Consultation Paper No.18/2019

Telecom Regulatory Authority of India

सत्यमेव जयते

Consultation Paper on
Review of Interconnection Usage Charges

New Delhi, the 8th November, 2019

Mahanagar Door Sanchar Bhawan, Jawahar Lal Nehru Marg, New Delhi – 110002

Stakeholders are requested to furnish their written comments by 09.12.2019 and counter-comments by 23.12.2019 to the Advisor (Broadband and Policy Analysis), TRAI. The comments may also be sent by e-mail to sksinghal@trai.gov.in and interconnection.trai@gmail.com . Comments would be posted on TRAI's website www.trai.gov.in. For any clarification/ information, Shri Sunil Kumar Singhal, Advisor (Broadband and Policy Analysis), TRAI may be contacted at Tel. No. +91-11-23221509.

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Chapter - I
Introduction

1.1. Interconnection between two public telecommunication networks allows consumers of one service provider to communicate with consumers of the other service provider. Without an effective interconnection, the individual networks would develop as discrete islands. It would defeat the purpose of establishing cohesive telecommunication network, and economic benefits arising out of seamless communication across the consumers of telecommunication services would be limited.

1.2. In a broader sense, the term interconnection refers to the technical and commercial arrangement under which service providers connect their equipment, networks, and services to enable their subscribers to have access to the subscribers, services, and networks of other service providers. A number of issues must be agreed upon by the Telecom Service Providers (TSPs) or determined by the regulator in order to finalize these arrangements. The most important commercial issue for a successful interconnection arrangement is the Interconnection Usage Charge (IUC).

1.3. The principal regulation for IUC of voice calls was notified by the Authority through "The Telecommunication Interconnection Usage Charges (IUC Regulation), 2003 (4 of 2003)" dated 29/10/2003. This Regulation laid down uniform termination charge of ₹ 0.30 per minute, irrespective of distances in all types of calls, effective from 1/2/2004. Its next review for call termination charges was undertaken in the year 2008-09, based on which the same were amended as follows:

a. Termination charge of ₹ 0.20 per minute for local and national long-distance calls to fixed line and mobile (revised downwards from the erstwhile charge of ₹ 0.30 per minute).

b. Termination charge of ₹ 0.40 per minute for international long-distance calls (revised upwards from the erstwhile charge of ₹ 0.30 per minute).

1.4. The international long-distance call termination charges were further revised to ₹ 0.53 per minute in 2015. Subsequently, vide the Telecommunication Interconnection Usage Charges (Fourteenth Amendment) Regulations, 2018 dated 12.01.2018 [herein after referred to as IUC Regulations, 2018], the international long-distance call termination charge (ITC) was revised to ₹ 0.30 per minute, effective from 1/02/2018. Some stakeholders challenged the IUC Regulations, 2018 in the Hon'ble High Court of Bombay. The matter is sub-judice.

1.5. While analyzing the issues involved in deciding the ITC in 2018, the Authority noted that (a) carrier route for carrying international incoming voice traffic is facing a fierce competition from Over-The-Top (OTT) route and grey route; and (b) international incoming voice traffic through carrier route has begun to decline from F.Y. 2016-17. The Authority further observed that there are certain nuanced differences between OTT route and grey route. It was expected that if the arbitrage opportunity i.e. the difference between ITC and tariff for domestic voice call is plugged or kept to a minimum, the attractiveness of the grey route for carrying international incoming voice traffic would be lost, and thereby, the carrier route for international incoming traffic would witness a legitimate growth. Accordingly, the Authority in the Explanatory Memorandum (EM) annexed to the IUC Regulations, 2018 has noted that:

"*The Authority would closely monitor the trends and patterns of ILD voice traffic in the country. The Authority, if it deems necessary, may review ITC from time to time*".

