

# **Appendix A**



PÓST- OG FJARSKIPTASTOFNUN

## **Analysis of wholesale market for call termination in individual mobile phone networks**

**(Market 7)**

**23 June 2015**

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## Summary and Conclusions

This document contains a draft by the Post and Telecom Administration (PTA) of analysis of the wholesale market for call termination in mobile phone networks, which is Market 7 in the ESA Recommendation on relevant markets from 2008. The market analysis is the basis for decisions on whether to impose, maintain, amend or withdraw specific regulatory obligations on electronic communications undertakings that have been designated as having significant market power.

Analyses of this market were previously made in 2006, 2010 and 2012<sup>1</sup>. The conclusion of the most recent analysis was that Síminn, Vodafone, Nova, Tal and IMC/Alterna had significant market power in their mobile phone networks. Obligations that were imposed with respect to the companies' GSM/UMTS and MVNO networks were as follows:

- Obligation for access
- Obligation for non-discrimination
- Obligation for accounting separation (only on Siminn and Vodafone)
- Obligation for price control. The obligation was based on benchmarking in those countries within the EEA which had been analysed using the BU-LRIC<sup>2</sup> methodology.

The PTA has now made a new analysis of the market in question. Since the last analysis was made, the company 365 miðlar ehf. has purchased IP-fjaraskipti hf. (Tal) and the merging of these companies has been endorsed by the Competition Authority with certain conditions.<sup>3</sup> Hereafter, the merged companies will be called 365 (Tal) in the analysis.

The number of companies on the market does not have a definitive impact on competition on the relevant market as it is delineated by each individual network where each company has 100% market share of the termination market in its own network and there are no existing possibilities for substitutability, neither in supply or demand for termination in individual mobile phone networks. Existing technology does not offer mobile phone call termination with parties other than the mobile phone company of the receiving user. It is unlikely that this will change in the foreseeable future. Nor does there appear to be at retail level any other realistic options for users that could exert a controlling influence on pricing of termination of telephone calls in mobile phone networks.

Another innovation on the market since the last market analysis is that mobile phone companies now offer service over 4G mobile phone networks which is also called Long Term Evolution (LTE). The offer of 4G/LTE service commenced in April 2013 when Nova began to offer its customers service over such a network and this was offered by Siminn a few months later in that same year. Vodafone has also developed a 4G network as part of its mobile phone service. 365 was successful in a call for tenders which was completed in 2013 for licences for frequencies for 4G/LTE mobile phone networks across the whole country, but the company has not yet commenced operations on its own network. As was the case when the offer of UMTS

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<sup>1</sup> When the relevant market was analysed in 2006 it was no. 16 in the ESA Recommendation on relevant markets from 2004. Now it is designated Market 7 pursuant to the 2008 Recommendation.

<sup>2</sup> Long-Run Average Incremental Cost is the cost that is added or is saved when a specific service or operation is added or discontinued, on the assumption that all costs are variable.

<sup>3</sup> <http://www.samkeppni.is/utgafa/frettir/nr/2451>

(3G) service commenced in 2007, this new service offer does not alter conditions for competition on the relevant market. This is particularly the case as 4G does not have dedicated circuits for voice communication but is only designed for data transfer. For this reason, telephone calls in 4G networks go via the 3G or 2G (GSM) networks of the company in question. In the case of call termination it is in addition not possible to distinguish services, neither with respect to usefulness or pricing, on the basis of the network handling the termination. 4G/LTE or 3G/UMTS therefore has no impact on shortage of substitutability for termination in individual networks.

The relevant service market thus covers call termination in individual mobile phone networks. The mobile phone networks that fall into this category are GSM (2G), UMTS (3G), LTE (4G) and virtual mobile phone networks (MVNO) based on the above specified networks. For this reason the PTA intends to specify the following service markets:

- Call termination in the Síminn GSM/UMTS/LTE mobile phone network.
- Call termination in the Vodafone GSM/UMTS/LTE mobile phone network.
- Call termination in the Nova UMTS/LTE mobile phone network.
- Call termination in the IMC Ísland/Alterna GSM mobile phone network.
- Call termination in the 365 (Tal) virtual mobile phone network.

The PTA considers that the geographical market for call termination in individual mobile phone networks is the whole country in accordance with the scope of each mobile phone network.

All companies have 100% market share in call termination in their own mobile phone networks. In the opinion of the PTA the relevant market is characterised by absolute entry barriers and possible competition is not foreseeable in the coming 2-3 years. The market analysis indicates that there are no competition factors on the market that would create pressure on the price for call termination in mobile phone networks. The technology does not, as things stand today, afford the possibility of substitutability in supply. There is no countervailing buying power whatsoever, neither at wholesale nor retail level, and there is nothing to indicate that competitors, customers or consumers can have an impact on the price of call termination in a mobile phone network. For this reason the PTA considers that all the above specified companies have significant market power and plans to designate Síminn, Vodafone, Nova, IMC/Alterna and the merged 365 and IP-fjarskipti (Tal) with significant market power on the market for call termination in their mobile phone networks.

The competition problem identified by the PTA on the relevant market can first and foremost be attributed to the fact that the mobile phone company that controls the network where a call is terminated has a monopoly position on the market in question. Most competition problems on the relevant markets are related to termination rates. In addition to this there is the fact that the substantial difference in termination rates of the electronic communications undertakings also had a damaging impact for consumers who had difficulty in identifying the cost of a telephone call. The PTA has in recent months and years eradicated the difference in termination rates that existed between companies and has significantly reduced termination rates. Excessively high termination rates can also have an impact on the entry of new service providers to the mobile phone market. Prices for call termination in mobile phone networks were thus for a considerable period of time higher than could be justified by costs, particularly when one refers to the Síminn cost analysis from 2010 and to the fact that off-net calls were significantly more expensive than on-net calls.

The PTA intends to impose the following obligations on the companies in an attempt to solve those competition problems that exist on the relevant markets:

Planned obligations on the Siminn mobile phone network:

- Obligation for access
- Obligation for non-discrimination
- Obligation for price control which will mean that a maximum call termination rate will be decided on an annual basis with benchmarking. During the period of validity of the above specified Decision, the price will be updated annually on the basis of new benchmarking which should be completed no later than 1 November each year. This conclusion will decide the price from and including the following turn of the year.

Planned obligations on the Vodafone mobile phone network:

- Obligation for access.
- Obligation for non-discrimination.
- Obligation for price control which will mean that a maximum call termination rate will be decided on an annual basis with benchmarking. During the period of validity of the above specified Decision, the price will be updated annually on the basis of new benchmarking which should be completed no later than 1 November each year. This conclusion will decide the price from and including the following turn of the year.

Planned obligations on the Nova mobile phone network:

- Obligation for access.
- Obligation for non-discrimination.
- Obligation for price control which will mean that a maximum call termination rate will be decided on an annual basis with benchmarking. During the period of validity of the above specified Decision, the price will be updated annually on the basis of new benchmarking which should be completed no later than 1 November each year. This conclusion will decide the price from and including the following turn of the year.

Planned obligations on the IMC Ísland/Alterna mobile network:

- Obligation for access.
- Obligation for non-discrimination
- Obligation for price control which will mean that a maximum call termination rate will be decided on an annual basis with benchmarking. During the period of validity of the above specified Decision, the price will be updated annually on the basis of new benchmarking which should be completed no later than 1 November each year. This conclusion will decide the price from and including the following turn of the year.

Planned obligations on the 365 (Tal) mobile phone network:

- Obligation for access.
- Obligation for non-discrimination
- Obligation for price control which will mean that a maximum call termination rate will be decided on an annual basis with benchmarking. During the period of validity of the above specified Decision, the price will be updated annually on the basis of new benchmarking which should be completed no later than 1 November each year. This conclusion will decide the price from and including the following turn of the year.

## **1.0 Introduction**

### **1.1 General**

1. This document contains the Post and Telecom Administration (PTA) draft analysis of the wholesale market for call termination in individual mobile phone networks (Market 7). The PTA last published an analysis of this market, along with its decision on obligations on undertakings with significant market power with its Decision no. 3/2012 on 13 January 2012. Prior to this the PTA published Decision no. 18/2010 on the relevant market on 16 July 2010. The first Decision on the relevant market was published by the PTA on 20 July 2006 when the market was designated as Market no. 16 pursuant to the ESA Recommendation then in force from 2004. It is planned that market analyses will be repeated at regular intervals in order to monitor whether circumstances on the market change.<sup>4</sup>

2. This document is based on PTA draft conclusions and decision on the relevant market. The PTA submitted the draft for consultation on 1 April 2015 where electronic communications undertakings, the Competition Authority and other stakeholders were offered to comment on the market analysis and its conclusions, see Article 6 of Act no. 69/2003 on the Post and Telecom Administration. The period of consultation ended on 18 May 2015. Comments from stakeholders and the position taken by the PTA on these comments are presented in a separate document (Appendix B). The market analysis, along with the Draft Decision with respect to obligations on the relevant market are now sent to the EFTA Surveillance Authority (ESA) for consultation pursuant to Paragraph 1 of Article 7 of the above specified Act no. 69/2003. Should ESA raise no serious objections to the analysis and to the PTA conclusions, the Decision based on the draft will be notified to the companies in question.

3. The analysis is divided into 3 main parts. First, there is a definition of the relevant service market and its geographical delineation. The next step is that the market that has been geographically defined is analysed and it is determined whether competition is active or whether one or more undertakings on the market have significant market power. It is finally evaluated whether it is appropriate to impose, maintain, amend or withdraw obligations on undertakings on the market. Markets are in a state of continuous development and for this reason need to be examined again within a reasonable timeframe. In making market analysis, attention is paid to projected development in the near future, to the extent that this is possible. The period that a market analysis is intended to cover depends to a certain extent on the characteristics of the relevant market, but as a rule of thumb one could expect conclusions of an analysis to apply for 2 to 3 years.

### **1.2 Electronic communications legislation**

4. The Electronic Communications Act no. 81/2003 implements the European Union Directives on Electronic Communications.<sup>5</sup> EU electronic communications legislation is

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<sup>4</sup> In Paragraph 6 of Article 6 of the Directive 2009/140/EC (The better regulation Directive) which among other things altered the framework Directive 2002/21/EC, it is stated that a regulatory authority shall generally complete review of market analyses within 3 years of completion of the last analysis. As the above specified Directive from 2009 has not been formally adopted in the EEA agreement, Icelandic electronic communications legislation has not been amended accordingly.

<sup>5</sup> They include the following tasks: 1) The Directive of the European Parliament and of the Council no. 2002/19/EC from 7 March, 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive) 2) the Directive of the European Parliament and of the Council no. 2002/20/EEC from

intended to create a homogenous working environment for electronic communications undertakings in Europe, to limit barriers and create conditions for sustainable competition for the benefit of consumers.

5. The Electronic Communications Act obliges the PTA to define certain electronic communications markets, both in terms of service and product types and in terms of geographical dimension in accordance with the fundamental principles of Competition Law and the obligations pursuant to the European Economic Area (EEA) Agreement. Furthermore, the PTA is required to analyse the defined markets and determine whether they are characterised by active competition. If the PTA comes to the conclusion that there is active competition in the relevant market – that is that no operator has SMP – it is prohibited from imposing obligations on the operators in that market. If the Administration has previously imposed obligations on undertakings in the relevant market, these shall be withdrawn and no new obligations imposed. Should on the other hand the PTA come to the conclusion that competition is not active on the relevant market because one or more companies have SMP, then the institution is obliged to designate them as having SMP and to impose on them the appropriate obligations.

6. The European Commission has published Guidelines and a Recommendation on market analysis. On the one hand there are Guidelines on market analysis and assessment of SMP<sup>6</sup> and on the other hand there is a Recommendation on the relevant markets.<sup>7</sup> The EFTA Surveillance Authority (ESA) has issued analogous Guidelines<sup>8</sup> (hereinafter called “the Guidelines,”) and a Recommendation<sup>9</sup> (hereinafter called “the Recommendation”) on the relevant market and a Recommendation on obligations concerning call termination rates and the PTA will take into account both the Guidelines and Recommendations from the Commission when conducting its market analyses. In addition to this the report of the Association of European Regulatory Bodies

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7 March 2002 on the authorisation of electronic communications networks and services (Authorisation Directive), 3) The Directive of the European Parliament and Council no. 2002/21/EC from 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive), 4) The Directive of the European Parliament and of the Council no. 2002/22/EC, of 7 March 2002, on universal service and users’ rights relating to electronic communications networks and services (Universal Service Directive) and the Directive of the European Parliament and of the Council no. 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications). The Directives of the European Parliament and of the Council no. 2009/140/EC (which amends the Framework Directive) and 2009/136/EC (which amends the Universal Service Directive and Personal Data Protection Directive) from 25 November, 2009, have not yet been formally incorporated into legislation in this country as they have not yet been adopted in the EEA Agreement.

<sup>6</sup> Commission Guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic networks and services, 2002/C 165/3.

<sup>7</sup> Existing regulations are: Commission Recommendation of 9 October 2014 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (notified under document no. C(2014) 7174).

<sup>8</sup> EFTA Surveillance Authority Guidelines of 14 July 2004 on market analysis and the assessment of significant market power under the regulatory framework for electronic communications networks and services referred to in Annex XI of the Agreement on the European Economic Area.

<sup>9</sup> Existing regulations are: EFTA Surveillance Authority Recommendation of 5 November 2008 on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with the Act referred to at point 5cl of Annex XI to the EEA Agreement (Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication-networks and services), as adapted by Protocol I thereto and by the sectoral adaptations contained in Annex XI to that Agreement and EFTA Surveillance Authority Recommendation of 13 April 2011 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EFTA States.

for Electronic Communications (ERG<sup>10</sup>) on obligations that may be imposed on electronic communications companies with significant market power will be taken into account for the purpose of strengthening competition, and the ESA Recommendation on call termination rates from 13 April 2011.<sup>11</sup>

7. In existing Recommendations on the relevant markets, seven electronic communications markets have been predefined that the PTA, in accordance with the electronic communications legislation currently in force and with Iceland's obligations according to the EEA Agreement, is obliged to analyse. Furthermore the electronic communications legislation prescribes that the PTA define these markets in accordance with circumstances that pertain in Iceland. Given the above it could transpire that the PTA market analysis will deviate from what is prescribed in the Recommendation. The PTA is also authorised to investigate all relevant electronic communications markets in connection with market analysis, regardless of whether or not they are listed in the Recommendation.

### **1.3 The PTA implementation of market analysis**

8. The implementation of market analysis is generally divided into 3 phases:<sup>12</sup>

- 1) Define the relevant service markets and geographical markets.
- 2) Analyse each of the defined markets, assess whether competition is active on the markets and make a decision as to where there is one or more undertakings to be found with significant market power.
- 3) Make a decision on whether obligations shall be imposed, amended or withdrawn for undertakings with significant market power.

9. The Administration has collected information, among other things regular statistical data and has requested specialised statistical data on the relevant market and has had informal communications with parties to the market. Statistics on the electronic communications market are collected from all parties to the market at 6 monthly intervals. In addition to this, the PTA collects and registers information on all changes to tariffs as they take place.

10. This preliminary draft is sent to the Competition Authority and to stakeholders and they are asked to make observations. The PTA then processes any observations received and reports on them in a separate document. The market analysis was updated in accordance with the comments that were taken into account. The market analysis and draft Decisions with respect to obligations on the relevant markets are then sent to the EFTA Surveillance Authority (ESA) for consultation, see Paragraph 1 Article 7 of Act no. 69/2003 on the Post and Telecom Administration. Should ESA make no observations on the market analysis and on the draft PTA Decision then the Decision will be notified to the companies in question.

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<sup>10</sup> Abbreviation for “European Regulatory Group of National Regulatory Authorities” The Body of European Regulators for Electronic Communications (BEREC) has now replaced ERG.

<sup>11</sup> Revised ERG Common Position on the approach to Appropriate remedies in the ECNS regulatory framework. Final Version May 2006. ERG (06) 33. The document can be seen here: [http://erg.eu.int/doc/meeting/erg\\_06\\_33\\_remedies\\_common\\_position\\_june\\_06.pdf](http://erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf). See further EFTA Surveillance Authority Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU.

<sup>12</sup> See further in: The PTA information brochure on market analysis. Last updated in August 2009. [http://www.pfs.is/upload/files/Kynningarrit\\_um\\_markaðsgreiningu\\_ágúst\\_2009\(1\).pdf](http://www.pfs.is/upload/files/Kynningarrit_um_markaðsgreiningu_ágúst_2009(1).pdf)

## 1.4 On market analysis

11. Pursuant to Article 16 of the Electronic Communications Act no. 81/2003 as amended, the PTA shall define service or goods markets and geographical markets in accordance with the main principles of competition law and with obligations according to the EEA Agreement. As has been stated it is necessary for the PTA to evaluate whether the markets, as defined in the Recommendation, harmonise with Icelandic circumstances. Both the service and geographical markets must be defined before it is possible to assess whether market conditions are such that they are susceptible to the imposition of ex-ante obligations. Market analysis is prescribed in more detail in Section II of the Regulation on market analysis in the field of electronic communications no.741/2009.

12. In Article 4 of the Competition Act no. 44/2005 a market is defined as a sales area for a product and substitute product and/or a sales area for a service and substitute service. Substitute products and services are defined as products or services that can, wholly or to a significant extent, take the place of other products or services not only on the basis of the objective characteristics of the product in question, the purchaser's intended use of them and their price, but also with respect to competition requirements and/or conditions relating to supply and demand. Products that can compete with one another are therefore called substitutable products, and each market consists of products that are mutually substitutable. Products that can be substituted for one another only to a limited extent are not considered to belong to the same market.

13. Substitutability is assessed from two points of view. First, how readily customers believe that one product can be a substitute for another (demand-side substitutability). Second, how easily a competitor of a given undertaking can adapt his production so that his product falls within the market to which a product of the given undertaking belongs (supply-side substitutability).<sup>13</sup> Demand-side substitutability is considered fundamental to market definition, while supply-side substitutability is less meaningful and is often related instead to an assessment of potential competition.

