	--	--
Portugal	--	2 200	6 250	--	--
Spain	--	2 200	6 250	--	--
Sweden	--	2 200	6 250	--	--
Switzerland	--	2 200	6 250	--	--
Turkey	n.a.	n.a.	n.a.	n.a.	n.a.
United Kingdom	--	2 200	6 250	--	--
United States	--	4 300	10 750	--	--
Number of International Direct Dial charge bands with OECD	--	2	4		
Average EC-12	--	2 200	5 562		
Average non-EC Europe	--	2 200	6 250		
Average non-Europe OECD	--	4 300	10 750		

Table C23. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax (in pence).

Country: United Kingdom

Tax: 17.5% VAT in 1992

Percentage Change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	84.18	86.56	68.85	-18.2	-38.7
Austria	48.21	47.57	43.30	-10.2	-32.7
Belgium	37.60	36.67	322.77	-12.8	-34.7
Canada	62.67	66.84	53.05	-15.03	-36.5
Denmark	37.60	36.67	32.77	-12.8	-34.7
Finland	48.21	47.57	43.30	-10.2	-32.7
France	37.60	36.67	32.77	-12.8	-34.7
Germany	37.60	36.67	32.77	-12.8	-34.7
Greece	48.21	47.57	32.77	-32.03	-49.0
Iceland	62.67	66.84	57.27	-8.6	-31.5
Ireland	35.25	33.00	31.50	-10.6	-33.0
Italy	37.60	41.91	32.77	-12.8	-34.7
Japan	90.67	122.79	109.57	20.4	-9.7
Luxembourg	37.60	36.67	32.77	-12.8	-34.7
Netherlands	37.60	36.67	32.77	-12.8	-34.7
New Zealand	84.18	86.56	68.85	-12.8	-34.7
Norway	48.21	47.57	43.30	-10.2	-32.7
Portugal	37.60	41.91	32.77	-12.8	-34.7
Spain	37.60	36.67	32.77	-12.8	-34.7
Sweden	48.21	47.57	43.30	-10.2	-32.7
Switzerland	37.60	36.67	32.77	-12.8	-34.7
Turkey	48.21	60.69	57.27	-18.8	-10.9
United Kingdom	n.a.	n.a.	n.a.	n.a.	n.a.
United States	62.67	66.84	53.05	-15.03	-36.5
Number of International Direct Dial charge bands with OECD	7	9	9		
Average EC-12	38.3	38.8	32.6		
Average non-EC Europe	48.8	50.6	45.8		
Average non-Europe OECD	76.9	85.9	70.7		

Table C24. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: United Kingdom: Mercury

Tax: 17.5% in 1992

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	--	75.3	60.31	-19.9	-32.2
Austria	--	46.94	38.14	-18.7	-31.2
Belgium	--	36.0	28.3	-21.4	-33.4
Canada	--	49.62	42.35	-15.9	-28.8
Denmark	--	36.0	28.3	-21.4	-33.4
Finland	--	46.94	38.14	-18.7	-31.2
France	--	36.0	28.3	-21.4	-33.4
Germany	--	36.0	28.3	-21.4	-33.4
Greece	--	46.94	28.3	-39.7	-49.9
Iceland	--	63.7	50.3	-21.0	-33.1
Ireland	--	32.6	27.2	-16.6	-29.3
Italy	--	41.05	28.3	-31.1	-41.6
Japan	--	121.04	95.0	-21.5	-33.5
Luxembourg	--	36.0	28.3	-21.4	-33.4
Netherlands	--	36.0	28.3	-21.4	-33.4
New Zealand	--	85.25	60.17	-29.4	-40.2
Norway	--	46.94	38.14	-18.7	-31.2
Portugal	--	41.08	28.3	-31.1	-41.6
Spain	--	41.05	28.3	-31.1	-41.6
Sweden	--	46.94	38.14	-18.7	-31.2
Switzerland	--	36.00	28.59	-20.6	-32.7
Turkey	--	46.94	50.12	6.8	-9.6
United Kingdom	--	n.a.	n.a.	n.a.	n.a.
United States	--	49.62	42.35	-15.9	-28.8
Number of International Direct Dial charge bands with OECD	--	9	10		
Average EC-12	--	38.06	29.20		
Average non-EC Europe	--	47.77	40.22		
Average non-Europe OECD	--	77.85	61.20		

No services available in 1985. Data are for 2 100 service customers who are connected directly to Mercury network.