1.6. In view of the above, the Authority has been continuously monitoring the developments in telecommunications market, and trends in incoming and outgoing International Long Distance (ILD) voice traffic volume. While analysing, the Authority noted that the characteristics of the telecommunications market in India as well as globally is changing very fast. The telecom market composition is changing from voice to data centric, and the tariff offerings are changing from pricing of individual products like voice, data, messages etc. to bundled offers comprising of pre-fixed quantity of voice calls, data, and messages together. Similarly, in case of international roaming also, tariff packages for bundles comprising of certain pre-fixed quantity of incoming and outgoing voice calls, data, and messages are becoming popular. In view of these developments in the tariff offerings, it appears that, at retail level, the relevance of per unit rates of individual products i.e. voice, data, and messages is reducing.

1.7. Further, to analyse the trends in incoming and outgoing ILD voice traffic volume, from time to time, the Authority collected the data relating to international incoming and outgoing voice traffic through carrier route. The analysis of this data indicates that the rate of decline of international incoming voice traffic through carrier route has reduced after the revision of ITC rates in 2018. As far as outgoing ILD voice traffic from India is concerned, it is much less in comparison to incoming ILD calls traffic, and it is also reducing but at a lesser rate. Over a period of last two years, the ratio of outgoing and incoming ILD calls traffic volume has slightly improved. Further, in-line with the global trend, with the rapid increase in data enabled subscribers in India, the use of OTT communication applications for voice calling is increasing. As most of the OTT communication applications do not charge for voice calls specifically, the increase in OTT voice traffic may also be affecting the grey market operations.

1.8. In the meantime, the Authority has received representations from stakeholders about revision of the existing IUC regime in respect of ITC rate. In support of their demand, these stakeholders have argued that despite reduction in ITC rate and transmitting the same to corresponding international operators in the form of reduced international settlement charges, the decline in international incoming traffic coming through carrier route is continuing.

1.9. In view of the above discussed developments, the question arises is whether the present regulatory regime for ITC, wherein its uniform rate on per minute basis as fixed by the Authority, is still relevant or some change in approach for regulating ITC is required? In the interest of consumers and Indian service providers, is there a need to provide flexibility to the Indian service providers for negotiating ITC with international carriers/ foreign telecom service providers? What could be the impact of such changes on carrier route traffic, and tariff of telecommunication services for Indian consumers? To discuss all these, and any other, issues with the stakeholders, the Authority is of the view that there is a need to undertake review of the existing regulatory regime for ITC.

The Present Consultation Paper

1.10. With this background, the present Consultation Paper (CP) embarks on the review of the existing regulatory regime for international termination charges in the country. Chapter-II deals specifically with international termination charges. Finally, Chapter-III lists the issues for consultation.

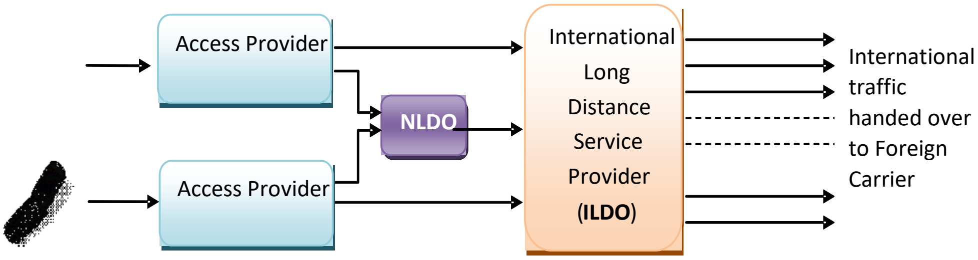
Chapter - II
International Termination Charge