14. When a service market has been defined, its geographical dimension must be defined. The main rule is that it is based on the scope of the electronic communications network and the legislative jurisdiction of the regulatory framework that applies to it. Geographical demarcation is also based on an assessment of substitutability of the product or service in question, on the supply side and on the demand side. The geographic market is the area where products or services are offered on sufficiently homogeneous competitive terms. In assessing demand-side substitutability, it is appropriate to consider customers' tastes and geographical purchasing patterns. On the basis of this, it is possible to define markets as local, regional, national, or transnational; that is, extending to more than one country. The PTA does not however have the authority to define transnational markets on its own initiative. If a market is considered to extend to more than one country, European regulatory authorities collaborate on the market definition together with the European Commission and ESA if appropriate.

15. Two factors are important in defining geographical markets: on the one hand scope and coverage of an electronic communications network and on the other hand price. If a telecommunications network is distributed over the whole country, then this is an indication that the geographical scope should be the whole country. If the distribution of the network is

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<sup>13</sup> See further Paragraph 39 in the Guidelines and the Explanatory Memorandum the EU Commission Recommendation, Section 3.1.

regional and there is no overlapping of regions, this is an indication that the geographical scope should be regional. If prices are the same for the entire country, this indicates that the geographical scope should be national. If prices differ according to region, this is a strong indication that supply- and demand-side substitutability do not exist and that the regions in question are distinct geographical markets.<sup>14</sup>

16. The PTA can define other markets than those specified in the ESA Recommendation, for example because of special circumstances in this country. In such cases there shall be consultation with ESA. When defining other markets, the following conditions need to be fulfilled to enable the imposition of obligations, see Paragraph 3 Article 4 of Regulation no. 741/2009 on market analysis in the field of electronic communications:

- that there exist high and non-transitory barriers to entry;
- that the market is structured in such a manner that one cannot expect active competition in the foreseeable future;
- that the application of existing competition law would not on its own suffice to provide remedies where the market has failed.

The above conditions, in the opinion of the EU Commission and of ESA, exist in the market being examined here.

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<sup>14</sup> Definition of the geographical dimensional of markets is discussed in Section 2.2.2 of the ESA Guidelines and also in the COMMISSION NOTICE on the definition of the relevant market for the purposes of Community competition law. (OJ C372 9/12/1997) and ERG Common Position on Geographic Aspects of Market Analysis (definition and remedies) - October 2008 ERG (08) 20 final CP Geog Aspects 081016.

## 2.0 Description and definition of the relevant service markets

### 2.1 Definition in the ESA Recommendation

17. The service market being examined here is the equivalent to Market 7 in the ESA Recommendation from 5 November 2008 where the relevant market is defined in the following manner:

Termination of telephone calls in mobile phone networks<sup>15</sup>.

18. In the EU Commission Explanatory Notes to its Recommendation from 2007,<sup>16</sup> on which the ESA Recommendation is based, it is stated that the market is the same as was specified in the prior Recommendation, that is to say Market 16 in the Commission Recommendation from 2003 and in the ESA Recommendation from 2004.

19. Termination of calls is made in such a way that each mobile phone network, is connected to other telephone networks by what is called interconnection where the technical interface is specifically defined in a certain manner. Mobile phone companies make agreements with each other on such interconnection where the rates made by a company are specified for receiving telephone calls or data transfer into its system and for calling up users in its own network to terminate the call.

20. The EU Commission has pointed out that the service of terminating calls in mobile phone networks is an integral part of telephone calls which can originate both in a fixed line network or mobile phone network. The rate for termination is determined by the party that provides termination and as the service is structured today, subscribers of this party normally have minimal opportunity to influence this rate because it is the party who calls who pays for termination (the Calling Party Pays or CCP rule). Termination rate is part of the cost price for the service provider of the party making the call and is included in his retail price.

21. At retail level, the termination of a call to one party is not a substitute for termination of a call to another party and this limitation on demand substitutability also impacts wholesale level. In addition to this, mobile phone companies are obliged to terminate calls to the user to whom someone has requested a call be made to as all electronic communications companies that provide public telephone services have the right and are obliged to make an agreement on interconnection, see Article 24 of the Electronic Communications Act.

22. If a competitor decides to increase the price for call termination it is not easy for other service providers to react to this by offering call termination. In order to be able to do this they would need access to information on the SIM card of the user in question. Such information is only available to the company to which the user is a subscriber. On the other hand it is the conclusion of the European Commission that the market in question is larger than termination with each and every user as it is not possible for the service provider to discriminate between users without warning in termination rates in the same network. In the light of this fact the market in question is at least defined as the termination of telephone calls in each mobile phone network.

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<sup>15</sup> See ESA Recommendation from 5 November 2008 on the relevant product and service markets, item 7 in the Annex.

<sup>16</sup> See Explanatory Note Accompanying Document to the Commission Recommendation of 17 December 2007 on Relevant Product and Service Markets, pages 41-44.

23. With the above in mind it is assumed that a mobile phone company and its service of terminating a call in its own network are wholly connected. For this reason the Commission considers it important to examine whether there is a possibility of substitutability on the supply and demand sides which could exercise restraint on pricing of call termination in such a manner that mobile phone companies would not be able to decide termination rates at will.

24. The Commission considers, with the above in mind, that for the time being there is no possibility of supply-side substitutability but then this could become possible in the future with for example software enabled SIM cards.

25. Nor is allowance made for the possibility of demand-side substitutability at wholesale level. Demand at wholesale level is dependent on supply as the service provider of the user that makes a call has no option other than to purchase call termination from the service provider of the party to whom a call has been made.

26. At retail level there are however various possibilities for demand-side substitutability, for example other types of telephone call or other forms of communication such as short calls with a request to call back, call transfer and SMS. The Commission nevertheless considers that it is unlikely that other forms of communication will provide sufficient restraint on pricing of call termination in mobile networks.

27. Countervailing buying power of users on the retail market could possibly create resistance against increases in call termination rates of service providers. This would however require that the party being called was aware of the costs of terminating calls made to him and that this would have an impact on his choice of service provider. The Commission considers however that mobile phone users have negligible knowledge of call termination rates in their own networks, that is to say costs to parties making calls to them (CPP rule).

28. A closed user group is another example of how countervailing buying power at retail level could possibly create resistance to pricing of call termination. The Commission considers however that this kind of countervailing buying power is unlikely to provide any significant restraint. The reason for this is that the service provider could offer such a group special terms which are at a lower rate than the general price for call termination.

29. The Commission has tabled a number of possible ways of defining the relevant market. The first is to define the national market for call termination in mobile phones. This possibility is however rejected, having taken into account the fact that the necessary supply substitutability does not exist. Another possibility is a national market where mobile phone service is defined as a package, that is to say that termination is linked to access and call origination. For this definition to be valid, mobile phone users would need to be aware of costs to parties who are calling them and the Commission considers that this condition is not fulfilled.

30. Finally the Commission comes to the conclusion that call termination in individual mobile phone networks is a separate market. One result of this is that all mobile phone network operators have a monopoly on termination of telephone calls on their own networks. It is however noted that this does not necessarily mean that they all have market dominance. This depends on whether there is sufficient countervailing buying power to counterbalance the mobile phone network operators' capability of operating without concern for their competitors, customers and users.

## 2.2 Overview of circumstances on the market and parties to the market

### 2.2.1 Companies on the market

31. In Iceland today there are four companies that operate mobile phone networks and one company that operates a virtual network. They are Siminn hf., Fjaraskipti ehf. (Vodafone), Nova ehf. and IMC Ísland ehf./Alterna which operate mobile phone networks and 365 Miðlar ehf., which IP fjaraskipti (Tal) has now merged with, which operates a virtual network previously operated by Tal. 365 Miðlar also controls a significant licence on the 800 MHz frequency band which is intended for 4G mobile phone network but the company has not yet commenced operation of its own network system. These are the companies that operate on the market in question in Iceland, i.e. the mobile phone companies that technically and financially control access to termination of telephone calls to end users in their systems.

32. The companies' frequency licences are quite varied and Síminn, Vodafone and Nova have today all been allocated frequency licences on the frequency bands used for GSM, 3G (UMTS) and 4G (LTE) services. Table 2.1 shows an overview of the companies' frequency licences on the market and the year of their issue<sup>17</sup>.

**Table 2.1 Overview of LTE, UMTS and GSM frequency licences of mobile phone companies**

Company	800 4G	Issued	900 GSM/3G	Issued	1800 GSM/3G	Issued	2000 3G	Issued
Siminn			29.6 MHz	2012	60 MHz	2012/2013	35 MHz	2007
Vodafone	20 MHz	2013	30 MHz	2012	40.8 MHz	2012/2013	35 MHz	2007
Nova	10 MHz	2013	10 MHz	2007	40 MHz	2012/2013	35 MHz	2007
IMC Ísland					6.8 MHz	2012		
365 Miðlar	30 MHz	2013						

Source: Post and Telecom Administration.

33. Siminn has provided mobile phone service since 1986 when the NMT mobile phone service was launched Siminn was the only company that provided and had a licence for NMT service. The NMT network reached all inhabitants of the country and was accessible in the highlands and in coastal waters until this NMT service was de-commissioned in September 2010. Siminn began to provide GSM mobile phone services in 1994 and has developed its own distribution system for GSM service which reaches about 98% of the country's inhabitants. Siminn has frequency licences for GSM services both in the 900 and 1800 frequency bands, for UMTS (3G) at 900 and 2000 frequency bands and LTE (4G) at the 1800 frequency band. Siminn is the largest electronic communications company in Iceland and offers comprehensive electronic communications services. The company previously had a monopoly in electronic communications and was owned by the state until 2005. In 2007 the operation of the Siminn core network was placed in a separate company, Mila. Despite this separation, the companies are closely related and are both part of the same company group. Siminn and/or Mila have been designated as having significant market power on most of the markets that have been subject to analysis by the PTA.<sup>18</sup>

<sup>17</sup> See further on the PTA website: <http://www.pfs.is/fjaraskipti/skraningar-og-leyfi/fyrirtaeki-med-tidniheimildir/>

<sup>18</sup> See overview of market analyses on the PTA website:  
[http://www.pfs.is/default.aspx?cat\\_id=11&module\\_id=210&element\\_id=1691](http://www.pfs.is/default.aspx?cat_id=11&module_id=210&element_id=1691)

34. Vodafone was founded in 2003 with a merger of Halló! Frjáls fjarskipti hf., Íslandssími hf. and the old Tal hf. Prior to this, mobile phone services were provided by Íslandssími and the old Tal, where the old Tal provided services from 1998. Vodafone provides GSM mobile phone service which reaches 98% of the country's inhabitants, mostly through its own distribution system but apart from that by means of a roaming agreement with Siminn with respect to transmitters that were deployed in the countryside according to an agreement between Siminn and the Telecommunications Fund. Vodafone has from the outset had frequency licences on the 900 and 1800 frequency bands and now has a licence for GSM service on the 900 and 1800 frequency bands, UMTS (3G) on 900 and 2000 and LTE (4G) on 800 and 1800 frequency bands. Vodafone on the other hand does not operate its own 3G system though this would be authorised by the company's frequency licences. Cooperation between Vodafone and Nova has on the other hand provided Vodafone with access to the Nova 3G systems. This cooperation commenced when Nova started operations.

35. Nova was allocated a frequency licence for UMTS service at the end of March 2007 and began to provide mobile phone service shortly before the end of that year. Nova only offers third and fourth generation mobile phone services. Vodafone and Nova have made an agreement on reciprocal joint use of systems, which is structured in such a manner that Vodafone can offer its customers full UMTS services where Vodafone has its own telephone exchange and only uses the Nova transmitters. In return, Nova customers roam on the Vodafone system if they move outside the range of Nova distribution, but there they only receive 2G service. Nova has licences for UMTS (3G in the 900 and 2000 frequencies and for LTE (4G) in the 800 and 1800 frequency bands.

36. IMC Ísland ehf. (IMC/Alterna) has had a mobile phone licence (DCS 1800) since 27 June 2000. IMC operations have been small and for most of the time based on international roaming service for foreign users and the company has placed little emphasis on gaining domestic customers. At the end of 2009 the company announced major development and investments in its mobile phone network in Iceland and subsequently made a roaming agreement with Siminn on 26 November 2009 for access to that company's distribution system. According to the above specified roaming agreement, IMC can transfer its rights and obligations pursuant to the agreement to its sister company Alterna Tel ehf. (Alterna). IMC also has a roaming agreement with Vodafone. Alterna launched a major marketing effort on the Icelandic mobile phone market in April 2012 with an attendant advertising campaign and the opening of retail outlets after trials over a period of several months. Pursuant to the above specified roaming agreements the plans allowed for IMC/Alterna<sup>19</sup> gaining significant market share on the Icelandic mobile phone market in the coming years. Alterna gained some customers but has not achieved significant results in retail of mobile phone service. IMC has however made resale agreements and the companies Símafélagið, Hringdu and Hringiðan are offering mobile phone services on the basis of these agreements. The service is however provided on the Siminn network through an IMC agreement on domestic roaming. The combined share of IMC/Alterna and the resale parties is small. IMC Ísland today has a frequency licence for GSM service on the 1800 frequency band but not in South and South West Iceland.

37. The origin of IP-fjarskipti (Tal) as a resale party on the Icelandic mobile phone market can be traced back to 2006 when Ódýra símafélagið (SKO) commenced operations. Ódýra símafélagið merged later with IP-fjarskipti (Hive) in 2008 and since then has traded under the name Tal. On 3 April 2009 TAL applied for a mobile network code (MNC code) and in the

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<sup>19</sup> The PTA sees the group as a single economic unit in the understanding of competition law.

application it was stated that the company planned to begin operating its own telephone exchanges when circumstances permitted and to introduce a double SIM card which would give the possibility of changing between networks and service providers depending on which was most convenient in each instance. In this way the company planned to build up its network little by little. On 25 May 2009, the PTA allocated the company a NMC code for use in mobile phones services. Among the conditions was that a telephone exchange had to be taken into operation within 18 months. IP-fjarskipti (Tal) opened a telephone exchange by making an agreement with Siminn for hire purchase of a telephone exchange. Certain costs have been incurred with the development of that system but these costs are considerably less because of the development of its own mobile phone network. Taking all the above into account the PTA considers it clear that TAL had become an independent virtual network party when the company notified this on 24 August 2010, as the company had an NMC code, a virtual network connection with a network operator and controlled its own telephone exchange. The company IP fjarskipti and its trademark Tal have now been merged with 365 Miðlar ehf and this merger was endorsed with certain conditions by the Competition Authority with its Decision no. 39/2014 from 10 February 2015<sup>20</sup>. 365 Miðlar ehf. has already started to offer mobile phone service as a virtual network operator under the trade Marks 365 but still continues to provide service in the name of Tal. 365 Miðlar was allocated the largest frequency licence for LTE (4G) service in the 800 frequency band which was on offer in the PTA call for tenders for 4G licences in 2013. This license is subject to the condition of the development of a 4G network with national coverage. Prior to the end of 2016 the company's network shall have national coverage where 99.5% of households and working premises with full year operations shall have access to 10 MB/S data transfer service which shall subsequently be increased to 30 MB/S by the end of 2020.

38. Late in 2013, Nova and Vodafone sent a submission to the PTA regarding a pending cooperative project related to the development of a joint distribution system for mobile phone and mobile network service. There it was stated that, subject to endorsement from the Competition Authority, a company would be founded in equal ownership of those companies which would handle ownership, building and development of a distribution system for all of the two companies' general mobile phone services, that is to say GSM, UMTS and LTE services. Then it was specified that the distribution system would be based on Ran Sharing and on MOCN technology (Multi Operator Core Networks) where there would be full sharing of both equipment and frequency licences. Both companies would retain their all frequency licences while the joint operating company would also operate technical equipment for its owners' frequency licences. The joint operating company would not have access to core systems for wholesale, for example for a virtual network (MVM all) or for resale or for retail. The PTA processed the submission and authorised Nova and Vodafone to implement this sharing of frequency licences with its Decision 14/2014. With a Decision no 14/2015 from 22 May 2015 the Competition Authority endorsed the above cooperation with specific conditions.

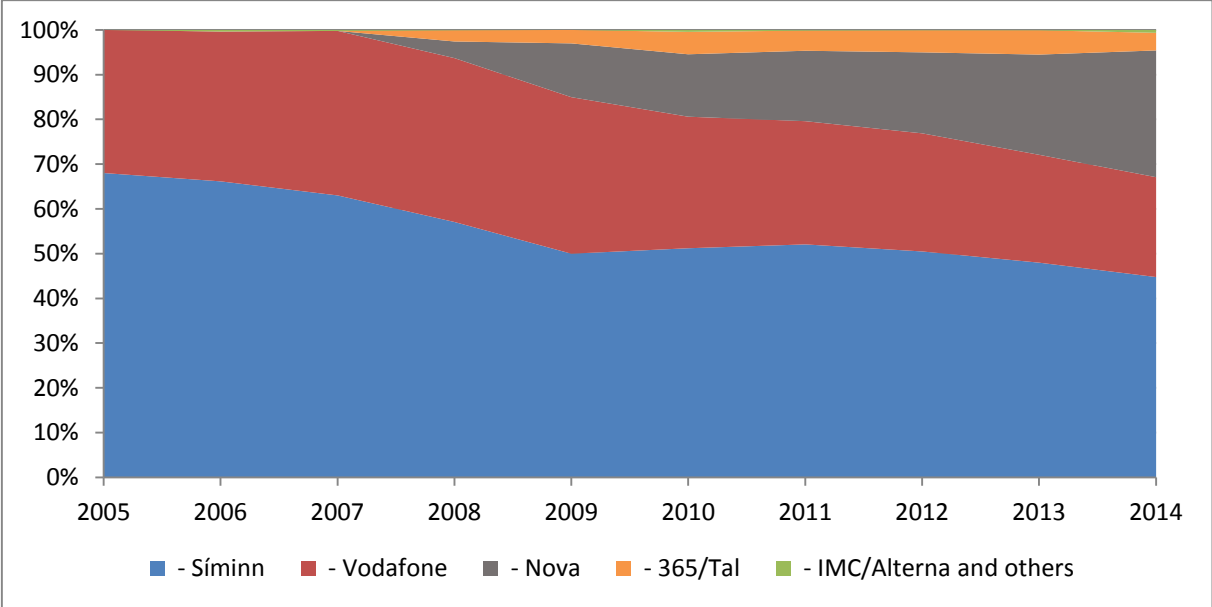
39. If one uses the ESA definition of the relevant market, then each mobile phone company has 100% market share of the call termination market in its own network. Their share of the total market for mobile phone service is however quite varied. Siminn has from the outset been

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<sup>20</sup> As 365 is a very strong company on the media market in Iceland, the Competition Authority imposed specific conditions for the merger. Among other things, the merged company is unauthorised to make it a condition for services provided on the media market that the company's electronic communications services are part of the package. In addition to this the company is unauthorised to bundle its media services and electronic communications services for a price or on such terms that would be equivalent to the above condition. Until 1 April 2016 the company is however authorised to bundle media services and certain electronic communications services, that is to say mobile phone service and TV distribution service.

the largest company on the mobile phone market as it is in fact in most electronic communications service markets. Siminn market share has however fallen somewhat on the mobile phone market since the first market analysis of the relevant market was made in 2006. The Siminn share by revenue on the retail market<sup>21</sup> has dropped from [60-65%]<sup>22</sup> in the year 2007 to [40-45%]<sup>23</sup> at the end of 2014. The Vodafone share has dropped somewhat during the same period, that is to say from [35-40%]<sup>24</sup> in 2007 down to [20-25%]<sup>25</sup> in 2014. 365 (Tal)<sup>26</sup> had [0-5%]<sup>27</sup> market share for 2014 but the company did not begin operation of its virtual network until the end of August 2010 and operated solely with resale up to that point in time.<sup>28</sup> Nova, which started operations at the end of 2007, has achieved [25-30%]<sup>29</sup> share during the same period measured by retail revenue on the mobile phone market. The IMC/Alterna is negligible. The resale parties IMC, Hringdu, Hringiðan and Símafélagið are also very small on the market and their joint share along with that of IMC/Alterna in retail revenue is just under [0-5%]<sup>30</sup> for 2014.