Table C.25. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: United States (AT&T)

Tax: Federal excise tax at 3%

Percentage change 1985/91

To:	1985	1988	1991	Nominal (1985=100)	Real (1985=100)
Australia	2.06	1.92	1.71	-16.9	-31.7
Austria	1.46	1.30	1.23	-15.7	-30.7
Belgium	1.46	1.30	1.30	-10.9	-29.5
Canada[1]	0.77	0.73	0.67	-13.0	-28.4
Denmark	1.46	1.30	1.24	-15.1	-30.1
Finland	1.46	1.46	1.39	-4.9	-21.6
France	1.46	1.30	1.22	-16.4	-31.2
Germany	1.46	1.30	1.26	-13.7	-29.0
Greece	1.46	1.46	1.46	0.0	-17.7
Iceland	1.50	1.50	1.50	0.0	-17.7
Ireland	1.37	1.33	1.19	-13.1	-28.5
Italy	1.46	1.30	1.25	-14.4	-29.5
Japan	2.10	1.92	1.69	-19.5	-33.8
Luxembourg	1.46	1.46	1.39	-4.9	-21.6
Netherlands	1.46	1.30	1.21	-17.1	-31.8
New Zealand	2.06	2.06	2.06	0.0	-17.7
Norway	1.46	1.30	1.24	-15.1	-30.1
Portugal	1.50	1.50	1.50	0.0	-17.7
Spain	1.46	1.30	1.30	-10.9	-29.5
Sweden	1.46	1.30	1.30	-17.1	-21.6
Switzerland	1.46	1.30	1.30	-10.9	-29.5
Turkey	1.50	1.50	1.50	0.0	-17.7
United Kingdom	1.37	1.33	1.07	-21.9	-35.7
United States	n.a.	n.a.	n.a.	n.a.	
Number of International Direct Dial charge bands with OECD	6	8	16		
Average EC-12	1.45	1.36	1.28		
Average non-EC Europe	1.47	1.38	1.34		
Average non-Europe OECD	1.75	1.66	1.53		

1. For highest mileage rate (1 611-4 000 miles or 2 221-4 000 miles in 1985).

Table C26. **International call charges: public switched telephone network**

Collection charges per minute, based on a four minute call, in **local currency,** excluding tax.

Country: United States (MCI)

Tax: Federal excise tax at 3%

Percentage change 1985/91

To:	MCI Start Date[1]	1988	1991	Nominal (1988=100)	Real (1988=100)
Australia	1.82	1.82	1.70	-6.6	-23.1
Austria	1.30	1.23	1.21	-6.9	-23.4
Belgium	1.23	1.23	1.29	4.9	-13.7
Canada[2]	0.71	0.97	0.83	16.9	-3.8
Denmark	1.29	1.29	1.23	-4.6	-21.5
Finland	1.45	1.45	1.38	-4.8	-21.7
France	1.23	1.23	1.21	-1.6	-19.0
Germany	1.29	1.23	1.25	-3.1	-20.2
Greece	1.45	1.45	1.45	0.0	-17.7
Iceland	1.49	1.49	1.48	-0.7	-18.2
Ireland	1.26	1.26	1.18	-6.3	-22.9
Italy	1.23	1.23	1.24	0.8	-17.0
Japan	1.82	1.82	1.68	-7.7	-24.0
Luxembourg	1.45	1.45	1.30	-10.3	-26.2
Netherlands	1.23	1.23	1.20	-2.4	-19.7
New Zealand	2.05	2.05	2.05	0.0	-17.7
Norway	1.29	1.29	1.23	-4.6	-21.5
Portugal	1.49	1.49	1.49	0.0	-17.7
Spain	1.23	1.23	1.29	4.9	-13.7
Sweden	1.23	1.23	1.19	3.2	-20.4
Switzerland	1.23	1.23	1.29	4.9	-13.7
Turkey	1.49	1.49	1.49	0.0	-17.7
United Kingdom	1.10	1.10	1.06	3.6	-20.7
United States	n.a.	n.a.	n.a.	n.a.	n.a.
Number of International Direct Dial charge bands with OECD	11	9	18		
Average EC-12	1.29	1.29	1.27		
Average non-EC Europe	1.35	1.35	1.32		
Average non-Europe OECD	1.60	1.67	1.57		