A. Background:

2.1. The flow of traffic for international outgoing calls is depicted in the following figure.

Figure 1: Schematic diagram for the traffic flow of international outgoing calls

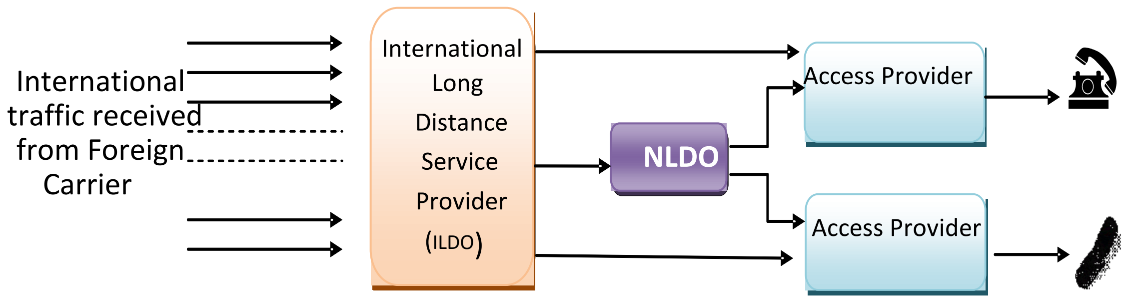
International Outgoing Calls:



2.2. The flow of traffic for international incoming calls is depicted in the following figure.

Figure 2: Schematic Diagram for Traffic flow of International Incoming Calls

International Incoming Calls:



B. Interconnection usage charges (IUC)

2.3. Interconnection Usage Charges (IUC) are wholesale charges payable by a Telecom Service Provider (TSP) to another Telecom Service Provider (TSP) for origination, transiting, carriage, or termination of the calls. The IUC mainly consists of origination, termination, carriage, and transit charges. This consultation paper is focusing on international termination charges only. Different types of charges for voice calls are as follows:

(1) International Settlement Charges

2.4. International settlement charges (ISC) are the charges exchanged between foreign service providers and Indian International Long Distance Operators (ILDOs) for exchanging international traffic. The international settlement charges include international carriage charge, national carriage charge (if any), and the termination charge applicable in the respective country.

(2) International Termination Charge

2.5. International termination charges are the charges payable by an International Long-Distance Operator (ILDO), which is carrying calls from outside the country, to the access provider in the country in whose network the call terminates.

(3) Domestic Termination Charges

2.6. These are the charges payable by the originating service provider to the terminating service provider for terminating the local or national long-distance calls successfully in its network.

2.7. There is a key difference between the international termination charge and domestic termination charge. While the domestic termination charge is determined on the basis of costs involved in terminating the call and have major significance for domestic telecommunication market, the international termination charge is fixed on the basis of several other considerations, in addition to costs involved in terminating the call and have significance for the international telecommunication markets.

C. Prevailing IUC Regulations for International Voice Call Termination Charges

2.8. After following the due consultation process, through the IUC Regulations, 2018, the Authority, fixed the termination charges for international incoming call to wireless and wireline @ Rs. 0.30 (paise thirty only) per minute, from 1.02.2018.

2.9. The Authority prescribed the ITC, after analysing, the relevant factors which include, but are not limited to, cost of terminating the call in the access network, risk of diversion of incoming international voice calls from carrier route to OTT and grey market route, average price of local and long distance calls in the domestic market, prevalent rates for International Settlement Charges and ITC in the international markets, variations in the forex rates, interests of the Indian consumers and services providers etc. All these factors are elaborated in Explanatory Memorandum (EM) to the IUC Regulations, 2018 dated 12.01.2018.

2.10. Keeping in view the ongoing rapid changes in the domestic telecommunication market characteristics and the adoption of technological innovations in the field of Information and Communication Technologies (ICTs) by consumers, the Authority in the Explanatory Memorandum (EM) annexed to the IUC Regulations, 2018 has noted that:

"*The Authority would closely monitor the trends and patterns of ILD voice traffic in the country. The Authority, if it deems necessary, may review ITC from time to time".*