**Figure 2.1 Market share of retail revenue on the mobile phone market, 2006 - 2014**



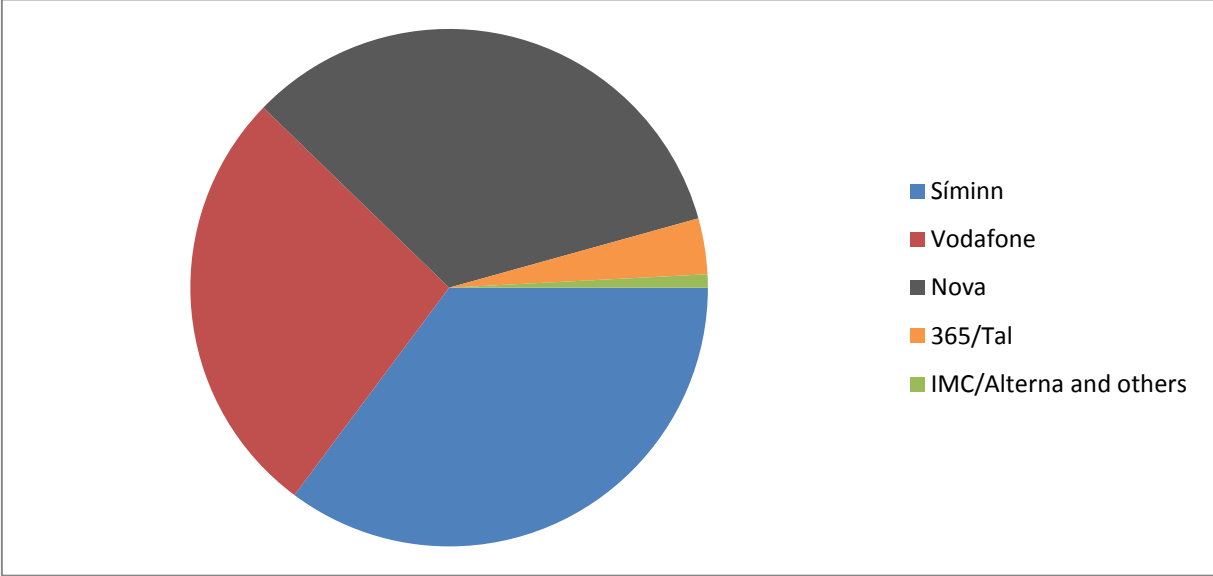
Source: Post and Telecom Administration.

40. There have been some changes in the number of customers since the beginning of 2006 where there has been a fall in number of customers with Siminn and Vodafone while there has been an increase with Nova and Tal, as they are two companies new in the market. IMC/Alterna commenced operations on the retail market in April 2010 and achieved a small share but has been on the decline since then. Figure 2.2 shows the division between mobile phone companies by number of customers. At the end of 2014, Siminn had 35.2% share, Vodafone had about

<sup>21</sup> These Figures are total revenue less interconnection rates (that is to say call termination revenue).  
<sup>22</sup> Deviation band for reasons of confidentiality  
<sup>23</sup> Deviation band for reasons of confidentiality  
<sup>24</sup> Deviation band for reasons of confidentiality  
<sup>25</sup> Deviation band for reasons of confidentiality  
<sup>26</sup> This also applies to SKO up to the year 2008 when Tal and SKO merged.  
<sup>27</sup> Deviation band for reasons of confidentiality  
<sup>28</sup> Service Provider.  
<sup>29</sup> Deviation band for reasons of confidentiality  
<sup>30</sup> Deviation band for reasons of confidentiality

27.1%, Nova had 33.4%, Tal had 3.5% and IMC/Alterna and the resale parties jointly had 0.8%.

**Figure 2.2 Market share - number of customers in GSM/3G/4G at the end of 2014**

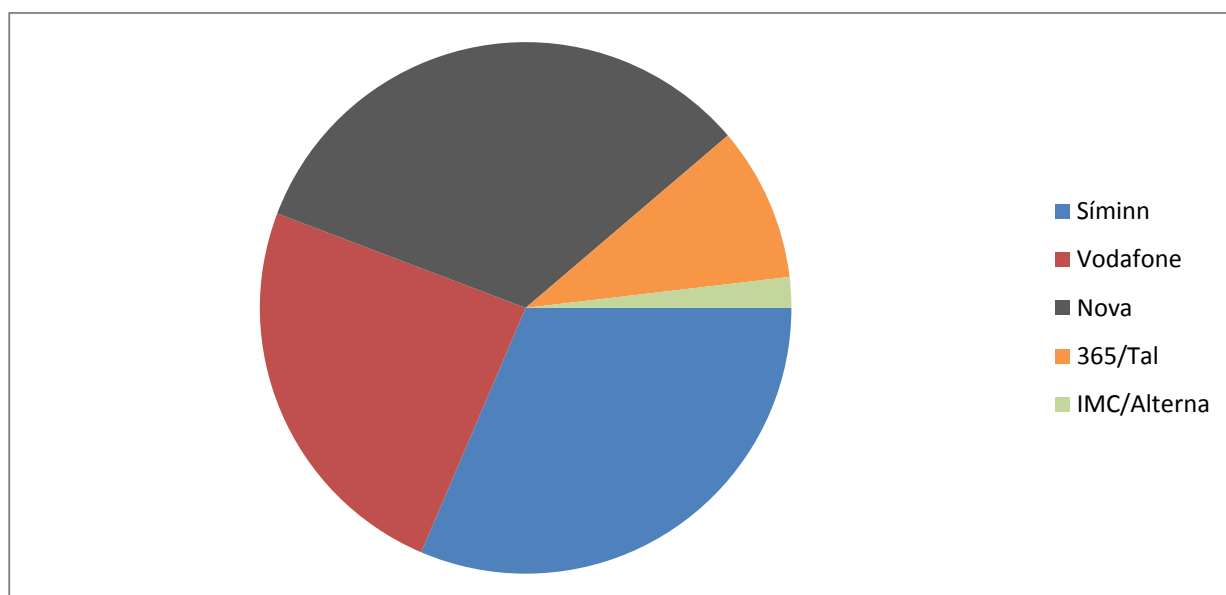


**Source:** Post and Telecom Administration.

41. If one however considers specifically the market for call termination then the total market revenue was just under ISK 520 million for 2014. <sup>31</sup> Nova had the largest part of this revenue, about [35-40%]<sup>32</sup> Siminn was next with about [30-35%]<sup>33</sup> and Vodafone had about [20-25%]<sup>34</sup> of the revenue. Tal, which commenced collection of call termination rates at the end of 2010, had [5-10%]<sup>35</sup>. IMC/Alterna had [0-5%]<sup>36</sup>. As can be seen in Figure 2.4 there is a significant difference in total number of minutes within each system. Call termination rates have dropped significantly in the past years, as the amount of call termination rates has been dropping where symmetry of these rates was achieved at the beginning of 2013.

<sup>31</sup> Source: Post and Telecom Administration.  
<sup>32</sup> Deviation band for reasons of confidentiality  
<sup>33</sup> Deviation band for reasons of confidentiality  
<sup>34</sup> Deviation band for reasons of confidentiality  
<sup>35</sup> Deviation band for reasons of confidentiality  
<sup>36</sup> Deviation band for reasons of confidentiality

**Figure 2.3 Market share - call termination revenue GSM/UMTS for 2014 (external sales)**



Source: Post and Telecom Administration.

42. The Siminn share of total termination minutes has dropped from 54% to [30-35%]<sup>37</sup> during the period 2006 until the end of 2014. The Vodafone market share increased steadily however until the year 2011 but then dropped again and is now [25-30%]<sup>38</sup>. The advent of Nova to the market in 2008 and the entry of Tal in the year 2010 are the reasons for a reduction with Siminn and Vodafone during the period 2007 to 2014 despite the fact that overall traffic increased in that period. Nova market share is a little more than the Siminn share and a little higher than that of Vodafone at [30-35%]<sup>39</sup>. The Tal share of total termination minutes for 2014 amounted to [5-10%]<sup>40</sup> and the company commenced collection of termination rates at the end of August 2010. IMC/Alterna has a [0-5%]<sup>41</sup> share. The number of minutes on the termination market has increased slowly in the last years which corresponds with the statistics for the total number of customers in mobile phone services (see Figure 2.6).

<sup>37</sup> Deviation band for reasons of confidentiality

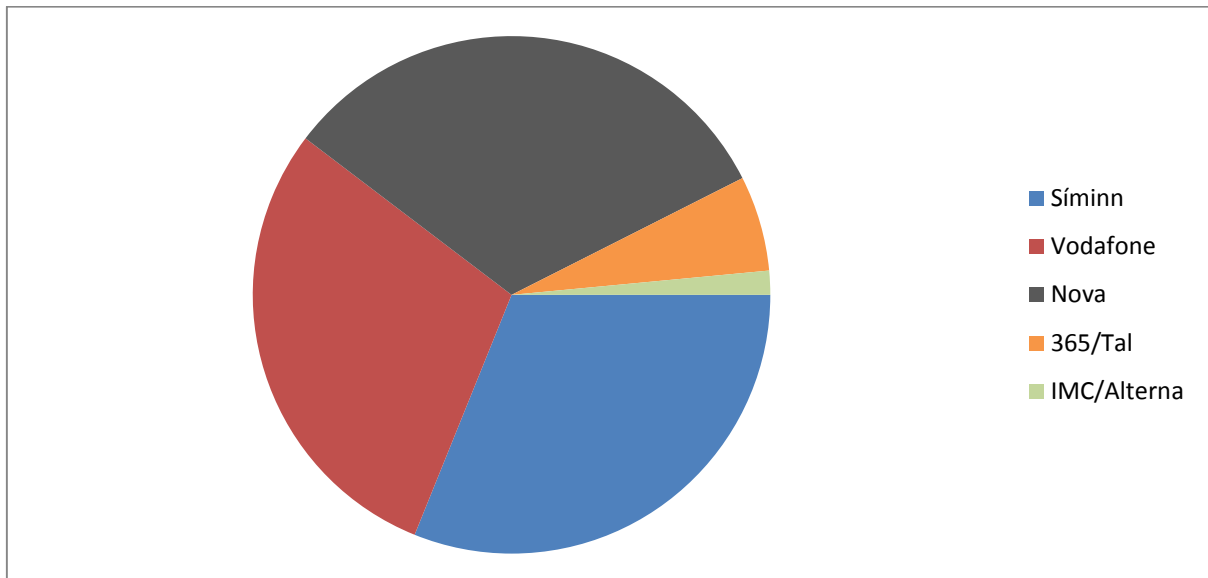
<sup>38</sup> Deviation band for reasons of confidentiality

<sup>39</sup> Deviation band for reasons of confidentiality

<sup>40</sup> Deviation band for reasons of confidentiality

<sup>41</sup> Deviation band for reasons of confidentiality

**Figure 2.4 Market share - termination in minutes in GSM/UMTS for 2014**

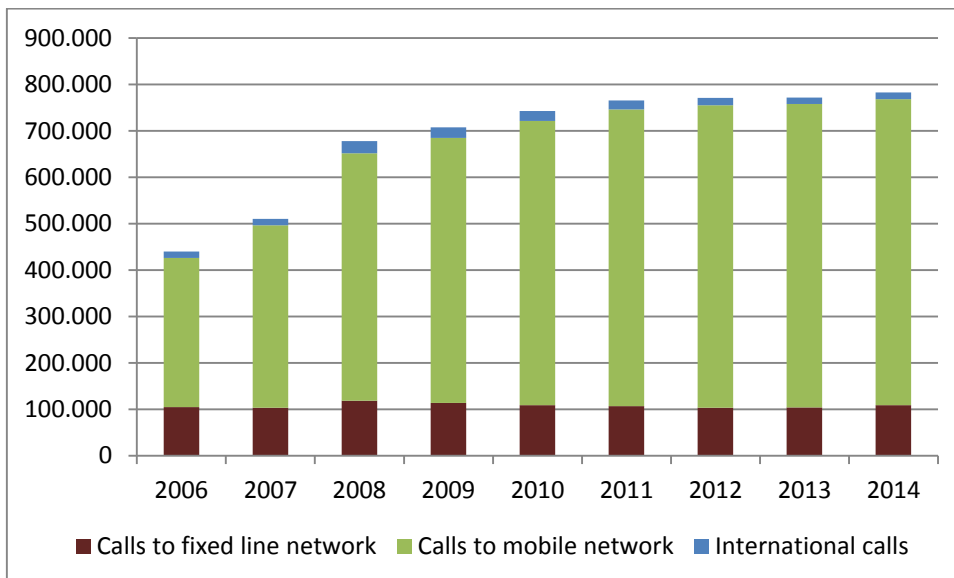


Source: Post and Telecom Administration.

### 2.2.2 Demand development

43. As is shown in Figure 2.6, the number of users in mobile phone services increased until mid-2010. The number of minutes in mobile phone networks has also increased correspondingly in recent years although all the annual increase has somewhat decelerated since 2009/2010 and in Figure 2.5 one can see the total number of minutes per annum called from mobile phones to fixed line networks and from national mobile phone networks to foreign countries from 2006 and up to mid-2014.

**Figure 2.5 Number of minutes from GSM/UMTS mobile phones, 2006 - 2014**



Source: Post and Telecom Administration.

44. Increased revenue from mobile phone services has been less in recent years than the increase in the number of users and in traffic. This can be seen in Table 2.2 here below. The explanation for this can be increased competition as there are many free minutes on offer, in

the first instance for on-net calls but now subscriptions are on offer with a large number of minutes included regardless of the system to which a call is made.

**Table 2.2 Total revenue by electronic communications operations, 2006 - 2014**

End of	2006	2007	2008	2009	2010	2011	2012	2013	2014
In millions ISK									
Total	33.082	39.665	42.616	43.140	43.366	45.295	48.287	50.459	52.268
- Fixed network	7.713	12.270	13.870	12.941	13.262	13.427	13.241	13.759	14.673
- Mobile network	15.473	16.250	16.795	16.728	14.865	15.616	16.305	16.169	15.788
- Data and Internet service	7.017	7.086	6.968	7.566	7.153	7.547	8.270	9.016	8.952
- Other revenue	2.879	4.059	4.984	5.905	8.086	8.705	10.471	11.515	12.855

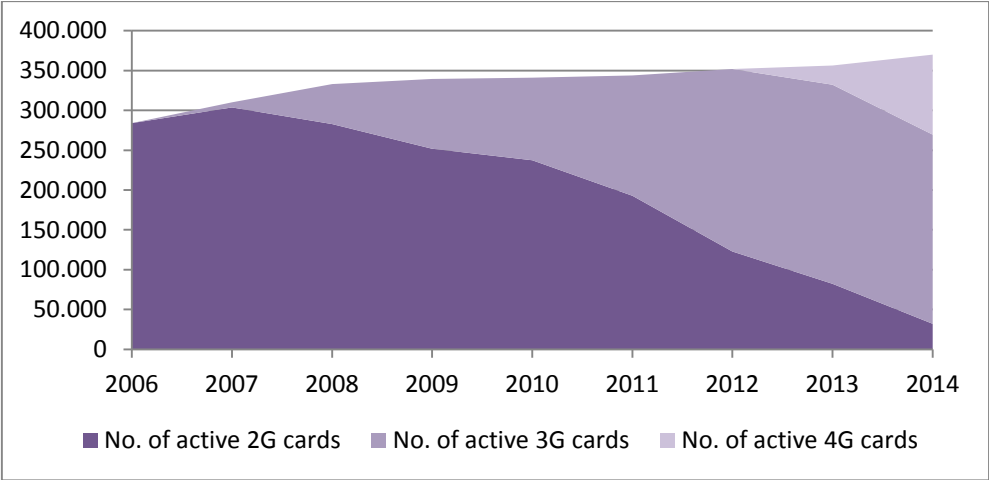
Source: Post and Telecom Administration.

45. Real growth on the market has not been significant in recent years. One must however bear in mind that there are many more registered users than the total number of inhabitants in the country and for this reason it is in no way certain that there are criteria for further growth in the near future.

**2.2.3 Development of supply**

46. As is stated in Section 2.2.1, IP fjarskipti (Tal) commenced operation with a virtual network in the autumn of 2010 and IMC/Alterna made an agreement with Siminn on roaming access in November 2009, and commenced sale of retail services in April 2010. Síminn, Vodafone and Nova have all offered UMTS (3G) services since the latter part of 2007. In April 2013, Nova commenced operations of a 4G network system and later in that same year Siminn began to offer 4G services as did Vodafone also. There is a rapid reduction in users who solely use GSM service while there is a steady increase in the number of 3G (UMTS) cards throughout 2013. In 2014 there is some reduction in the number of 3G cards while 4G cards show strong growth and the number of GSM cards (2G) drops rapidly. Figure 2.6 shows the number of 4G, 3G and GSM cards for the years 2006-2014. Major growth in 4G is attributable among other things to the issue of SIM cards for electronic identity during the latter part of 2014 which were all SIM cards for 4G service.