1. Start date varies from 1986 to 1988.
2. For lowest mileage band.

Table C27. **Exchange rate of SDR in national currency**

	1985	1988	1990	1991[1]	Consumer price index (1985=100) 1990
Australia	1.61	1.73	1.53	1.74	146.60
Austria	18.98	16.64	15.41	16.06	111.40
Belgium	55.32	49.55	45.28	46.95	111.00
Canada	1.53	1.66	1.58	1.56	124.40
Denmark	9.85	9.07	8.38	8.78	121.20
Finland	5.95	5.64	5.18	5.53	127.30
France	8.03	8.30	7.38	7.75	116.60
Germany	2.70	2.37	2.19	2.28	107.00
Greece	214.40	190.89	162.30	250.33	222.60
Iceland	46.20	57.29	579.08	80.93	253.00
Ireland	0.88	0.88	0.82	0.85	117.60
Italy	1 843.70	1 754.72	1 623.00	1 701.95	131.80
Japan	220.23	172.78	196.20	183.94	106.90
Luxembourg	55.31	49.55	45.28	46.95	109.00
Netherlands	3.04	2.66	2.47	2.58	103.70
New Zealand	2.25	2.06	2.27	2.35	156.40
Norway	8.33	8.78	8.48	8.90	135.40
Portugal	172.99	193.99	192.80	198.10	171.10
Spain	169.32	159.99	138.10	142.63	136.80
Sweden	8.36	8.26	8.02	8.29	135.20
Switzerland	2.28	1.97	1.88	1.97	113.20
Turkey	633.63	1 912.94	3 531.00	--	857.90
United Kingdom	0.76	0.76	0.76	0.78	133.40
United States	1.10	1.35	0.74	1.36	121.50

1. Average for eleven months.

Table C28. **Collection charges, Australia: 1991** (in SDR per month)

	To Australia	From Australia
Austria	1.74	1.03
Belgium	2.37	1.03
Canada	0.88	0.85
Denmark	1.21	0.91
Finland	0.83	0.91
France	2.08	0.91
Germany	1.37	1.03
Greece	1.54	1.14
Iceland	1.74	1.60
Ireland	2.03	0.85
Italy	2.05	0.91
Japan	1.41	1.14
Luxembourg	2.66	1.14
Nederland	1.63	1.03
New Zealand	0.67	0.74
Norway	1.72	0.91
Portugal	1.75	1.14
Spain	2.85	1.26
Sweden	1.85	0.91
Switzerland	1.62	1.03
Turkey	3.04	1.14
United Kingdom (BT)	0.88	0.85
United States	1.26	0.91

Table C29. **INTRA-EC collection charges: 1991**

(in SDR)

To: From	B	D	F	G	Gr	I	It	L	Neth	P	Sp	UK(BT)
B	--	0.64	0.46	0.46	0.64	0.46	0.64	0.32	0.38	0.64	0.64	0.46
D	0.33	--	0.39	0.33	0.39	0.39	0.39	0.33	0.33	0.39	0.39	0.39
F	0.49	0.49	--	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49
G	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.509
Gr	0.61	0.61	0.61	0.61	--	0.61	0.61	0.61	0.61	0.61	0.61	0.61
I	0.71	0.71	0.71	0.71	0.71	--	0.71	0.71	0.71	0.71	0.71	0.56
It	0.67	0.67	0.58	0.58	0.58	0.77	--	0.58	0.67	0.77	0.67	0.67
L	0.31	0.44	0.44	0.44	0.44	0.44	0.44	--	0.31	0.44	0.44	0.44
Neth	0.43	0.43	0.43	0.43	0.56	0.56	0.56	0.56	--	0.56	0.56	0.43
P	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	--	0.73	0.73
Sp	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	--	0.85
UK	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	--