D. Developments after the notification of IUC Regulations, 2018

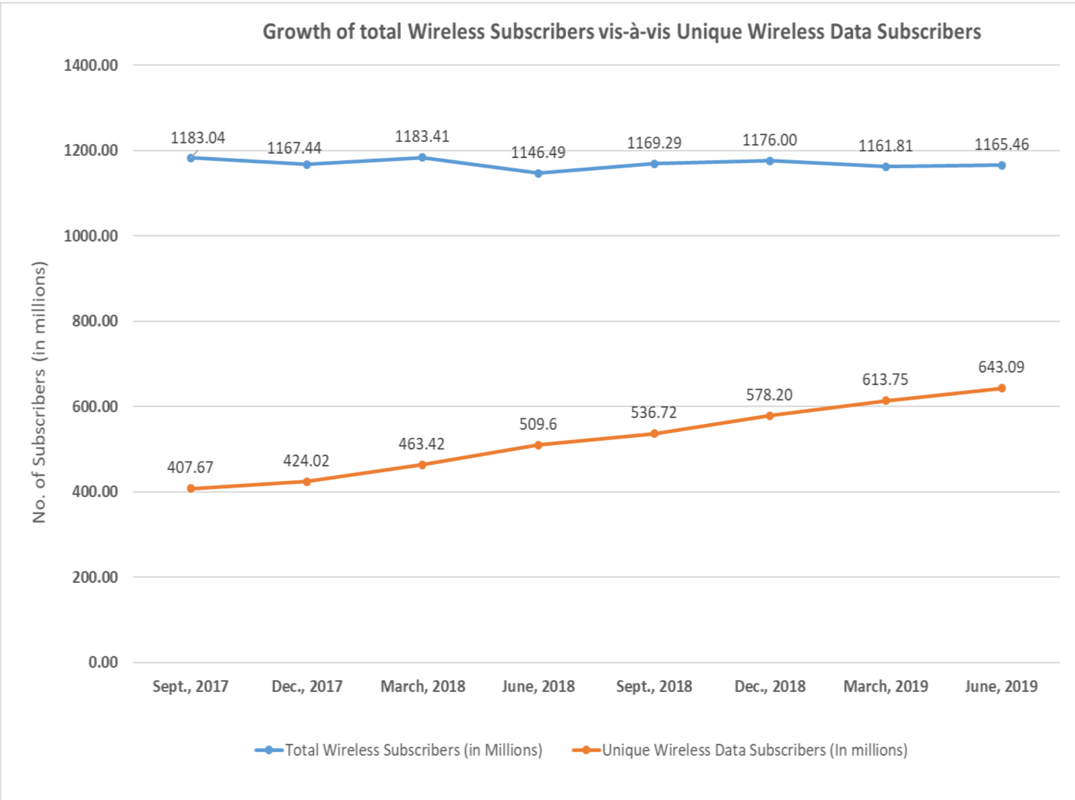
2.11. Now, most of the service providers in the country are offering bundled plans for telecommunication services which include voice, message and data. These bundled plans offer certain pre-fixed volume of voice calls, messages, and/ or data against daily/ weekly/ monthly flat charges. The adoption of these flat rate charging bundled plans by subscribers is one of the very significant developments in the recent past.

2.12. Further, the proportion of data enabled smartphones and smart-feature-phones has continuously increased in the Indian mobile handset market. According to the International Data Corporation's (IDC) Quarterly Mobile Phone Tracker[1], a total of 69.3 million mobile phones were shipped to India in the June 2019 quarter. Out of these, smartphone and feature phone market share were 36.9 and 32.4 million units respectively. In the last quarter ending June 2019 also, while the smartphones market has grown, the feature phone (non-data enabled) market has continued to decline. This trend indicates that the Indian telecommunication

[1] https://www.idc.com/getdoc.jsp?containerId=prAP45442419

services consumers are progressively moving towards adoption of latest technologies.

2.13. In terms of subscribers, while the number of wireless subscribers has remained practically static during the last two years, the share of data enabled wireless subscribers has continuously increased. At the end of June 2019, number of wireless data subscribers increased to 643.09 Million. A graph depicting the total wireless subscribers and wireless data subscribers over a period of last two years is given in Figure-3. This trend also indicates that the share of data enabled subscribers in total wireless subscribers has grown rapidly. It now stands at approximately 55% of total wireless subscription.