**Figure 2.6 Number of active telephone cards for GSM, 3G and 4G mobile phone networks, 2006 - 2014**



Source: Post and Telecom Administration.

47. A completely new service with new subscribers did not come with the advent of third and fourth generation mobile phones as was the case when GSM entered the market and replaced NMT. There has not been a commercial division of the market but rather, telephone calls are sold on the same subscription terms and in addition to this the conditions, presentation, marketing and pricing of base services are the same when provided through third or fourth generation-networks as for prior generations. What is however happening is technological replacement of network systems of which customers are not necessarily aware. From the point of view of the customer, new functionality is offered, such as TV in mobile phones and the ability to browse websites better than one could before, but the pricing of data transfer through mobile phones is unchanged even where customers switch between systems. The customer is however quicker to use more data than before through more powerful systems. Customers with 3G or 4G cards use GSM service in those areas not reached by 4G or 3G networks. In the case of voice transmission, the user finds no difference between using UMTS or GSM service, and the 4G network does not carry voice services.

48. Pricing of 4G, 3G and GSM service is the same both in the retail and wholesale markets. The price for call termination in individual mobile phone networks is thus the same in both instances whether the telephone call goes via a 3G or 2G network.

## **2.3 The PTA definition of the relevant service markets**

### **2.3.1 Introduction**

49. In its analysis of Market 7, which was published in its final version on 16 July 2010, the PTA defined a market for access and call termination in individual mobile phone networks. This definition is based on the ESA Recommendation in force on the relevant market from 2008, taking into consideration the Explanatory Note to the EU Commission Recommendation on the same subject from 2007. As is stated in Section 2.1 here above the definition of this market is not materially changed in the new ESA Recommendation from 2008 from the old Recommendation from 2004. The ESA Recommendation thus does not require amendments to the prior PTA definition. In the following Sections there is discussion on how the PTA considers it appropriate to define the market given circumstances in this country. The discussion is largely similar to corresponding discussion in prior analyses but takes into account the offer of new services and the entry of new parties to the market.

50. There are two factors that have greatest impact on the definition of the relevant market. First there is the fact that it is only the mobile phone network operator himself who can provide call termination in his own network (monopoly of call termination in own network) and demand at wholesale level is completely tied to supply as the mobile phone company of the user making a call has no option but to purchase call termination from the mobile phone company of the user to whom the call is made. Second, there is the fact that the rate for call termination is decided by the mobile phone company that provides it and as this is structured today, users with this company have generally little interest in influencing the price as they do not pay for termination of calls made to themselves but rather it is the person who makes the call who pays for the termination (CPP rule).

51. In accordance with the conclusions of ESA, the PTA view is that the above specified factors mean that it is important to examine whether other forms of communication on supply and demand sides are such that they can exercise restraint on pricing of call termination. With this view the PTA will use the SSNIP test. When assessing substitutability the first step is to examine the retail market before the wholesale market is defined.

### **2.3.2 Assessment of substitutability in demand at retail level**

52. At retail level, the behaviour of both the party making a call and the party receiving a call is assessed, in the light of small but significant and non-transitory increases in call termination rates.

#### **2.3.2.1 The reactions of the party making a call to small but significant and non-transitory price increase**

53. If the party making a call reacts to a significant and non-transitory price increase by changing his manner of communication, there could be reason to include this substitutability in market analysis. Here it is assumed that a price increase will result in a change in usage patterns of the party making a call which will lead to the increase being unprofitable.

54. In order to react to a small but significant and non-transitory price increase with a change in manner of communication, the PTA considers that the party making the call needs to:

- know that he is making a mobile phone call to a specific network;
- know what it costs to call in the mobile phone network in question and
- be aware of an increase in order to have the option of choosing another manner of communication, even where this might be different and technologically unlike normal mobile phone telephone calls.

55. In addition to this the increase in termination rate needs to be automatically obvious in the retail price for varying networks. This is precisely not always the case as prices for telephone calls are not broken down in such a manner that one can determine the part of termination in the price. One must therefore consider it unlikely that an increase in termination rate in a specific network would lead to fewer users in other networks making calls into that network. In those cases where there is the same retail price for telephone calls in more than one mobile phone network, the increase in termination rate will in all probability not be discernible to the end user and will appear as an increase in retail price for telephone calls in all external networks. In such an instance, it is unlikely that an increase in termination rate will influence the calling pattern of users.

56. Despite the above, the PTA considers it proper to determine which other forms of communication could conceivably be a substitute for telephone calls in mobile phone networks. It is assumed that a sufficient number of callers know the network to which their call is directed and the cost, and that these callers are also aware of termination rates on the telephone call. In this connection, the PTA considers it proper to examine the following forms of communication:

- call to a fixed line telephone instead of to a mobile phone;
- a call between two mobile phones in the same network instead of a call between two mobile phones each in their own network, or a call from a fixed line telephone to a mobile phone;
- SMS instead of a mobile phone call;
- short call with a request to call back;
- Telephone call with IP technology (VoIP) instead of call to mobile phone

#### **Call to a fixed line telephone instead of to a mobile phone**

57. It is conceivable that users will react to high termination rates for mobile phone calls by calling to a fixed line telephone where the termination rate and retail price is lower. The PTA

can imagine certain circumstances where an attempt is made to call first to a fixed line telephone before calling a mobile phone. The PTA however, believes that such substitutability will not be very common as the purpose of calling a mobile phone is to reach the party in question wherever he may be located, regardless of whether he is close to a fixed line telephone. This option is therefore in many instances, inadequate. For this reason the PTA considers that telephone calls to fixed line telephones can only to a very limited degree be a substitute for calls to mobile phones. The substitutability of fixed line telephone calls is thus considered too small to be included in the definition of the relevant market.

#### **A call between two mobile phones in the same network instead of call between two mobile phones each in its own network or calls from a fixed line telephone to a mobile phone**

58. A call between two mobile phones in the same network is in some instances less expensive than a call between two mobile phones each in its own network or a call from a fixed line telephone to a mobile phone. It is conceivable that an increase in termination rate which leads to a higher retail price could lead to the calling party rather using a mobile phone which is connected to the same network as the party to whom the call is directed. This is dependent on the retail tariff of the mobile phone company in question. If a call in the same mobile phone network is to be a substitute for a call between two distinct mobile phone networks then this would require that the calling party or the party being called have more than one mobile phone subscription to enable the party to choose the subscription which will lead to a lower termination rate. This option is complex and it must be considered unlikely that many people will have more than one mobile phone subscription. This means that one must consider that substitutability between telephone calls in the same mobile phone network and telephone calls between two distinct mobile phone networks is small and has thus no significant impact on pricing of call termination in mobile phone networks.

#### **SMS instead of a mobile phone call**

In some instances SMS may be a substitute for a telephone call. This particularly applies to short telephone calls that do not necessarily need to take place at specific point in time. Against this there is the possibility that a message could be delayed, that the number of characters in a message is limited and that there are indications that the market considers SMS to be rather an addition than a substitute for telephone calls. Similarly, there could be a need for many SMS messages to complete the same communication that could be completed with a short telephone call. In the opinion of the PTA an SMS does not substitute a telephone call to a sufficient degree to make a significant and non-transitory increase in termination rate for telephone calls unprofitable. Possible substitutability is not considered sufficient reason to include SMS in the definition of the relevant market.

#### **Short call with a request to call back**

59. Such calls are not new, and there is no available proof that they have an impact on the price for call termination. One must consider that such telephone calls are most common among the younger generation for the purpose of transferring costs to other parties, particularly parents, and for this reason, such calls do not impact the final cost of a call.

#### **Telephone call with IP technology (VoIP) instead of mobile phone call**

60. The use of VoIP services on the Internet has recently increased significantly, particularly in connection with international calls. Calls using IP technology are made by calling through the Internet, variously from one computer to another, or from a computer to a fixed line or mobile phone. There are also wireless telephones on the market, which give the user the opportunity to make a wireless connection with the Internet for the purpose of making a call.

61. When one calls from one computer to another then both the party making the call and the recipient need to be connected to the Internet and to have computers with appropriate software, headphones and a microphone is, in order to be able to conduct a conversation. The advantage when calling from computer to computer is that one only pays for the network connection and download, where appropriate, and not for the call itself. When calling through the Internet to a fixed line phone or mobile phone then in most instances one pays for the telephone call according to a special tariff that is based on a fixed price per minute. It is reasonable to consider whether VoIP telephone calls, from one computer to the other, could be a substitute for telephone calls to mobile phones should prices for such calls increase (because of higher termination rates). The main argument against this would be mobility and this would apply also to calls to fixed line telephones instead of to mobile phones. In addition to this, both parties need to have the same programme installed in their computers and the receiving party needs to have the programme active when the calling party wishes to make a connection. The advantage with the mobile phone call is that it is possible to reach the party in question, wherever he is located - an advantage that all things being equal cannot be achieved in a computer.

62. Various apps for mobile phones that can transfer calls over 3G and 4G data transfer networks have achieved some distribution. They are however subject to the same drawbacks as VoIP from computer to computer, that both parties need to have installed the same app in their mobile phones and to have them active at the same time for a call to be possible. Such service provided by apps cannot ensure comparable quality, neither in the quality of sound of the conversation or in the uptime of the service in the same manner as a mobile phone. Though it is likely that data transfer costs with such telephone calls are possibly somewhat lower than the minute price for the same telephone call, one cannot see that such apps have sufficient substitutability for telephone calls that they provide competitive restraint to any real degree.

63. Technically, the possibility exists to transfer calls as data transfer with VoIP protocol with an IP telephone exchange. For this to be possible the end users' telephones need to use the appropriate software (app), which connects to the relevant IP telephone exchange. One can consider such solutions to be technically possible but it is not known whether they are yet used for such purposes in this country, except as a special addition to corporate IP in-house telephone systems, for connecting employees' mobile phones, which would be in-house handsets. It is unlikely that such specialised solutions would have sufficient substitutability for general telephone calls on a mobile phone network for them to provide competitive restraint to any real degree.

64. In today's circumstances the PTA considers that VoIP service, whether through a computer, an app or VoIP telephone exchange, would not provide competitive pressure on termination rates for telephone calls in mobile phones. The main reasons for this are that VoIP through computers has not yet achieved significant distribution despite the fact that this possibility has been available for many years. The most attractive option is to use VoIP when calling from one mobile phone to another using a specialised app, because of the low cost, but this however, requires that the party receiving the call has the same kind of app and is online when the call is made, but in such a case the quality of the call is not comparable with that made through a mobile phone over a mobile phone network. The use of VoIP telephone exchange connections also requires a special app located with the party making the call and is almost exclusively used in connection with interconnection of mobile phones with an in-house telephone system based on IP protocol. Many barriers thus remain to there being a realistic substitute available.

65. With the above in mind the PTA concludes that telephone calls using IP technology over the Internet, between apps or with a connection with a VoIP telephone exchange, do not provide termination rates with competitive restraint to any real degree and are not a substitute for telephone calls using mobile phones and that this is not foreseeable in the lifetime of this analysis.

### **Summary and Conclusions**

66. A number of forms of communication could be proposed as possible substitutes for telephone calls between mobile phone networks. Calls within the same mobile phone network could possibly be as substitute service, that is to say if the user is fully aware of which mobile phone network he is calling. Number transfer between mobile phone networks first became active in October 2004 and up to that point in time users had generally been able to discern which network they were calling. It has however been more difficult to determine this since number transfer became active. The PTA believes that in most instances, it is relatively insignificant whether the user knows which mobile phone network he is calling as users' price awareness is not sufficient to create a situation where a small but significant and non-transitory price increase would become unprofitable. This means that one must conclude that telephone calls within the same mobile phone network are not a realistic substitute service for telephone calls to other networks.

67. It is therefore the PTA conclusion that no other form of communication can constitute sufficient substitutability for telephone calls to mobile phones such that the total impact of a small but significant and non-transitory price increase in call termination would become unprofitable. This conclusion is based among other things on the fact that demand for telephone calls appears to be inelastic in this country as user price awareness has been small and the cost of call termination between mobile phone networks has lacked transparency, particularly after number transfer became active. The market being examined here will therefore not include other forms of communication, which is in accordance with ESA conclusions.

#### **2.3.2.2 The reactions of the recipient of a call to a small but significant and non-transitory price increase**

68. If the party receiving a call reacts to a significant and non-transitory price increase by completing his call with another form of communication, there could be reason to include this substitutability in the market analysis. The assumption here is that price increase causes a change in communication pattern of the party receiving a call and leads to the price increase being unprofitable

69. As has been stated, the impact of the CPP rule is that an increase in call termination rate has in general no impact on the party receiving a call, as he does not pay for the call. In the light of this fact one can assume that it would be highly unlikely that the party receiving a call would switch mobile phone companies because of that company's increase in call termination rate. This is however conceivable were the increase to result in the party in question, receiving fewer phone calls than before. In the opinion of the PTA, the following criteria need to be fulfilled for the price increase to have such an impact:

- A sufficient number of call recipients would need to switch mobile phone company if it became more expensive to call them because of an increase in call termination rate;
- the caller is aware of the cost of call termination;
- the caller knows the mobile phone network he is calling and the price of call termination

in that network, and

- the recipient of the call knows that the caller is aware of the call termination rate, knows which mobile phone network he is calling and the cost of the call.

70. As stated previously, the PTA considers that mobile phone users are generally not aware of the network they are calling or of the price they are paying for call termination. One may furthermore conclude that few recipients of calls are concerned about termination rates in their own network as they do not bear the cost of this rate. The result of this is that the party that receives a call will in general not react to a small but significant and non-transitory increase in call termination rate in their own mobile phone network by changing their form of communication or by switching mobile phone company. This would presumably apply even where other forms of communication were available.

71. In this connection one can mention that Nova achieved significant market share in a short space of time, that is to say about 24% share from the beginning of 2008 until 2011 and nearly 33% market share by number of customers by the middle of 2014. The company's customers seem to be unconcerned about termination rates in the Nova network being significantly higher than those of Siminn and Vodafone over a period of several years, from the time that the company commenced operations, and that telephone calls to Nova customers were significantly more expensive with the other mobile companies than calls to other networks. Now that symmetry has been achieved in termination rates, this no longer applies.

72. With the above in mind the PTA considers that there is insufficient substitutability on the demand-side from those parties that received telephone calls and that there is not a realistic substitute on demand-side at retail level which could impact on termination rates in mobile phone networks or on the definition of the relevant market.

### **2.3.3 Assessment of substitutability in demand at wholesale level**

73. There is a direct connection between demand at wholesale and retail levels. If a user requests to make a call to a party in a specific mobile phone network, the mobile phone company has no option but to purchase termination from the mobile phone company of the user to whom a call has been requested. In the light of this fact, it is the conclusion of the PTS that substitute service does not exist at wholesale level.

74. It is technically possible to terminate a call in another mobile phone network in such a way that one can avoid high termination rates. This can for example be done by one mobile phone company purchasing termination from the other through corporate subscription. Here it is assumed that the price per minute is lower for a company than for an individual. The PTA considers it however likely that in such an instance, the mobile phone company providing termination of a call would endeavour to prevent this. It is therefore the conclusion of the PTA that in practice, such efforts to terminate a call in another manner would not be sufficiently effective in contributing to a small, yet significant and non-transitory price increase being unprofitable.

75. The methodology is also known where an electronic communications company directs mobile phone traffic through another service provider (re-routing or re-filing) in order to avoid paying higher termination rates. Instances have arisen in this country where mobile phone traffic from one company to another has been routed through a foreign electronic communications company in order to pay lower termination rates. Such behaviour on the market has only endured for a short period of time and has had limited impact, as one may

consider it likely that such a practice is only economically beneficial while there is some kind of distortion in pricing of call termination. With the above in mind the PTA considers there to be no reason to take this particularly into account when defining the relevant market, as termination rates here in this country have been symmetrical between companies since 2013.

#### **2.3.4 Conclusion on substitutability in demand**

76. With the above in mind, it is the conclusion of the PTA that there are no possibilities of substitutability on the demand-side that would provide a reason for broadening the definition of the relevant market. This conclusion is in accordance with ESA conclusions.

#### **2.3.5 Assessment of substitutability in supply at retail level**

77. Substitutability on the supply side at retail level requires that electronic communications companies which do not offer termination in specific mobile phone networks can begin to provide this service if the mobile phone company being called has elevated termination rates. For this to be realistic, then these companies would at least need to have access to the information on the SIM card of the party being called.

78. In today's situation it is only the mobile phone company which issues the SIM card which has access to this information. Other mobile phone companies would therefore need the permission of the mobile phone company in question to gain access to this information. The PTA considers it unrealistic that such information would be available as this could reduce revenue which the mobile phone company earns from call termination. The PTA considers that there are therefore no realistic possibilities for substitutability on the supply side at retail level.

#### **2.3.6 Assessment of substitutability in supply at wholesale level**

79. Supply-side substitutability at wholesale level requires that other companies can start to offer termination at wholesale level for calls to specific end users if an electronic communications company should increase termination rates.

80. As is stated in Section 2.3.5, only the mobile phone companies of the parties to whom a call is made have access to information on their SIM cards and this information is necessary to be able to offer the termination in question. This also applies to service at wholesale level. This means that substitutability in supply at the wholesale level is not available.

#### **2.3.7 Conclusion on substitutability in supply**

81. It is the PTA conclusion that supply-side substitutability is not available for call termination on the wholesale or retail market that would give reason to broaden the definition of the relevant market. This is in accordance with ESA conclusions.

#### **2.3.8 Further on practical market analysis**

82. With reference to the above, there are no other available forms of communication in supply or demand that should be included in the relevant market analysis. According to this, it seems appropriate to define the market as supply of call termination at wholesale level to a specific party or telephone number. The PTA however, believes that such a definition would be too narrow, as the opportunities for mobile phone companies to discriminate in termination rates to their users in their networks are very limited. The price for termination is the same for all and should an electronic communications company wish to give preferential treatment to price sensitive customers, then this is normally done in another manner than by reducing termination rate, for example with retail discount terms for specific numbers. For this reason it

is the assessment of the PTA that the relevant market should cover all call termination in each individual mobile phone network through interconnection, regardless of whether the call originates in another mobile phone network or in a fixed line network.