Table C30. **Accounting rates and collection charges to the United States**

Country	Collection charge to US ($)	Half accounting rate with US ($)	Difference (1) - (2)	% Change 1985-91 Collection charge	Accounting rate
Austria	1.53	0.55	0.98	-58.5	-23.1
Belgium	1.17	0.66	0.51	-66.7	-25.0
Denmark	1.28	0.55	0.73	-16.7	-37.5
Finland	1.14	0.55	0.59	-55.2	-37.5
France	1.39	0.55	0.84	-38.6	-37.5
Germany	1.87	0.55	1.32	-33.0	-16.7
Greece	2.10	0.84	1.26	14.1	-6.1
Iceland	1.55	0.66	0.89	--	-25.0
Ireland	1.79	0.64	1.15	-32.5	-29.4
Italy	2.58	0.94	1.64	-15.1	-14.7
Luxembourg	2.19	0.55	1.64	-15.0	-28.6
Netherlands	1.38	0.49	0.89	-45.5	-25.0
Norway	1.14	0.55	0.59	-52.1	-37.5
Portgual	2.39	0.67	1.72	25.8	-25.0
Spain	2.84	0.82	2.02	-18.4	-13.2
Sweden	1.14	0.27	0.87	-29.2	-68.2
Switzerland	1.39	0.55	0.83	-33.3	-37.5
Turkey	2.62	1.00	1.62	--	-11.1
UK (BT)	0.93	0.34	0.59	-15.3	-35.8

Appendix D

Recommendation D.140

The CCITT

bearing in mind

that the International Telecommunication Regulations indicate that administrations shall by mutual agreement establish and revise accounting rates to be applied between them, taking into account the Recommendations of the CCITT and trends in the cost of providing the telecommunication services;

that the costs incurred in providing telecommunication services, although based on the same components, may have a different impact depending on the country's development status which, in turn, may affect the quality of international services;

that one of the purposes of the ITU, as identified in the Constitution of the ITU (Nice, 1989), is to foster collaboration among its Members with a view to the establishment of rates at levels as low as possible consistent with an efficient service,

considering

that administrations should endeavour to lower the provisioning costs of international telephone services;

that administrations should strive to offer customers high quality international telephone services at the lowest possible prices;

that too great a dissymmetry between the charges applicable in each direction of the same relation may contribute to the distortion of the balance of traffic and encourage the rentention of high accounting rates;

that the remuneration for the use of telecommunication facilities made available to administrations should cover the costs incurred in providing those facilities, such as:

-- network costs;

-- financial costs;

-- overheads;

that costs depend on many factors which vary by country;

that international telephone networks should be used in an efficient way;

that demand for international telephone services should be stimulated;

that some accounting rates have not kept pace with the recent costs trends and are therefore too high;

that accounting rates that are not cost-orientated may encourage inefficient routings;

that the existing accounting procedures contained in the D-Series Recommendations continue to provide administrations with efficient and flexible processes.

recommends

that the following principles be applied when establishing or revising accounting rates for international telephone services;

1. accounting rates for international telephone services should be cost-orientated and should take into account relevant costs trends:

2. each administration should apply the above principle to all relations on a non-discriminatory basis;

3. administrations should seek to achieve cost-orientated accounting rates in an expeditious manner, recognising that this may need to be implemented on a scheduled basis where the level of reduction required is significant. In the event of scheduling, administrations should aim to agree staged reductions over a period normally of one to five years. However, the actual length of the period of implementation may depend on the extent of reductions agreed and/or the difference in the development of the countries concerned.

further recommends

4. that administrations should periodically review accounting rates to ensure that they continue to reflect current costs trends;

5. that information relative to accounting rates for the international automatic telephone service should be made available on a voluntary basis to the Director of CCITT in an aggregated format, in accordance with the guidelines set out in Annex 2, to assist CCITT studies into accounting rate movements.

Annex 1 to this Recommendation contains guidelines for the cost elements to be taken into account when determing international telephone accounting rates (for further study).

Annex 2 to this Recommendation contains guidelines concerning the provision of information relating to accounting rates for the international automatic telephone service.

Annex 3 to this Recommendation contains guidelines for bilateral negotiation of cost orientated telephone accounting rates (for further study).

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PRINTED IN FRANCE
(93 95 03 1) ISBN 92-64-14418-8 - No. 47865 1995