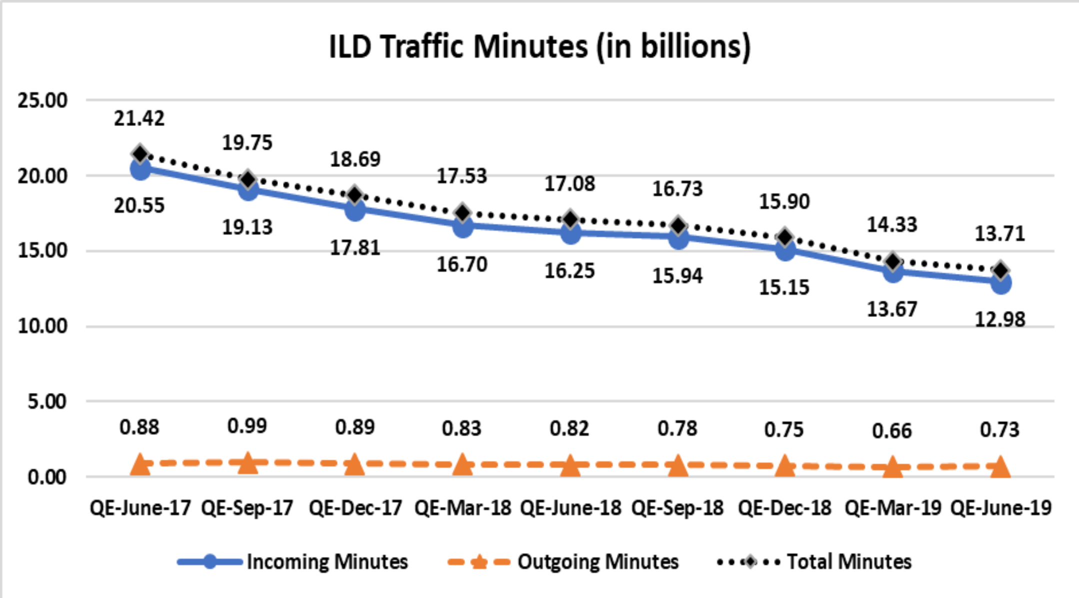
Source: TRAI

Figure- 3

2.14. As per the market estimates, in India alone, more than 400 Million of these wireless data enabled subscribers are the consumers of OTT communication applications also. During the last two years, this number has more than doubled. Many of such OTT communication applications have internet telephony feature also. Even though, in India, the Public Switched Telephone Network (PSTN)/ Public