### **2.3.9 SMS (Short message service)**

83. It is proper to examine whether termination of SMS should be part of the same market as call termination. The Commission and ESA consider that voice call termination on the one hand and SMS on the other, belong to separate markets.<sup>42</sup>

84. If there were substitutability between termination of SMS and a voice call, it would be possible to view termination of SMS as being part of the market for voice call termination. As stated in Section 2.3.2, it was the PTA conclusion that despite the fact that there was substitutability between SMS and telephone calls in specific instances, SMS could not be a substitute for telephone calls to the extent that it could make a small but significant and non-transitory increase in termination rates unprofitable. It is furthermore unlikely that termination of SMS would provide any restraint on price for terminating telephone calls as it is the same party who provides termination for both and for this reason, little likelihood that he would underbid himself.

85. The question whether SMS is part of the relevant market depends on whether these messages are substitute service for telephone calls and can exercise restraint on termination rates. If a mobile phone company decides to increase its termination rate, then this could lead to a decrease in the number of termination minutes, should users react to the increase by sending SMS instead of making a call. The following criteria need to be in place for one to be able to expect such a reaction:

- The increase in termination rate must manifest itself in a higher price to users.
- If one assumes that the price to users increases, they must know a) which mobile phone network they are calling and b) the cost of calling the mobile network in question (which in turn is dependent on termination rate).
- The telephone call must be such that it is possible to use SMS instead.

86. It is not axiomatic that the price to the end user increases even though the termination rate increases. This means that it is not possible to assume that the first criterion always applies.

87. It may be possible to send an SMS instead of calling, if a higher price for call termination leads to a higher retail price, but one must consider that this will have the same limited restraint on termination rates in practice, as there is insufficient price awareness among users and insufficient transparency in prices.

88. With respect to the third criterion, then the telephone call must first and foremost be short (and with a party that the person making the call knows) for it to be possible to use SMS instead of a telephone call. In the light of differing possibilities for use one must consider that SMS can only to a very limited degree be a substitute for a telephone call.

89. The PTA considers this to be of no importance with respect to call termination and SMS even though access and their origin are sold in the same package. It is mainly because it is the party that makes the call that has to pay for termination and on the other hand, it is the party

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<sup>42</sup> See the Explanatory Memorandum to the EU Recommendation from 2007, pages 42 and 44.

receiving the telephone call, who chooses the network where the termination takes place. The decision on whether to communicate with a telephone call or by SMS is made by differing users at differing times but termination is on the other hand, dependent on separate purchases made by other users of mobile phone services and is not part of a specific package. The party who calls does not decide with his mobile phone subscription to purchase only termination with one party in the same manner that he chooses with his subscription to purchase access and origination with one party and a specific price both for telephone calls and SMS.

90. There is a considerable difference between termination of a telephone call and SMS, which indicates that they do not belong to the same market. SMS service was not possible in an NMT mobile phone network and was not possible in a fixed line network until 2005 when Siminn began to offer this service for fixed line telephones, but prior to that it had been possible to send SMS messages from a computer. SMS service is an additional service which came into being much later than the inception of the telephone voice service with mobile phones. Pricing of SMS and telephone calls from mobile phones is furthermore quite different where a specific price is paid for each SMS while for voice telephony services payment is made for the number of minutes. In addition to this, a special agreement is made for termination of SMS in interconnection agreements.

91. There is also a technical difference between telephone calls and SMS as SMS is not based on the same real-time as telephone calls and for this reason it is possible to use other methods for termination of SMS. Furthermore, SMS messages and telephone calls are by nature different forms of communication and fulfil differing needs.

92. It is the opinion of the PTA that circumstances on the market have not changed with respect to SMS since previous analyses of the market in question were made and the Administration therefore considers that as before, there is insufficient substitutability between termination of telephone calls and SMS in mobile phone networks to exercise restraint on termination rates for mobile phone calls. It is therefore, the PTA conclusion that termination of SMS is not part of the relevant market. The PTA will however closely monitor the development of termination of SMS and if necessary, the Administration will assess whether a separate market should be defined for termination of SMS.

### **2.3.10 Third and fourth generation mobile phone service and virtual network service**

93. Since the prior analysis was made of the termination market in 2006, 3G (UMTS) service has entered the market in this country and now more recently 4G (LTE) service. As stated in Section 2.2.3 this service is closely connected with GSM service and in the case of call termination one can make little or no distinction between GSM, 3G and 4G. GSM and 3G telephone calls are sold on the same subscription terms and conditions. Customers with 3G and 4G cards use GSM service in those areas not reached by 4G and 3G networks. In the case of voice transmission, the user finds no difference between using 3G or GSM service, and the 4G network only carries data. There is no difference in pricing of 3G and GSM service, including termination service, neither in retail or wholesale.

94. The PTA considers that termination of calls with 3G technology belongs to the same market as termination of GSM calls. In those instances where companies offer both 3G and GSM service, the service is so intertwined that one must consider the termination of telephone calls in the network of the company in question to be one and the same market, regardless of whether the call is made with 3G or GSM technology.

95. In addition to this the PTA considers that call termination in virtual networks<sup>43</sup> belongs to the same market as termination of GSM and 3G telephone calls. Virtual networks operate like real mobile phone networks with respect to purchase and sale of termination. The attributes of the market, such as 100% market share in one's own network, also applies to the virtual network parties<sup>44</sup> in the same way as it applies to traditional mobile phone network operators.<sup>45</sup> Neither 3G systems nor virtual networks are dealt with separately in the EU Commission Recommendation on termination rates<sup>46</sup> from 2009. The PTA considers that by including 3G and virtual networks in the market in question, it is properly interpreting the above EU Recommendation on the market in question.<sup>47</sup>

96. Virtual network parties operate their own core/switching network and support systems and have their own mobile network codes – MNC. They do not have their own frequency licence or radio system, but make an agreement with mobile phone network operators on access to their radio systems. Virtual network parties make interconnection agreements with other mobile phone companies in the same manner that traditional mobile phone network operators do, and can thus provide termination of telephone calls to their customers.

97. It is the assessment of the PTA that the relevant service market is according to the ESA Recommendation and conclusions. Sufficient substitutability for termination of telephone calls in mobile phone networks can neither be found in demand nor in supply on the retail or wholesale markets for it to influence the conclusion. Existing technology does not offer mobile phone call termination with parties other than the mobile phone company of the receiving user. It is unlikely that this will change in the foreseeable future. Nor does there appear to be at retail level any other realistic options for users that could exert a controlling influence on pricing of termination of telephone calls in mobile phone networks.

98. The relevant service market thus covers call termination in individual mobile phone networks. The mobile phone networks included here are GSM 900 and 1800, UMTS (3G) 900 and 2000, LTE (4G) 800 and 1800 virtual networks. As has been stated there are four companies in this country that offer call termination in their own mobile phone networks and they are Siminn, Vodafone, Nova and IMC/Alterna. In addition, 365 Miðlar (Tal) offer termination of calls in their own virtual network and this is part of the service market in question as shown above. Resale parties do not handle termination for their customers, but it is rather the network operator behind them who does this which means that such parties are not included in the service market in question.

99. With the above discussion in mind the PTA defines the following service markets:

- Call termination in the Siminn mobile phone networks.
- Call termination in the Vodafone mobile phone networks.
- Call termination in the Nova mobile phone networks.
- Call termination in the IMC Ísland/Alterna mobile phone networks.
- Call termination in the 365 (Tal) virtual mobile phone networks.

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<sup>43</sup> Mobile Virtual Network (MVN),

<sup>44</sup> Mobile Virtual Network Operators (MVNOs),

<sup>45</sup> Mobile Network Operators (MNOs).

<sup>46</sup> Commission Recommendation of 7.5.2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU Analogous Recommendation from ESA 2011.

<sup>47</sup> This is the same conclusion as that reached by the Norwegians in the NPT analysis of the market in question from 27 September 2010. See point 38 on page 11 of Annex 1 to that analysis.

### 3.0 Definition of geographical market

100. A geographical market covers a geographical area where stakeholder companies participate in supply and demand of the relevant goods or services where conditions for competition are the same or sufficiently uniform and, where it is possible to demarcate the geographical area from neighbouring area where conditions for competition are significantly different. In assessing demand-side substitutability, it is appropriate to consider customers' tastes and geographical purchasing patterns. It is customary to demarcate geographical electronic communications markets with reference to the distribution of the relevant electronic communications networks and to the jurisdiction of the legal framework that applies to the relevant market.<sup>48</sup>

101. Mobile phone networks that are used for call termination are geographically limited to Iceland. Iceland is the jurisdiction governed by the Electronic Communications Act no. 81/2003. General operating licences for electronic communications companies cover the whole country, as is generally the case with frequency band licences. Today Siminn mobile phone networks cover the whole country, about 98% of inhabitants. Vodafone furthermore provides mobile phone service to about 98% of the country's inhabitants, mostly through its own networks but apart from that, through a roaming agreement with Siminn for the countryside, see the above specified agreement between Siminn and the Telecommunications Fund. Vodafone also has an agreement with Nova for the use of the latter party's 3G system and in return Nova has access to the Vodafone 2G system in areas not reached by the Nova system. The Nova 3G network covers most of the urban kernels around the country while its 4G network covers the capital city area and the urban kernels at Reykjanes and in South and West Iceland. In total the Nova mobile phone networks reach about 87% of the country's inhabitants and in addition to this Nova has roaming agreements with Siminn and Vodafone in connection with "ring-road roaming" pursuant to the Siminn and Vodafone agreement with the Telecommunications Fund for the development of mobile phone systems outside profitable areas on the main road around the country and on a number of mountain roads. Vodafone and Nova also plan cooperation in operating the technical parts of their mobile phone networks and will in this connection, achieve coverage over almost all the country for GSM, 3G and 4G. The IMC/Alterna mobile phone network is smaller and their frequency licence does not cover South and South West Iceland. IMC/Alterna has in addition to this made an international roaming agreement with the Vodafone and a national roaming agreement with Siminn<sup>49</sup> which provides IMC/Alterna users with the possibility of roaming in the Siminn and Vodafone mobile phone networks.

102. One must consider that conditions for competition in call termination in mobile phone networks are basically the same throughout the whole country. Termination prices do not vary according where the user is located in the country. The service is comparable at any location in the country as the relevant market only covers voice transmission and not data transfer, which can vary depending on region. The PTA is not aware of any difference in the competition

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<sup>48</sup> See Section 2.2.2 in the Guidelines.

<sup>49</sup> IMC made a roaming agreement with Siminn on 26 November 2010. According to that agreement, IMC can transfer its rights and obligations pursuant to the agreement to its sister company, Alterna which has launched a marketing effort on the Icelandic mobile phone market. This marketing effort commenced with an advertising campaign and the opening of retail outlets in April 2010 after tests lasting a number of months. The company has however not yet succeeded in gaining a significant market share up to this point in time.

environment between regions in Iceland which could provide a reason for dividing the country into more than one area.

103. In the light of the fact that call termination in each individual mobile phone network is a separate market one can conclude that the geographical scope of each market is in accordance with the scope of the mobile phone network of each individual mobile phone company. Nor does it matter in this connection that in some areas there are more networks than in other regions in the country, as there is no substitutability between terminations in varying networks.

104. The PTA considers there to be no indications that the country is divided into varying markets for call termination in mobile phone networks and thus does not see the necessity to make a detailed study of that aspect.<sup>50</sup>

105. With the above in mind it is the assessment of the PTA that there is no need to demarcate the relevant market more narrowly than is allowed for in the guidelines. In the light of the above the PTA considers that the geographical market for call termination in individual mobile phone networks is the whole country in accordance with the scope of each mobile phone network. This also applies to the 365 Miðlar (Tal) virtual networks subject to the company's virtual network agreement with Siminn, and to the IMC/Alterna network as that company has signed a major roaming agreement with Siminn. The entry of 365 Miðlar to the market for the company's 4G development will not change this as the company's licence is dependent on conditions for development of national coverage by the end of 2016.

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<sup>50</sup> According to BEREC Common Position on Geographic Aspects of Market Analysis (definition and remedies) – from 5 June 2014 BoR (14) 2008, there is only a need for detailed study of geographical markets should a preliminary investigation indicate that the country could be divided into varying market regions.

## **4.0 Analysis of the market for call termination in mobile phone networks (Market 7)**

### **4.1 Introduction**

106. In this Section the relevant service markets are analysed on the basis of the factors which impact assessment of significant market power, in order to determine whether one or more companies has such a position. The factors used to measure market power of the relevant companies depend on the characteristics of each market. It is the task of the regulatory authorities to judge which factors are most appropriate to evaluate market power. The factors used are those discussed in the ESA Guidelines, in the regulation on market analysis from 2009 and in the PTA information brochures on market analysis from 2009.

107. In the opinion of the PTA the most important factors for analysing the relevant market are market share, entry barriers and possible competition, countervailing buying power and price development. The PTA considers that assessment of those criteria that have been omitted here would not change the conclusions of the market analysis in the light of the special circumstances resulting from the definition of the call termination market.

### **4.2 Market share**

108. A company's market share is an important factor in market analysis. It is however not the only factor that decides whether a company is considered to have SMP, but it can give strong indications as to whether a market dominance position exists or not. A very significant market share, that is to say over 50%, is on its own sufficient according to accepted case law, to designate a company as having a dominant position, except in exceptional circumstances. According to the Guidelines, a suspicion that single dominance exists with one company does not arise until market share has reached at least 40%. This depends, however, on the size of the company in comparison to its competitors. In some instances a company with a market share of less than 40% can have single dominance. A company with market share of less than 25% would in all likelihood not be considered to have dominance, except in the case where it had joint dominance with another undertaking. Development of market share over a given period of time is also significant in the assessment of whether the company has a dominant market position. Should a company have a non-transitory high market share then this indicates a dominant market position, while on the other hand a fluctuating or falling market share will indicate the contrary. In new and growing markets a high market share is less of an indication of market strength than on a mature market with slow growth.

109. In accordance with the definition of the wholesale market for call termination in individual mobile phone networks, each electronic communications network is one market and thus there is only one company on each market. This means that regardless of the metrics used, each mobile phone company has 100% market share in the relevant market.

110. The fact that each mobile phone company has 100% market share of the relevant market gives a strong indication that the companies enjoy significant market power on the wholesale market for call termination in their own mobile phone networks and that they can to a significant extent operate without taking into consideration customers or other electronic communication companies.

### **4.3 Entry barriers**

111. Entry barriers is a collective name for various factors that can influence companies' market power. If there are few barriers to a market then potential profitability is an attraction for new companies to gain market share from the incumbents. Potential competition from new parties can influence the behaviour of a company with SMP and can diminish its harmful influence on competition. Entry barriers on the other hand weaken or prevent competition.

112. In general, potential competition from new service providers affects the behaviour – including prices – of dominant operators in the market. On the other hand access barriers of various kinds can weaken the prerequisites for possible competition and can even prevent competition.

113. Termination of telephone calls in mobile phone network is made in the network to which the recipient of the telephone call is connected. There is no existing technology in mobile phone networks that enables any party other than the service provider of the recipient of a telephone call to offer the service of termination of telephone call. The key to the competition problem on this market can be found in the fact that other parties cannot offer this service and this is the fundamental reason for regarding each network as an independent market. Should developments lead to it being possible for other parties to offer termination of telephone calls in such circumstances, then this would lead to a fundamental change in the state of competition on this market. The PTA however considers that there is no indication that such technology will appear on the market in the foreseeable future.

114. The prevailing principle – that the calling party pays – also diminishes the effects of competition in the call termination markets. The reason is that the main principle means that users have no incentive to switch service providers because competitors offering lower termination rates have entered the market.

115. According to the above there are significant entry barriers on the market that cannot be surmounted in the near future. This indicates that all companies that offer termination of telephone calls in mobile phone networks in this country have significant market power.

### **4.4 Countervailing buying power**

116. Buyers with a strong negotiating position can influence competition and can limit sellers' possibilities to operate without taking into consideration competitors and customers. A strong negotiating position exists primarily when a customer buys a large portion of an operator's production, is well informed of other offerings, can switch to another operator without significant expense, and even has the potential to commence production of a comparable product/service.

117. As has been stated, the definition of the relevant market is that there is only one mobile phone company on each market. Even though each mobile phone company has 100% market share on the market in question, market strength depends on buyers' negotiating power and the way that this can influence the behaviour of the company in question. In the light of this fact, it is necessary to assess whether and to what extent countervailing buying power exists on the market for call termination in individual mobile phone networks and under what circumstances purchasers at the wholesale and retail levels can influence seller behaviour.

118. On the relevant wholesale markets, countervailing buying power can come from fixed line network operators and from other mobile phone network operators who purchase termination in a specific mobile phone network. These network operators need to purchase termination from the mobile phone network operator in question in order that their customers have the option of calling a customer of the mobile phone network.

119. It is conceivable that large network operators, for example, fixed line network operators could exert pressure on mobile phone network operators in agreements on interconnection price. The strongest weapon would be a threat to deny interconnection. In practice, this possibility is not very realistic as there is a general obligation on electronic communications companies to negotiate an agreement on interconnection with networks and with the services of other electronic communications companies, see Article 24 of the Electronic Communications Act.

120. It is furthermore possible to maintain that purchasers could use wholesale price for termination as a negotiating weapon, for example by threatening to increase the price if a network operator did not reduce his price. In this connection it should however be pointed out that the largest network operators have in most instances been designated as having significant market power and can normally not increase termination rate without the endorsement of regulatory bodies, which in many instances have prescribed cost analysis on these prices. Siminn could for example, not increase its price for call termination in its fixed line network nor in its mobile phone network without the endorsement of the PTA and the same applies to prices for call termination in Vodafone fixed line and mobile phone networks.

121. Siminn, Vodafone and Nova are all large purchasers of termination in each other's networks. Siminn has by far the largest market share on the telephone market since competition commenced and still had 31.4% market share by number of customers at the end of 2014 and [40-45%]<sup>51</sup> market share by revenue in retail. Despite Siminn's size and market share, Vodafone did not reduce its termination rates to level them with those of Siminn until the company was forced to do this subsequent to the PTA Decision from 20 July 2006 (M16g). The same can be said about termination rates of Nova and IMC/Alterna which were not reduced until after the PTA made its Decision no. 18/2010 on Market 7, which ordered reductions on those companies' call termination rates.