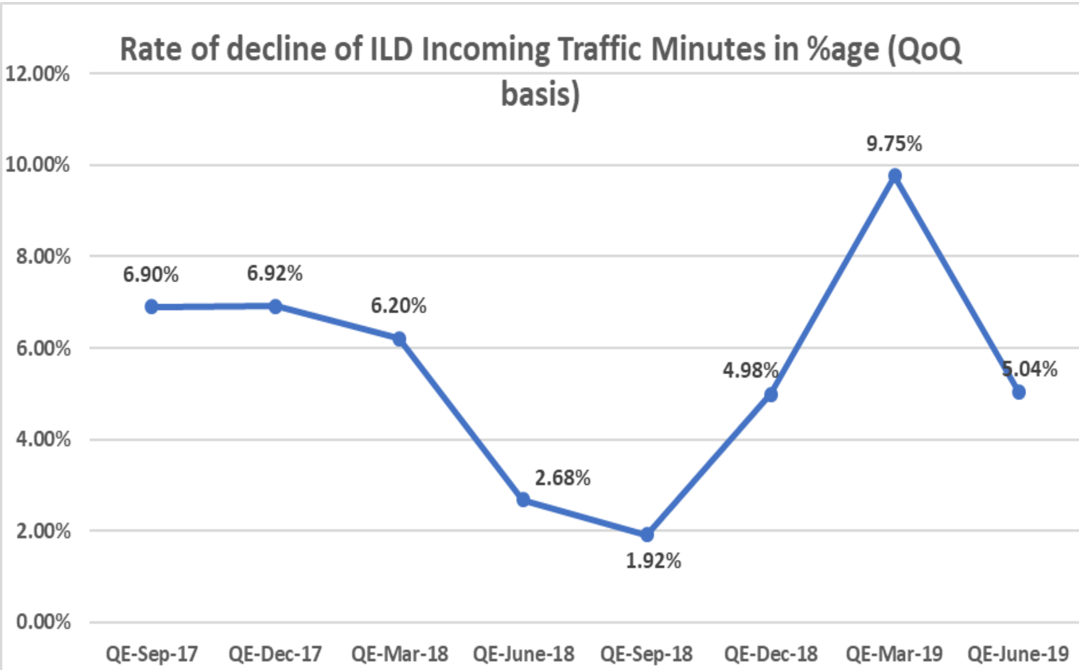
Land Mobile Network (PLMN) are not permitted to be interconnected with the internet network for switching of voice calls, the convergence of internet access and mobile number at device level and rapid increase in subscription of bundled plans have greatly facilitated and encouraged internet telephony. Now it is the choice of the consumer whether to use carrier route or internet telephony (OTT apps) for voice communication. Since such OTT communication applications have global presence and achieved significant level of market penetration in international markets, these applications have already cornered the voice calls traffic also in those markets. With the rapid increase in wireless data enabled subscribers in India, now, these applications might be cornering the international voice call traffic here too.

2.15. As noted earlier, to analyse the trends in incoming and outgoing ILD voice traffic volume, the Authority, from time to time, collected the necessary data, from ILD operators. The analysis of this data indicates that while the rate of decline of international incoming voice traffic through carrier route has reduced after the revision of ITC rates in 2018, the international incoming traffic coming through carrier route has not witnessed the expected growth. On the contrary, the international incoming traffic coming through carrier route in India is continuously declining. This may be because of the interplay between carrier route, grey market, and OTT. While the reduction in the ITC rate arrested the rate of decline of international incoming voice traffic, the rapid increase in the data enabled wireless subscribers and consequent use of OTT communication applications by consumers may be the reason behind continuous decline in the volume of international incoming voice traffic. As far as outgoing ILD voice traffic from India is concerned, it is much less in comparison to incoming ILD calls traffic, and it is also reducing but at a lesser rate. Over a period of last two years, the ratio of outgoing and incoming ILD calls traffic volume has slightly improved. Two graphs depicting the trends in outgoing, incoming and total ILD voice traffic volume and rate of decline of ILD incoming traffic minutes on Quarter-on-Quarter (QoQ) basis, over a period of last two years, are given in Figure-4, and Figure-5.



Source: ILDOs

Figure-4



Source: ILDOs

Figure-5

2.16. Based on the data submitted by ILDOs, it has been noted that after the revision of ITC from Rs. 0.53 to Rs. 0.30 in February 2018, the average ISC i.e. amount receivable by ILDOs from foreign service provider has reduced from Rs. 0.59 for Q.E. September 2017 to Rs. 0.42 for Q.E. March 2019. It indicates that while reduction in ITC was to the tune of Rs 0.23 per minute, the decrease in average

ISC is Rs. 0.17 only. In other words, the ILDOs have still not passed on the full benefits of reduction in ITC to foreign telecom service providers.

E. Review of the existing regulatory regime for ITC

2.17. As per the existing regulatory regime for IUC, notified vide the Telecommunication Interconnection Usage Charges Regulation, 2003 (4 of 2003) dated 29.10.2003, for outgoing international long-distance calls, the international carriage charges and international termination charges at the foreign end are under forbearance. Therefore, these charges are mutually agreed between Indian International Long-Distance Operators (ILDOs) and international carriers/ foreign service providers.

2.18. As noted earlier also, the ITC for incoming international long-distance call in India is regulated and presently fixed @ of Rs. 0.30 per minute. This is not the position in case of many countries to whom we send major proportion of outgoing international long-distance calls. In many countries, with whom India have significant volume of ILD traffic, the international termination charges have been kept under forbearance. It has come to the notice of the Authority that, in many cases, the foreign operators fix comparatively high international termination rates for outgoing calls from India. Such high rates for termination are fixed either by their regulator or by such TSPs themselves after commercial negotiations.

2.19. In effect, for an international outgoing call the domestic access service provider is a price-taker as it cannot materially affect the international settlement charges/ international termination rates decided by international carrier/ foreign service provider. Accordingly, to ensure level playing field, for an international incoming call, the foreign access provider must be a price-taker as the international termination charge to be paid to the Indian access provider is decided domestically. However, since, the ITC for incoming international long-distance calls in India is regulated and fixed at uniform rate, for outgoing calls, the foreign access providers practically become price-makers in their markets. Under such circumstances, to take advantage of the situation, foreign access providers may fix comparatively higher rates for outgoing international calls.

2.20. With the rapid increase in utilization of OTT communication apps and correspondingly the change in market structure, the higher tariffs offered by foreign access providers, as price-makers, for international outgoing calls in their markets may have some impact on choice of the consumers to use either carrier route or internet telephony (OTT apps) for calling. Similarly, the outgoing ILD traffic may also be getting cannibalized from carrier to OTT route.

2.21. So, to address such developments happening in international telephony market structure, the question arises that should the existing regulatory regime for IUC in respect of ILD calls be continued, wherein the ITC is regulated for incoming calls but is under forbearance for outgoing calls or a new regime is required? In other words, to ensure level playing field, should both i.e. domestic as well as foreign service providers be made either price-takers or price makers and not otherwise. Since, we can’t regulate the call termination charges at foreign end, should we also liberalize regulatory regime for ITC, so that the both end service providers become price-takers.

2.22. It is pertinent to mention here that the impact of changes in the international voice calls market is not limited to telecom sector alone. An increase in international telecommunication traffic may have other positive effects on the economic opportunities in terms of improving trade and services, and an overall improvement in the productivity and competitiveness.

2.23. The prevalent termination charge for international incoming calls is ₹ 0.30 per minute while the domestic termination charge is ₹ 0.06 per minute for wireless calls. There could be a view that the ITC rate for international calls fixed by the Authority, puts the Indian access service providers in a disadvantageous situation vis-à-vis foreign service operators, as termination charges in many other countries are much higher than ITC rate in India. On the other hand, some stakeholders could be of the view that there is no extra cost involved in terminating the international call, and, therefore, termination charges for domestic and international calls should be same i.e. ₹ 0.06 per minute.

2.24. The option of increasing the international incoming termination charge from the current level also has its pros and cons. The advantage is that it may help access providers earn more revenue. It may also reduce tariffs for outgoing international calls if access providers are willing to share the increased revenue with customers. Critics of this approach would cite the disadvantage of the substantial arbitrage opportunity that differential domestic and international termination charge would create. Grey market has always been a matter of concern and effects of the same cannot be left unaccounted by the Authority while considering the regulatory regime for the international termination charge.

2.25. An alternate argument could be a regime of 'reciprocal arrangements' i.e. mandating the same level of ITC for calls from a country as that is applicable for calls from India to that country. While on the face of it, to ensure level playing field, this proposal may look attractive, in fact this may not be a feasible proposition. Since the currency of each country is different and their exchange rates keep on changing, this may lead to uncertainty in business transactions, complexity in settlement, and increase in disputes. Further, in this scenario, there could be many rates for international termination charges. This may also encourage the operators to alter Calling-Line-Identification (CLI) to show that the calls are from a country that enjoys low international termination charges for calls to India.