122. Nova has been on the market since the end of 2007 and decided a termination rate that was considerably higher than the termination rates of Siminn and Vodafone. Nova was designated as having significant market power on 16 July 2010, and has thus been subject to obligations on pricing from that time. Termination prices were reduced by those decisions in steps until the termination rates of Siminn, Vodafone and IMC/Alterna were symmetrical at the turn of the year 2012/2013.

123. IMC/Alterna, which began offering general mobile phone services on the retail market in April 2010, was also designated as having significant market power on 16 July and is subject to the same kind of obligations as Nova on pricing from that time.

124. IP-fjarskipti (Tal) made a tariff for termination at the end of August 2010, which was also significantly higher than the termination rates of other companies after the above specified obligations came into force. With the previous decisions made by the PTA, the Tal termination rate has been reduced to be symmetrical with the others. As has been stated previously, Tal has

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<sup>51</sup> Deviation band for reasons of confidentiality

now merged with 365 Miðlar ehf. Experience has shown that it is not possible to speak of great pressure on companies to reduce their termination rates without the intervention of the PTA.

125. Countervailing buyer power at retail market is inhibited, particularly with respect to the CPP principle. As has been stated, it seems that purchaser price awareness is relatively low on the retail market, which limits their reactions to price increases. One may also conclude that many small customers have less countervailing buying power than few large customers. In addition to this the PTA believes that the possibilities of the large customers are limited and not sufficient to impact termination rates.

126. In the opinion of the PTA there does not seem to be sufficient, countervailing buying power on the wholesale or retail markets for one to be able to assert that Siminn, Vodafone, Nova, IMC/Alterna and 3T do not have a dominant position on the market for call termination in their own mobile phone networks. The fact that there is no substitutability, neither in supply nor demand, on the wholesale or retail markets, limits the possibility of countervailing buying power on the relevant markets. It seems that there is a lack of willingness of mobile phone companies to reduce termination rates without the intervention of the PTA.

#### **4.5 Price development**

127. Price development over a specific period of time indicates the extent to which competition is active between companies. If prices are stable over a specific period of time, one may conclude that there is little price competition and that parties on the market are satisfied with their share. Regular and harmonised price changes give an indication of price-fixing on the market while fluctuating and irregular price changes are the characteristics of strong competition. On the relevant markets for call termination in individual mobile phone networks, price and price development of call termination give a good picture of the competition status of the operating mobile phone companies.

128. At the inception of competition on the mobile phone market in 1998, Tal<sup>52</sup> and Siminn had symmetrical termination rates where the average day and evening rate was then ISK 12.43 per minute. In the year 2000 the companies both reduced call termination rates such that the average became ISK 11.25. Another reduction was made in January 2001 when the average price was ISK 11. Íslandssími entered the market in 2001 and then had the same call termination rate as the previously named companies. Around the turn of the year 2001/2002 Íslandssími and Tal increased their rates. The average Vodafone rate per minute was from that time ISK 12.1 and the connection rate was ISK 0.99 against ISK 0.68 with Siminn. Siminn made a small reduction in its price at the beginning of 2002, which brought the Siminn average price to ISK 10.5. There were no further price reductions with these companies until the PTA made decisions on reduction of prices.

129. With the PTA Decision from 23 April 2003, Siminn was obliged to reduce its prices to ISK 8.92 per minute and from that time had the same day and evening call termination rate. The PTA Decision subsequent to analysis of Market 16, which was published 20 July 2006 obliged Siminn and Vodafone to reduce their minute rates to ISK 7.49 per minute and the connection rate to ISK 0 and this reduction was made in 4 phases over a two-year period and was concluded on 1 June 2008.

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<sup>52</sup> That is to say Tal hf., which subsequently merged with Íslandssími hf. which today is Og fjarskipti ehf. (Vodafone).

130. Nova entered the market at the end of 2007 with a termination rate which was ISK 12.5 per minute and a connection rate of ISK 0.6/telephone call. Siminn complained about this pricing and demanded that the PTA decide a lower price. After the PTA commenced processing of the Siminn complaint, Nova, reduced its price to ISK 12 per minute from and including 1 June 2008 while its connection rate remained unchanged. With its Decision no. 22/2008 from 14 August 2008, the PTA decided not to demand a further reduction by Nova for the time being as the pricing would be examined in more detail in connection with a planned market analysis.<sup>53</sup> The case in question was first and foremost a dispute on interconnection and the PTA could not impose obligations on Nova, for example, obligations for price control, in such a case. This can only be done subsequent to market analysis. This matter ended in August 2008 and on 16 July 2010 Nova was designated as having significant market power and has thus been subject to obligations from that time. Nova's termination rates were reduced following the above Decision of the PTA, to ISK 10.3 from and including 1 September 2010 and to ISK 8.3 on 1 January 2011. The connection charge was also discontinued. On 1 January 2012, Nova was obliged to reduce its termination rates to ISK 6.3 and on 1 January 2013 to ISK 4 (or to the amount indicated by the PTA benchmarking) and then the company's termination rates became symmetrical with those of Siminn, Vodafone and IMC/Alterna.

131. The termination rates of IMC Ísland ehf. were for some considerable time such that the daily rate was ISK 13.5 per minute, evening rate ISK 12.0 and the connection charge ISK 0.70 - these prices having remained unchanged from the outset until the company made a roaming agreement with Siminn in November 2009. According to the IMC interconnection tariff from May 2010, the company's termination rate was ISK 12 to parties other than Siminn. The termination rate to Siminn was ISK 7.49 for telephone calls originating in the Siminn fixed line network. On the other hand, calls from the Siminn mobile phone networks that terminated in the IMC system were priced as if they were on-net calls in the Siminn mobile phone network, that is to say that origin and termination of a call is priced at ISK 6.53 in the above mentioned roaming agreement between the companies. There has not been much discussion on the pricing that was in force for some considerable time at IMC as very little traffic terminated in the IMC network. The company launched a marketing campaign on the Icelandic mobile phone market in April 2010. Following the PTA analysis on Market 7 on 16 July, IMC/Alterna was designated as having significant market power and has been subject to obligations from that time. The company followed Nova in reducing its termination rates.

132. In August 2010 IP-fjarskipti (Tal) issued a notification to other telephone companies where it was stated that Siminn would handle the transfer of interconnection traffic from other electronic communications companies to the telephone exchange of Tal (IP-fjarskipti). They also announced their termination rate of ISK 12.5 per minute and connection rate of ISK 0.6 according to the IP-fjarskipti (Tal) tariff.

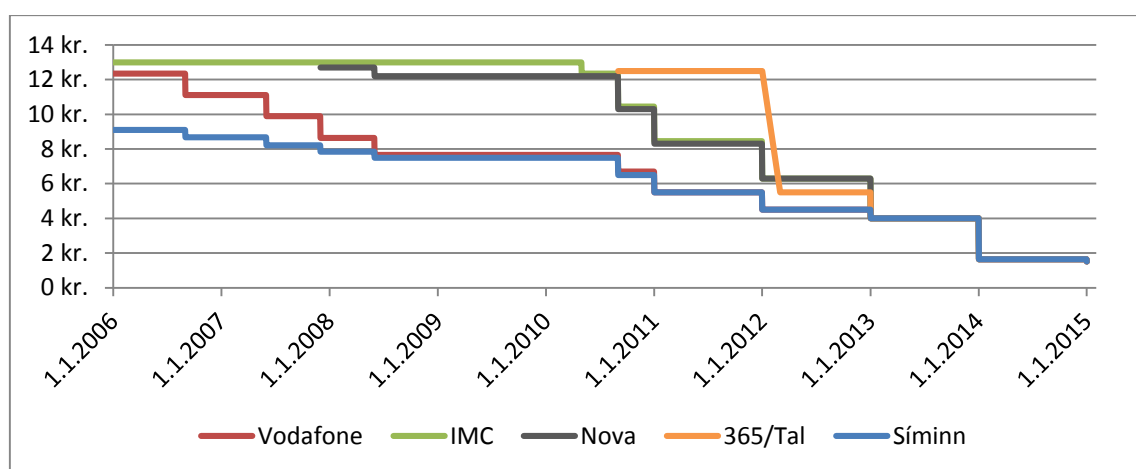
133. In the PTA analysis of the relevant market which was concluded with the PTA Decision no. 18/2010, see further subsequent PTA Decision no. 18/2010, Siminn, Vodafone, Nova,

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<sup>53</sup> The following is stated in the above specified Decision: *"The conclusion of the Administration will however solely be based on views derived from Article 24 of the Electronic Communications Act, that is to say whether the Nova tariff be considered to constitute limitation or hindrance in the making of an interconnection agreement in the understanding that it is considered unfair to Siminn, where that company could conceivably deny interconnection. This means that it is not possible to prescribe the imposition of obligations on Nova in this Decision on the basis of Article 27 of the Electronic Communications Act, such as price control of the company's tariff ... **Such obligations may only be imposed on a company on the basis of market analysis in accordance with the rules that apply to such analysis.**"*

IMC/Alterna and Tal were designated as having significant market power and obligations were imposed on the company, among other things on price control of the companies call termination tariffs. The obligation on price control meant that all termination rates would be decided by annual benchmarking with those states in the EEA area who used the BU-LRIC cost analysis methodology, instead of basing them on Siminn historical costs as had been done previously. In addition to this all call termination rates were to be symmetrical from and including 1 January 2013. Prices based on benchmarking came into force however, later than was planned because of the ruling from the Appellate Committee for Electronic Communications and Postal Affairs in the Nova appeal case<sup>54</sup> which caused a postponement of 6 months of the planned coming into force of termination rates on the basis of benchmarking, that is to say from 1 July 2013 to 1 January 2014. Termination prices of all companies were reduced to ISK 4 on 1 January 2013 (which was based on Siminn historical costs) and subsequently after benchmarking to ISK 1.64 on 1 January 2014 and 2 ISK 1.52 1 January 2015.

**Figure 4.1 Development of call termination rates of mobile phone companies, 2006-2015<sup>55</sup>**



Source: Post and Telecom Administration

134. Termination prices in Europe have dropped significantly in recent years, first and foremost with the application of price obligations on the relevant market. In a report from the Body of European Regulators for Electronic Communications (BEREC)<sup>56</sup> on comparison of termination rates and 35 European countries which are parties to BEREC, the development of call termination rates in Europe in recent years is shown, among other things.

135. Termination prices in the relevant countries in Europe have dropped very significantly in recent years as a result of the intervention of regulatory bodies in the countries in question and in July 2014. The price per minute using arithmetic mean was €cent 1.69 per minute and €cent 1.23 using weighted mean. The price of call termination in Iceland was at the same time €cent 1.059 per minute.

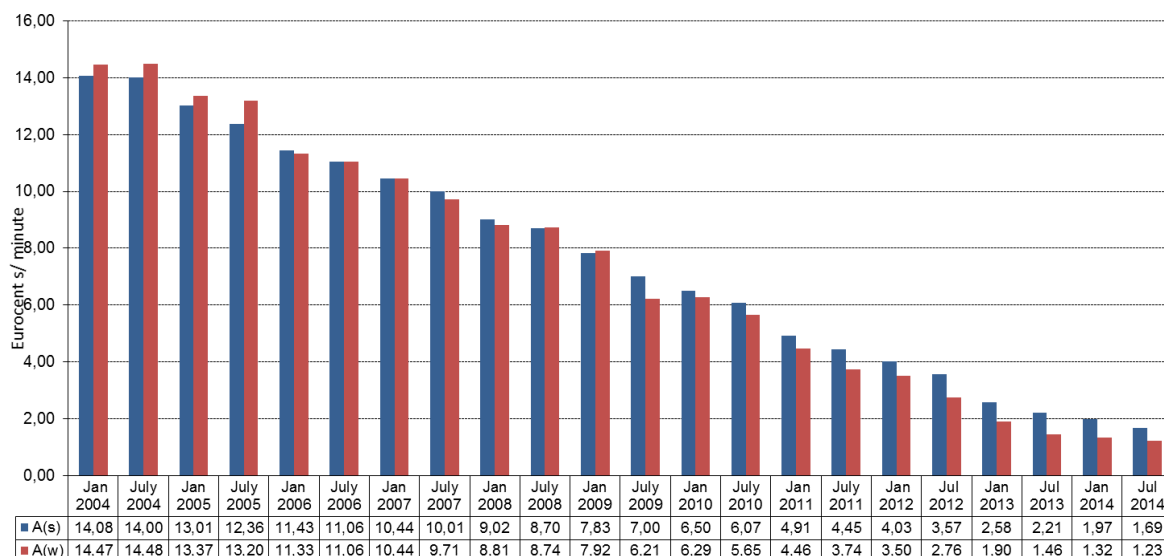
136. Figure 4.2 shows the development of average termination rates per minute in countries within BEREC from 2004 until 2014.

<sup>54</sup> See the ruling of the Appellate Committee for Electronic Communications and Postal Affairs number 6/2012 from 30 June 2013.

<sup>55</sup> The reference is the minute price and connection rate calculated on a 3 minute telephone call, where appropriate.

<sup>56</sup> Body of European Regulators for Electronic Communications - MTR Benchmark (as of July 2014) Internal Report, September 2014.

**Figure 4.2 Development of average termination rates 2004 until 2014 (arithmetic and weighted mean)**



Source: BEREC

137. As stated above, the cost of terminating a telephone call between mobile phone networks in this country is borne by the calling party, which is the same arrangement as applies in many places abroad, including in all, EEA states. In the United States and in a number of other countries this arrangement however differs, in that in those instances, mobile phone network operators collect the cost of call termination of calls from other networks from their own subscribers (Receiving-Party-Pays or RPP). Studies of termination rates have shown that they are higher, where the collection arrangement is CPP (Calling-Party-Pay) when compared with RPP<sup>57</sup>. It is believed that higher termination rates resulting from CPP can be attributed to a lack of competitive incentive with mobile phone network operators and to a lower level of price awareness with users with respect to the cost of terminating a telephone call in another mobile phone network. In addition to this, some economists maintain that high termination rates are used to subsidise equipment for their own users and the cost of gaining customers and that termination rates are not in accordance with costs in most countries.

138. The PTA considers there to be many indications that the price of call termination in mobile phone networks of Icelandic companies has been higher than costs could justify, and the Siminn cost analysis<sup>58</sup> showed a cost price for termination, which supports the above assertion.

139. It is clear that network operators can still decide termination rates in their networks without much concern for their competitors, customers or end users. The PTA considers that history shows that pricing of termination by a company not subject to an obligation for price control clearly indicates that each network operator has significant market power in his own

<sup>57</sup> See Crandall and Sidak; Josha Gans, Sephan King, and Julian Wright, *Wireless Communications, Handbook of Telecommunications Economics* (Martin Cave et. Al eds., North-Holland Volume 2) (2004); Chris Doyle and Jennifer C. Smith, Regulation Initiative Working Paper No. 21: *Market structure in Mobile Telecoms: Qualified Indirect Access and the Receiver Pays Principle* (May 1999), available at <http://ssrn.com/abstract=321420>.

<sup>58</sup> See the Decision of the PTA no. 9/2010 on cost analysis in Siminn wholesale prices for call termination in GSM and UMTS mobile phone networks dated 16 April 2010.

network. It is the assessment of the PTA that in the light of experience of the last decades, mobile phone companies have minimal if any incentive to lower their termination charges without the intervention of the regulatory institutions and, there is every indication that they attempt to apply rates that are far in excess of costs. This is a clear indication that the companies thus enjoy significant market power, each in its own network.

#### **4.6 Assessment of SMP on the relevant market and the designation of a company with SMP**

140. Assessment of Significant Market Power (SMP) is based on ESA Guidelines and on various other criteria. The PTA takes current market conditions into account when making its assessment. Developments over recent years are also taken into account and the assessment is forward-looking to the near future.

141. In Paragraph 1 Article 18 of the Electronic Communications Act no. 81/20030, the following is stated: *An undertaking shall be deemed to have SMP if it, either individually or jointly with others, holds a position of economic strength on a certain market which enables it to prevent effective competition and to operate to a substantial extent without concern for competitors, customers and consumers.*”

142. This is an important point of departure in the market analysis and PTA wishes to emphasise that SMP is the appropriate metric, not abuse of a dominant position. Therefore the core of the market analysis is not whether an undertaking has misused its dominant market position. This does not mean, however, that an undertaking's behaviour in the market does not make any difference in the assessment of SMP. Even though the formal aspects of the market are most important, conduct that enhances a dominant position or maintains the competitive advantage enjoyed by a dominant undertaking can strengthen the position of that undertaking still further.

143. An undertaking can have significant market power alone or jointly with one or more other undertakings. If it is concluded that an undertaking has significant market power, it is generally unnecessary to consider the question of joint dominance with one or more other operators. However, if it is concluded that no single operator has significant market power, it is necessary to examine the possibility of joint dominance together with other undertakings. If an undertaking has a dominant market position in a given market, it is also possible to decide that it also has a dominant market position in a related market if the relationship between the markets is such that the undertaking can use its strength in one market to enhance its strength in another, see Paragraph 2 Article 18 of the Electronic Communications Act.

144. As has been stated there are four companies that offer call termination in mobile phone networks and one in its virtual network that are covered by the description of the relevant market. Siminn, Vodafone and Nova are the largest companies. The operations of the fourth company, IMC/Alterna, were for a long time limited and the company has operated in this country for many years and for this reason it is covered by the relevant market in the opinion of the PTA. The most important factor here is that the company made a roaming agreement with Siminn on 26 November 2009 and planned major development and investment in its mobile phone system in this country, although this development has been somewhat slower than intended. According to the above specified roaming agreement, IMC is authorised to resell its rights and obligations pursuant to the agreement in question to its sister company, Alterna. In addition to this, IMC has a roaming agreement with Vodafone. Alterna launched a market

effort in April 2010 on the Icelandic mobile phone market with an attendant advertising campaign and the opening of retail outlets. IMC has also commenced resale to three other companies. The PTA sees IMC and Alterna as a single economic unit in the understanding of competition law. Should IMC transfer its rights and/or obligations pursuant to the roaming agreements with Siminn or Vodafone, the obligations that will be imposed on IMC in this Decision will be transferred to Alterna. 365 Miðlar (Tal) operate a virtual network. The company has agreements on virtual network access to the Siminn mobile phone network. 365 Miðlar also have frequency licences for the operation of 4G mobile phone service across the whole country.

145. All companies have 100% market share in call termination in their own mobile phone networks. In the opinion of the PTA the relevant market is characterised by absolute entry barriers and possible competition is not foreseeable in the coming 2-3 years. In the light of the above, there is every indication that the companies all have significant market power. In order to come to another conclusion there would need to be factors that significantly influence the market power of the companies. Such factors would first and foremost relate to countervailing buying power which does not appear to be in place.

146. The market analysis indicates that there are no competition factors on the market that would create pressure on the price for call termination in mobile phone networks. The technology does not, as things stand today, provides the possibility for substitutability in supply. There is no countervailing buying power whatever, neither at wholesale nor retail level, and there is nothing to indicate that competitors, customers or consumers can have an impact on the price of call termination in the companies' mobile phone networks.

#### **4.6.1 Siminn**

147. Siminn, which along with its sister company Mila ehf. form a single economic unit in the understanding of competition law, is the largest electronic communications company in Iceland and operates on most of the defined electronic communication markets. Siminn was first on the mobile phone market and provides mobile phone service across the whole country. Siminn is also the largest purchaser of call termination on the wholesale market. In the opinion of the PTA, it cannot be seen that conditions exist on the demand-side that would limit the Siminn market power in call termination in its own mobile phone networks. Siminn's position on the relevant market indicates that the company can to a very significant extent, operate without take into account competitors, customers and consumers. With the above in mind it is therefore the assessment of the PTA that Siminn has significant market power on the wholesale market for call termination in its own mobile phone networks.

#### **4.6.2 Vodafone**

148. Vodafone is the next largest electronic communications company in Iceland and also operates on most of the defined electronic communications markets. Vodafone provides mobile phone service across the whole country. Vodafone's position on the relevant market indicates that the company can to a very significant extent, operate without take into account competitors, customers and consumers. With the above in mind it is therefore the assessment of the PTA that Vodafone has significant market power on the wholesale market for call termination in its own mobile phone networks. The company has an agreement with Nova for the use of the latter companies. UMTS mobile phone network and the companies have announced plans for further cooperation in the form of a jointly owned company which will operate the companies' technical equipment and handle use of their frequencies.

### **4.6.3 Nova**

149. Nova is the third party on the national mobile phone market and only operates a UMTS/LTE mobile phone network, but has made an agreement for cooperation with Vodafone, which among other things, assures the company access to roaming in the Vodafone GSM system and the companies have announced plans for further cooperation in the form of a jointly owned company which will operate the companies' technical equipment and handle use of their frequencies. The company was free to decide its call termination rates until the PTA Decision no. 18/2010 was published on 16 July 2010. Nova charged a considerably higher price than the prices that Siminn and Vodafone were obliged to offer subsequent to the first round of market analysis of the relevant market in 2006. Countervailing buying power of Siminn and Vodafone was not sufficient to pressurise Nova to reduce its prices and this indicates that the company can operate on the relevant market, call termination market, without taking into account competitors, customers and consumers. With the above in mind it is therefore the assessment of the PTA that Nova has significant market power on the wholesale market for call termination in its own mobile phone networks.

### **4.6.4 IMC/Alterna**

150. IMC/Alterna is the smallest company on the relevant market up to this point in time. The company had only a very few domestic users until it commenced a marketing campaign on the Icelandic electronic communications market in April 2010 under the name Alterna, and its operations in this country had been minimal up to 2009 when the company made a roaming agreement with Siminn. The company made a roaming agreement with Siminn on 26 November 2009 and plans to develop and invest in its mobile phone system in this country. According to the above specified roaming agreement, IMC is authorised to resell its rights and obligations pursuant to the agreement in question to its sister company, Alterna. IMC also has a roaming agreement with Vodafone. Alterna launched a market effort in April 2010 on the Icelandic mobile phone market with an attendant advertising campaign and the opening of retail outlets. The PTA sees IMC and Alterna as a single economic unit in the understanding of competition law. Should IMC transfer its rights and/or obligations pursuant to the roaming agreements with Siminn or Vodafone, the obligations that will be imposed on IMC in this Decision will be transferred to Alterna. Despite the fact that IMC operations on the Icelandic mobile phone market have been limited for a considerable length of time, the same decisive access barriers exist as with the other network operators. The company thus has 100% share in its own network which will be the case in the near future. "The company's termination rates had been rather high and had not changed much from the outset until PTA Decision no. 18/2010 was published. Experience shows that companies that are new entrants to the market do not have to yield to countervailing buying power and have thus been able to maintain higher prices than their counterparties, despite being small. IMC/Alterna has had mobile phone operations in this country for more than 10 years and though all its operations have up to this point in time been on rather a small scale, one must consider the company as one of the operators on the call termination market. Having taken all of this into consideration the PTA concludes that IMC/Alterna can to a significant extent operate on the market in question, the call termination market, without taking into consideration competitors, customers and consumers. With the above in mind it is therefore the assessment of the PTA that IMC/Alterna has significant market power on the wholesale market for call termination in its own GSM network.

### **4.6.5 365 miðlar (Tal)**

151. IP-fjarskipti (Tal) was first and foremost a resale party at Vodafone but at the beginning of 2010 IP-fjarskipti (Tal) made an agreement on virtual network access with Siminn and on 24

August 2010, it was announced that Siminn would handle transfer of interconnection traffic from other electronic communications companies to the IP-fjarskipti (Tal) telephone exchange. Then TAL made a virtual network agreement with Vodafone in December 2010. The reduction of call termination prices of Siminn, Vodafone, Nova and IMC/Alterna on 1 September 2010 and at the turn of the year 2010/2011 did not lead to reduction of IP-fjarskipti (Tal) call termination prices and an obligation for price control was imposed on the company in the most recent Decision on the relevant market, that is to say PTA Decision nr. 3/2012. IP-fjarskipti has now merged with 365 Miðlar and operations have commenced under the name 365. With the above in mind it is therefore the assessment of the PTA that 365 Miðlar (Tal) has significant market power for the termination of calls in its own virtual network.

#### **4.7 Conclusion**

152. With the above market analysis in mind, the PTA intends to designate Siminn, Vodafone, Nova and IMC (Alterna) as having significant market power in their own mobile phone networks and 365 Miðlar (Tal) as having significant market power in its own virtual mobile phone network on the relevant wholesale markets for call termination in mobile phone networks

## 5.0 Imposition of regulatory obligations

### 5.1 In general on obligations

153. According to Paragraph 2 of Article 17 of the Electronic Communications Act, market analysis shall be the basis for decisions on whether the PTA shall impose, maintain, amend or withdraw obligations on companies with significant market power. If a market analysis reveals that there is no effective competition in the relevant market and that one or more electronic communications undertakings in that market possess SMP, the PTA is authorised to impose one or more obligations on the company that is designated as having SMP, in accordance with Article 18 of the Electronic Communications Act. If the PTA has previously imposed specific obligations on operators, these shall be reviewed and either maintained, amended, or withdrawn in accordance with the results of the market analysis.

154. Article 27 of the Electronic Communications Act states that when an electronic communications undertaking is designated with SMP, the PTA may impose on it obligations concerning transparency, non-discrimination, accounting separation, open access to specific network facilities, price control and cost accounting, as necessary for the purpose of promoting effective competition<sup>59</sup>. These obligations are described more fully in Articles 28 – 32 of the Electronic Communications Act.

155. When selecting obligations to be imposed in order to solve specific competition problems, it is necessary to use several fundamental principles as guidelines.<sup>60</sup> All obligations imposed shall take into account the nature of the specified competition problem and shall be designed to solve it. They shall be transparent, justifiable, reasoned, and in line with the objectives they are designed to achieve – that is, to promote competition – as well as contributing to the development of the internal market and safeguarding users' interests. Obligations must be proportionate and may not impose heavier burdens on operators than is deemed necessary.

156. In a report from the European Regulators Group (ERG)<sup>61</sup> on ex-ante obligations emphasis is placed on developing competition in the construction of electronic infrastructure and networks where this is considered desirable. In such instances the imposed obligations should support such development. When infrastructure-based competition is not considered desirable due to significant and persistent economies of scale and scope or other barriers to entry, it is necessary to guarantee sufficient access to electronic communications networks and equipment at the wholesale level. In this context, it is necessary to ensure two things: first, to encourage service-based competition; and second, to guarantee a sufficient fee for access to existing electronic communications networks, thus providing an incentive for further investment in such networks, as well as for their renovation and maintenance.

157. For the long term, service-based competition that has its foundation in steered access to a cost-analysed price can be a tool for generating competition in the regeneration of electronic communications networks. This refers to what is called “the investment ladder,” and its

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<sup>59</sup> See also Articles 9 - 14 of the Access Directive.

<sup>60</sup> See Article 8 of the Framework Directive.

<sup>61</sup> In the year 2010 a new institution took over the role of ERG, that is to say BEREC.

objective is to create conditions that make it possible for new operators to build up their electronic communications networks step by step.

158. In selecting the obligations that are best designed to promote competition in a given market, it is often useful to consider the position that would exist if obligations were not imposed on undertakings in the relevant market and whether it would be sufficient to use competition legislation alone to guarantee effective competition.

## **5.2 Competition problems**

### **5.2.1 In general on problems in the field of competition**

159. Obligations are imposed on companies with SMP with the aim of combating real and/or potential problems in the field of competition in the markets in question. Problems in the field of competition refer to any kind of behaviour by a company with SMP which is intended to or leads to competitors being forced out of markets, which prevents potential competitors from entering the market and or damages consumers' interests. When obligations are applied pursuant to the Electronic Communications Act, the reason for doing this is not in fact that the party is misusing market dominance. It is sufficient that competition problems could possibly arise under given circumstances.

### **5.2.2 Competition problems in the market for call termination in individual mobile phone networks**

160. The competition problem on the relevant market can first and foremost be attributed to the fact that the mobile phone company that controls the network where a call is terminated has a monopoly position on the market in question. Further to this there are technical barriers which result in it only being possible to terminate a telephone call in the network where the recipient is a customer. It can thus not be seen that there are possibilities of competitive pressure on the relevant market and this situation is unlikely to change in the foreseeable future. The CPP principle also limits user possibilities to indirectly impact pricing of call termination as they must be considered insensitive to an increase in call termination price for calls to their own telephone.

161. Mobile phone companies have a monopoly on call termination in their own networks and can therefore offer their service to a large extent without taking into account customers and competitors. This monopoly position of the mobile phone companies enables them to demand higher termination rates than would be possible if there was pressure from competition. In the opinion of the PTA there are a number of factors that specifically indicate that all five mobile phone companies were charging excessively high call termination prices prior to the imposition of obligations. First, the Siminn cost analysis endorsed by the PTA with its Decision no. 9/2010 in April 2010 indicated that the cost of call termination with companies in this country that were operated in an efficient manner had been much lower than the call termination prices then in force suggested. Second, the companies' call termination prices were high in comparison with the price for on-net calls.

162. Most competition problems on the relevant markets were related to call termination prices in mobile phone networks. Other problems related to denial or rejection of interconnections and to discrimination. In the opinion of the PTA, the overpricing of telephone calls that originated in mobile phone networks other than those in which the termination took place. It has been the opinion of the PTA in the most recent analyses of the relevant market that

the cost of telephone calls between networks does not justify there are significantly higher price when compared with telephone calls made within the same mobile phone network. In the opinion of the PTA this is among other things a consequence of the arrangement for payment of call termination which is known as the CPP principle, as it means that users of another network pay the costs and there is little consumer price awareness. The cost is transferred to the users that are connected to other mobile phone or fixed line networks.

163. The significant difference in call termination prices between mobile phone companies had a negative impact on consumers. Consumers generally find it difficult to perceive the cost of a telephone call as the retail price does not reflect the call termination price of the companies for external traffic. This limits transparency and mobility of users and damages their interests.

164. In the opinion of the PTA, it seems that price discrimination was being practised against external traffic by pricing call termination from other networks much higher than within the same network before call termination prices were harmonised and reduced. Excessively high termination rates can also affect the entry of new service providers to the mobile phone market, both diverting their interest from the market and limiting the possibilities to operate there in competition with other companies on the market and to gain market share. The PTA considers that the above indicated that the price for termination of telephone calls in mobile phone networks in this country was higher than the costs warranted.

165. There have in reality been a few changes to the structure of the market since the last analysis was made of this market and published in January 2012<sup>62</sup>. Despite the fact that there are still five companies offering termination in mobile phone networks, there is nevertheless only one company on each individual market. No new technical innovations have been introduced to the market that make it possible to compete in the call termination market within an individual network. The PTA considers that all the problems that were identified in the market in the years 2006, 2010 and 2012 are still in place and for this reason the Administration is obliged to take measures and to impose appropriate obligations pursuant to the provisions of the Electronic Communications Act.

### **5.3 Obligations in force**

#### **5.3.1 Obligations that were imposed with the PTA Decision no. 3/2012 from 13 January 2012**

166. In the Decision of the PTA no. 3/2012 from 13 January 2012, Síminn, Vodafone, Nova, IP-fjaraskipti (Tal) and IMC/Alterna were designated as having significant market power on the relevant market and appropriate obligations were imposed on those companies. Before the Decision was made, the draft of the Decision was formally notified to the EFTA Surveillance Authority (ESA). ESA made no objections the analysis, or to the obligations that the PTA intended to impose on the relevant market. The Decision in question was appealed to the Appellate Committee by IP-fjaraskipti ehf. (Tal) with respect to the price reduction glidepath for that company. With the Ruling of the Appellate Committee number 2/2012 from 25 May 2012 the PTA Decision was confirmed.

167. In the above Decision, Síminn hf. (Síminn), Fjaraskipti ehf. (Vodafone), Nova ehf. (Nova), IMC Ísland ehf. (IMC) and IP-fjaraskipti ehf. (Tal) were designated as having significant market power on the following markets:

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<sup>62</sup> See the decision of the PTA number 3/2012.

- Call termination in the Siminn GSM/UMTS mobile phone network.
- Call termination in the Vodafone GSM mobile phone network.
- Call termination in the Nova UMTS mobile phone network.
- Call termination in the IMC GSM mobile phone network.
- Call termination in the Tal virtual mobile phone network.

168. Obligations for access, non-discrimination, and price control were imposed on all companies and in addition to this the obligation for separation of accountancy was imposed on Siminn and Vodafone.

### **5.3.1.1 Obligations on-networks of Siminn, Vodafone, Nova and IMC/Alterna and IP-fjarskipti (Tal)**

#### **Obligation to provide access**

169. Obligations were imposed on Siminn, Vodafone, Nova and IMC/Alterna to reach agreements on interconnection with electronic communications companies that offer general electronic communications services or electronic communications networks, and offer call termination in their GSM/UMTS mobile phone networks. IP-fjarskipti (Tal) bore the same obligation for its virtual network. Interconnection agreements should be completed without delay and no later than within one month from the time they were requested. The companies should give other electronic communication companies the option of connecting directly to their own mobile phone networks. Electronic communications companies that operate both mobile phone and fixed line phone networks shall give counterparties the option of connecting directly to mobile phone networks and it shall not be made a condition that mobile phone traffic go via through the companies' fixed line networks.

#### **Obligation for non-discrimination**

170. The obligation was imposed on Siminn, Vodafone, Nova, IMC/Alterna and IP-fjarskipti (Tal) to practice non-discrimination when making agreements for call termination in GSM/UMTS mobile phone networks and in their virtual networks. The companies should provide all purchasers of termination of telephone calls in wholesale services, including their own departments, with analogous conditions, prices and resources. Access to the network should be provided within a comparable period of time. The companies shall conduct their operations in such a manner that treatment of information that is revealed when making and applying interconnection agreements is pursuant to Article 26 of the Electronic Communications Act. It was unauthorised to provide other parties with information on transactions with other companies with respect to call termination including other departments of the company, subsidiaries or partners.

#### **Obligation for separation of accountancy**

171. The obligation was imposed on Siminn and Vodafone for separation of accountancy for GSM/UMTS mobile phone networks. Separation of accountancy should be organised with respect to revenue, costs, assets and liabilities for mobile phone services in wholesale and retail. Siminn and Vodafone should provide to the PTA on an annual basis a breakdown of the operational accounts and balance sheet for wholesale and retail service for mobile phone networks along with a statement of the division of indirect costs that were not possible to allocate through comparison with other cost items.

## **Obligation for price control**

172. An obligation was imposed on Siminn, Vodafone, Nova, IMC/Alterna and IP-fjarskipti (Tal) for the reduction of the termination rate in their GSM/UMTS mobile phone networks to ISK 4.0 or to the amount that new cost accounting indicated, by 1 January 2013. It was also stated that prices should become symmetrical on 1 January 2013. Call termination rates should be based on annual benchmarking of states within the EEA that applied the BU-LRIC methodology in cost analysis in accordance with the ESA Recommendation from April 2011. During the period of validity of the above specified Decision, the call termination rate would then be updated annually on the basis of new benchmarking which should be completed no later than 1 November each year, in the first instance 1 November 2012. This conclusion decided the price from and including the following turn of the year, in the first instance on 1 January 2013.

### **5.3.2 The impact of existing obligations**

173. Those obligations in force have, as could be expected, had a direct impact on the call termination prices of Siminn, Vodafone, Nova, IMC/Alternate and IP-fjarskipti (Tal) as they prescribed a reduction in call termination prices in GSM/UMTS networks and in those companies' virtual networks. The obligations have had no more impact on call termination prices than that which was strictly prescribed. The companies have not reduced their price further than they were obliged to.

174. The reduction and the levelling of termination rates of the companies had a levelling effect on retail prices for on-net calls in their networks. One can see this in the altered subscription packages of all of the electronic communications companies as the most common subscriptions are those that have the same minute price in all systems though there are still subscription packages where the on-net price is different and lower than the off-net price.

175. With the reduction of termination rates, mobile phone companies lose some revenue. It is however difficult to say how this impacts their performance as there are many other influencing factors. If a reduction in call termination prices is applied to all parties to the market, then this equally reduces costs for purchase of call termination service which means that it is not possible to assert that the reduction of call termination prices is burdensome when one looks at the broader picture. If traffic between mobile phone companies is symmetrical, then the reduction of call termination prices has no impact as costs are reduced in accordance with reduced revenue. The reduction of call termination prices will mean that costs and revenue in mobile phone service will be generated in a more transparent manner than before, and a better base will be created for competition on the mobile phone market.