2.26. Keeping in view the changes happening in the international telephony market structure, another option could be that instead of fixing the ITC rate, just like termination charges for outgoing international calls, forbearance regime may be considered for incoming international calls ITC rate i.e. leaving the ITC rates for negotiation between ILDOs and access providers. Since, most of the access service providers operating in India have ILD operations also i.e. they are integrated access cum ILD operators, such negotiations would be between Indian service providers and foreign service providers. Such flexibility given to service providers may provide required space to them for innovation in charging and tariff models. If such option is considered, then it may be necessary for access cum ILD service providers to offer matching termination rates in transparent and non-discriminatory manner to standalone ILDOs also. It may help access cum ILD as well as standalone service providers to negotiate ITC rates in such a manner that it balances the interests of Indian service providers as well as foreign service providers. In the data centric world, it may not only help in ensuring level playing field amongst Indian and foreign service providers but also in countering the onslaught from OTT communication apps.

2.27. The forbearance option discussed above may have an added advantage in the form of influencing the rate of outgoing international calls from foreign country to India. As a part of this negotiation process, if the Indian service providers can negotiate for reduction in the rate of outgoing international calls from foreign country to India, it may encourage consumers of those jurisdictions to choose carrier route in place of OTT or internet telephony route. Forbearance option could also be used by service providers to negotiate either volume based or flat rate charges.

2.28. The direct transition from regulated to forbearance regime for ITC rates may have the risk of unpredictable behavior by service providers and the unprecedented changes in the ITC rate may affect other sectors of economy, in addition to international telephony market. To cover such unforeseen risks, while considering the forbearance for ITC rates, there may be a need for fixing the ceiling rates of ITC.

2.29. Considering the multiple opinions, the stakeholder's comments are invited on following issues. It is requested that the comments be supported with reasons, justification, and relevant data for their meaningful appreciation.

Q1. Keeping in view the changes happening in the international telephony market structure, is there a need for change in the existing regulatory regime for International Termination Charge (ITC) i.e. change the existing regulatory regime from fixing uniform rate of ITC to an alternate approach? Kindly justify your comments with supporting arguments.

Q2. If your response to the Q1 is affirmative, then what should be the alternate approach? Kindly elucidate the alternate approach and benefits of the same vis-à-vis the present approach.

Q3. If your response to the Q1 is negative, then in the changing international telephony market structure, what other regulatory measures are required to be taken by the regulator for protecting the interests of Indian consumers and service providers? Kindly justify your comments with supporting arguments.

Q4. Your comments on any other issue related with the international termination charges may also be given.

Chapter-III
Issues for Consultation

In view of the developments taken place in the telecommunication services sector during the last few years, following is the list of issues for consultation. It may please be noted that comments to the issues given below should be supported with reasons, justification, and relevant data.

Q1. Keeping in view the changes happening in the international telephony market structure, is there a need for change in the regulatory regime for International Termination Charge (ITC) i.e. change the existing regulatory regime from fixing uniform rate of ITC to an alternate approach? Kindly justify your comments with supporting arguments.

Q2. If your response to the Q1 is affirmative, then what should be the alternate approach? Kindly elucidate the alternate approach and benefits of the same vis-à-vis the present approach.

Q3. If your response to the Q1 is negative, then in the changing international telephony market structure, what other regulatory measures are required to be taken by the regulator for protecting the interests of Indian consumers and service providers? Kindly justify your comments with supporting arguments.

Q4. Your comments on any other issue related with the international termination charges may also be given.

List of Acronyms

S. No.	Acronym	Description
1	TRAI	Telecom Regulatory Authority of India
2	CP	Consultation Paper
3	IUC	Interconnection Usage Charge
4	ITC	International Termination Charge
5	OTT	Over-The-Top
6	ILD	International Long Distance
7	ILDO	International Long-Distance Operator
8	TSP	Telecom Service Provider
9	ICT	Information and Communication Technology
10	IDC	International Data Corporation
11	PSTN	Public Switched Telephone Network
12	PLMN	Public Land Mobile Network
13	CLI	Calling-Line-Identification
14	QoQ	Quarter-on-Quarter
15	ISC	International Settlement Charge