## **5.4 Proposals for obligations**

176. The PTA has on the basis of market analysis come to the conclusion that obligations should be imposed on Siminn, Vodafone, Nova, IMC/Alternate and 365 (Tal) on the market for call termination in individual mobile phone networks. In this Section the obligations that the PTA plans to impose will be defined and described in more detail.

### **5.4.1 Obligation to provide access**

177. According to Paragraph 1 of Article 28, Paragraph 1 of the Electronic Communications Act the PTA may instruct undertakings with significant market power to meet normal and reasonable requests for open access to public electronic communications networks, network elements, and associated facilities under certain conditions prescribed by the Administration.

Paragraph 2, Item g of the same Article states that it is permissible to require that electronic communications undertakings interconnect networks or network elements.

178. When imposing an obligation to grant access, it is necessary to consider whether the access in question encourages investments in the network and promotes innovation, efficiency and sustainable competition. In Paragraph 3 of Article 28 of the Electronic Communications Act it is stated that when making a decision to impose obligations pursuant to Paragraph 1, the PTA shall take into account whether it is:

- technically and economically realistic to use or set up one's own facilities in competition, taking into account market development and the nature and type of interconnections and access in question;
- feasible to provide the access proposed;
- justifiable, in view of the original investment by the owner of the facility and the risk taken in making the investment;
- to the advantage of competition in the longer term;
- inappropriate, in view of intellectual property rights;
- conducive to increasing the supply of services.

179. The PTA has assessed whether the access requirement is technologically and financially realistic and whether it would be realistic for a competitor to set up his own infrastructure in competition, considering market developments and the nature of the access in question. The PTA considers it quite feasible for all electronic communications companies to grant the access that is proposed; furthermore it considers it justifiable with respect to the initial investment. The PTA considers the obligations to be in the interests of competition in the long-term and that they will encourage an increase in service offers.

180. Pursuant to Article 24 of the Electronic Communications Act, all electronic communications companies that operate a public electronic communications network or public electronic communications services have a right to interconnection with other public electronic communications networks or service and they are in the same way obliged to agree on interconnection. Termination of telephone calls in mobile phone systems is covered by this provision which means that it is a mandatory requirement that a mobile phone network company offer other electronic communications companies call termination in its network. The PTA should therefore not need to prescribe with a separate decision whether this access should be provided. On the other hand it could be necessary for the PTA to prescribe specific conditions for the access arrangement.

181. The PTA considers that it has not observed significant problems in the making of interconnection agreements and has no knowledge of electronic communication companies being denied interconnection. The PTA did however receive a complaint from Nova in December 2010 to the effect that IP-fjarskipti (Tal) was delaying the making of an interconnection agreement between the companies. On 11 March 2011, the companies signed an interconnection agreement. TAL made an interconnection agreement with Vodafone in December 2010. There are also examples from the past of interconnection agreements having taken an abnormally long time and of negotiations having been difficult. The PTA considers it important that there be no delays in making agreements on interconnection and that a company should not use technical barriers as an excuse. The PTA will monitor whether agreements on interconnection with the above for networks are made within reasonable time limits and whether reasonable requirements are made with respect to technology. "... In order to prevent

hindering the entry of new companies into the electronic communications market by delaying negotiations on agreements or by limiting information, or that negotiations on agreements between incumbents are delayed, the PTA intends to prescribe that interconnection agreements shall be completed without delay and no later than within two months from the date when they are requested. Should agreement not be reached, a party can request that the PTA decided whether an interconnection agreement should be made and with what conditions."

182. The conclusion proposed by the PTA with respect to access to call termination in mobile phone networks is that Siminn be obliged to make agreements on interconnection with those electronic communications companies that offer public electronic communications services or electronic communications networks and to offer call termination both in its mobile phone networks pursuant to Article 24 of the Electronic Communications Act, see also Item g Paragraph 2 of Article 28 of the same Act. The same applies to Vodafone, Nova and IMC's Alterna. 365 Miðlar (Tal) shall bear the same obligation for its virtual network.

183. Interconnection agreements shall be completed without delay and no later than within two month from the time they were requested. Electronic communications companies that operate both mobile phone and fixed line phone networks shall give counterparties the option of connecting directly to the mobile phone networks and it shall not be made a condition that mobile phone traffic go via through the companies' fixed line networks.

184. The PTA withdrew the obligation for transparency and the publication of a reference offer on Siminn and Vodafone, with its Decision no. 18/2010 as the Administration did not see this obligation as being necessary, given an active competition environment. It was in accordance with the principle of proportionality to not impose more obligations than were necessary to resolve the competition problem in question. The PTA considered that Article 24 of the Electronic Communications Act and the above access obligation were sufficient to implement interconnection agreements on the market in question without unnecessary delays. While the companies did not need to publish a reference offer, they were obliged to inform electronic communications companies that requested interconnection about all the issues necessary to ensure that the making of an interconnection agreement should not take a longer period of time than that prescribed above. The need for the obligation for transparency on the market in question was also lessened by the fact that interconnection had up to this point in time gone through the fixed line networks of Siminn and Vodafone and mobile phone networks had not been connected directly. There was, however, still the possibility that one mobile phone network operator could request direct interconnection with the mobile phone network of another mobile phone network operator. All necessary information that would otherwise have appeared in a reference offer should thus be above board in agreement negotiations between such parties. One could also point out that the maximum would be fixed with a glidepath such that transparency of pricing would be assured. The PTA considers that circumstances on the market in question have not changed in this regard, and therefore plans not to impose an obligation of transparency on the companies.

185. Using the same arguments as expounded here above, the PTA decided that it would not impose obligations for transparency and for the publication of a reference offer on Nova and IMC/Alterna in the above specified Decision. The PTA considers that circumstances on the market in question have not changed in this regard, and therefore plans not to impose an obligation of transparency on the companies. The same applies to 365 Miðlar (Tal)

#### **5.4.2 Obligation for non-discrimination**

186. According to Article 30 of the Electronic Communications Act, the PTA can impose obligations on electronic communications companies designated with SMP to practise non-discrimination when agreeing to interconnection or access. Such obligations should particularly ensure that electronic communications companies make the same conditions to other companies that provide electronic communications services for the same kind of transactions and should provide service and information with the same conditions and the same quality as they provide to their own service department, subsidiaries or collaborators.

187. Significant market power of mobile phone companies in call termination in their own networks and the lack of possible substitute service can lead to the companies discriminating against parties that require the service, should the obligation for non-discrimination not be imposed. They could for example have the incentive to sell to unrelated parties at a higher price than the price to their own departments or might discriminate between unrelated parties. Such conduct has a negative impact on competition and is detrimental to consumers who need to pay excessively high rates for telephone calls between separate networks.

188. Even where companies have been assured interconnection at a cost-analysed price, a company with significant market power could try to discriminate using other factors than price and thus increase a competitor's costs in order to remove him from the market. This could be in the form of poor provision of information, varying quality in services and unfair conditions in agreements. Fair, moderate and justifiable conditions for access, including price are basic issues when striving to strengthen competition. In the opinion of the PTA the obligation for non-discrimination is admirably suited to tackle the problems that arise in connection with discrimination, both with respect to price and other factors. The PTA believes that the demand for non-discrimination is both reasonable and normal. It cannot be seen that this results in significant costs for the companies in question or inconvenience as this obligation has applied to all of the companies since 2012 and for a longer period for all but 365 (Tal). The obligation for non-discrimination does not mean that all companies are subject to exactly the same conditions but rather that all difference in conditions is based on objective criteria.

189. Is important that companies with a dominant position in the retail market do not abuse their dominance in this retail market with abnormal pricing. With such behaviour, the company with market dominance can force new companies into unprofitable and sustainable operations. It is important that the Competition Authority does not permit such behaviour if its assessment is that a specific company has a dominant position on a retail market. If the wholesale price for call termination is higher for external traffic than for on-net traffic then this can lead to price/margin squeeze.

190. An obligation of non-discrimination was imposed on Siminn and Vodafone in the market analysis of the market in question which was completed in 2006 with respect to prices for termination in their own mobile phone networks for calls from the same mobile phone network, from other mobile phone networks or from fixed networks. In the market analysis that was completed with the Decision of the PTA number 18/2010, the Administration lifted the obligation for non-discrimination, with respect to on-net calls as it was thought more normal that the Competition Authority monitored such problems on retail markets that concerned, first and foremost behaviour of companies with significant market power in their pricing of retail products. It would also be inappropriate if such an obligation for non-discrimination at wholesale level limited the freedom of companies that did not have significant market power at the retail level, to price their retail products in the manner most suitable at any given time. It

was also the view of the PTA that the problem in question would decrease in step with reductions in termination rates. Then the PTA considered that the results of a recent Siminn cost analysis showed that pricing for origin and termination of on-net calls and for origin and termination of calls between mobile phone networks, were similar. For this reason, the obligation for non-discrimination was not as important as in the previous market analysis when the pricing of termination between mobile phone networks in wholesale had been higher than the retail price for on-net calls with both Siminn and Vodafone. As has been shown in previous market analyses, it was the assessment of the PTA that telephone calls with origin and termination in the same mobile phone network were subsidised when price separation was practised against external traffic by pricing termination of calls from other networks higher than on-net calls. The existing Siminn cost analysis from 2010 indicated that there was no subsidising of on-net telephone calls. It was however still the assessment of the PTA that price differentiation was being used on off-net calls. The PTA still proposes that the non-discrimination obligation should not cover on-net calls.

191. Furthermore, the PTA considers that discrimination in call termination prices conducted in the lee of lack of transparency in the market and the low level of countervailing buying power that results from the CPP principle, are not characteristics of a competition market. In the opinion of the PTA, the above specified price discrimination, which has admittedly diminished significantly in recent years, is a consequence of mobile phone companies having a monopoly on call termination in their own networks where they can operate without taking into consideration their competitors, customers and consumers. In the light of the above, and until nothing new emerges, the PTA considers it appropriate to prescribe, non-discrimination in pricing in the companies' own mobile phone networks for calls from other mobile phone or fixed line networks.

192. There is currently an obligation for non-discrimination on Siminn, Vodafone, Nova, IMC/Alterna and 365 (Tal) on the basis of prior obligations on the relevant market. In the light of the fact that an obligation is already in place with the companies in question one must consider it to be not particularly burdensome for those companies to continue to bear this obligation. The PTA considers it necessary to maintain the non-discrimination obligation in order to ensure that the companies do not discriminate against those parties to whom they sell call termination. This is done particularly to ensure that mobile phone companies do not discriminate in pricing of termination within the price ceiling prescribed in the obligation on price control.

193. With a view to Article 30 of the Electronic Communications Act, the PTA intends to maintain the obligation for non-discrimination on Síminn, Vodafone, IMC/Alterna, Nova and 365 (Tal) for their mobile phone and virtual networks, for call termination in the networks in question from other mobile phone and fixed networks. The companies shall provide all purchasers of call termination in wholesale with comparable conditions, prices and quality. Access to the network shall be provided within a comparable period of time. The companies shall conduct their operations in such a manner that treatment of information that is revealed when making and applying interconnection agreements is pursuant to Article 26 of the Electronic Communications Act. It is unauthorised to provide other parties with information on transactions with other companies with respect to call termination including other departments of the company, subsidiaries or partners.

### **5.4.3 Obligation for separation of accountancy**

194. Pursuant to Article 31 of the Electronic Communications Act no. 81/2003 the PTA can impose obligations on an electronic communications company with significant market power for separation of accountancy between operations that relate to interconnection or access and other operations in such a manner that it will be possible to allocate all revenue and costs to operational units that can be connected to differing services. In addition to this the Administration can demand of a company that operates both an electronic communications network and electronic communications services that its wholesale prices and prices within the company are transparent, among other things to prevent unjustified subsidies. In the PTA Decision no. 3/2012 from 13 January 2012, obligations were maintained on Siminn and Vodafone for separation of accountancy.

195. The purpose of accountancy separation is among other things to be able to identify information from bookkeeping to show as exactly as possible the results from various parts of operations as though from separate companies. Separation of costs limits possibilities for the company in question to rate for costs that are not related to a specific service. As call termination prices are now decided on the basis of benchmarking and are for this reason not dependent on the costs of individual electronic communications companies in this country, the PTA sees no reason to maintain obligations on separation of accountancy.

196. The PTA therefore intends to withdraw the obligation for separation of accountancy on Siminn and Vodafone. This obligation is not imposed on other companies.

### **5.4.4 Obligation for price control**

#### **5.4.4.1 General**

197. Pursuant to Article 32 of the Electronic Communications Act, the PTA can impose obligations on electronic communications companies for cost related tariffs and obligations for cost accountancy for specific types of interconnection or access, where market analysis indicates that a lack of active competition can lead to an electronic communications company with significant market power demanding excessively high rates or to there being an abnormally small difference between wholesale and retail prices. As was stated in the discussion on competition problems, the PTA considers that all companies that offer call termination in a mobile phone network could have the incentive to demand higher call termination rates should their tariffs not be subject to price control.

198. The PTA considers that the conditions of the above specified provision, exist in this market. The competition problem on the market is mainly related to an incentive for overpricing of telephone calls that originate in networks other than the one where termination takes place. In the opinion of the PTA this is among other things a consequence of the arrangement for payment of termination, which is known as the CPP principle, as it means that parties other than their own customers pay the costs and there is little consumer price awareness. Before the PTA prescribed symmetrical termination rates there was a significant difference in the termination rates of those companies that were subject to price control and those that did not bear such an obligation. The PTA considers it undesirable that electronic communications companies be free to collect termination rates in excess of the costs in an efficiently operated mobile phone networks. Such a situation is contrary to consumer interests and limits transparency on the market.

199. The PTA considers that according to the above there is little in the current situation that could contribute to a reduction of termination rates and for this reason that it is necessary to control pricing of call termination in the mobile phone networks in question. Experience in this country and abroad shows that competition has not been sufficient to reduce termination rates in accordance with real costs of providing termination and almost all regulatory bodies in Europe have imposed obligations to reduce termination rates. In addition to this, termination rates need to be levelled on the market in order to support balance and transparency on the market. In the opinion of the PTA the imposition of obligations for access and non-discrimination do not suffice on their own to deal with the competition problems inherent in pricing in the relevant markets.<sup>63</sup>

200. The PTA thus considers it necessary to maintain obligations on price control on the market and that it is necessary that all companies that offer termination in mobile phone networks continue to be subject to price control, as there has been no evidence of incentives that would bring about normal pricing development where obligations were not in place. For this purpose the PTA intends to maintain the measures initiated with the Administration's Decision no. 3/2012.

#### **5.4.4.2 PTA Decision no. 3/2012**

201. In PTA Decision no. 3/2012, the practice was discontinued of deciding termination rates for Icelandic mobile phone companies with reference to the Siminn cost analysed prices (which were based on historical costs) and this was replaced with benchmarking in accordance with Article 12 of the EFTA Surveillance Authority Recommendation of 13 April 2011 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EFTA States.<sup>64</sup> This change in methodology for deciding termination rates was neither appealed to the Appellate Committee nor to the courts.

202. In the above Decision, it was stated that the obligation for price control of the company's tariffs prescribed a reduction in call termination rates to ISK 4.0 or another amount decided by the benchmarking, in two steps until 1 January 2013. During the period of validity of the above specified Decision, the call termination rate would then be updated annually on the basis of new benchmarking which should be completed no later than 1 November each year, in the first instance 1 November 2012. This conclusion decided the price from and including the following turn of the year, in the first instance on 1 January 2013.

#### **5.4.4.3 Recommendations from the EU Commission and from ESA on obligations with respect to termination rates**

203. The EU Commission issued a Recommendation with respect to the regulatory treatment of call termination tariffs in mobile phones and fixed line networks in May 2009<sup>65</sup>. The Commission considered that obligations with respect to termination rates were not sufficiently homogenous in member states of the Union and decided to issue a regulation to support homogenisation. The EU Commission Recommendation was based to a large degree on the position of the European Regulators Group (ERG), which issued a common position on

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<sup>63</sup> See PTA Decision no. 9/2010 from 16 April 2010.

<sup>64</sup> EFTA Surveillance Authority Recommendation of 13 April 2011 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EFTA States.

<sup>65</sup> Commission Recommendation of 7.5.2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU.

termination rates on 28 February 2008<sup>66</sup> ESA issued an analogous Recommendation on 13 April 2011<sup>67</sup>.

204. The main principle according to the Recommendations is that regulatory authorities should prescribe rates that are based on the costs of an efficiently operated company and in this manner the rates should be the same in all companies, that is to say symmetrical rates. When analysing costs for termination it is recommended that the pure bottom-up (BU) LRIC model<sup>68</sup> be used. The focus is on expected future development on the basis of existing costs where it was assumed that the most efficient technical solutions on offer during the period of validity of the Decision would be used. This means that one should allow for next generation networks (NGN) in the central part of the network and a mixture of 2G and 3G in the access network. Termination rates shall only be based on costs incurred by an electronic communications company in implementing termination. One can compare the bottom-up model with the top-down<sup>69</sup> model for adjustments.

205. Should a regulatory authority, because of its size and/or lack of funding, be unable to implement the BU-LRIC model then it can use another methodology, see among other things, benchmarking. If it is shown that this method returns an outcome that harmonises with the objectives of the Recommendation then the implementation of LRIC can be postponed until 1 July 2014. Under certain circumstances it will be possible to postpone even further. The results from a methodology, other than LRIC should not exceed the average termination rates of states that use the methodology recommended in the Recommendation, that is to say methodology based on a pure BU-LRIC model.

206. All deviations from the main principle of symmetrical termination rates should be based on circumstances over which the company in question has no control, such as variance in frequency licences. Where a new mobile phone company is so small that it cannot achieve full efficiency in operations and for this reason carries higher unit costs and where barriers to entry and growth on the retail market have been demonstrated, it is considered justifiable for the company to maintain higher prices for a period of up to 4 years from its entry to the market.

207. New companies are afforded a glidepath to reduce their prices to the same level as that of other companies, because of their higher unit costs, until minimum economy of scale is achieved. Allowance is not made for a longer glidepath than 4 years from the time that a new company enters a market, unless something extraordinary and non-transitory causes the increase in cost, such as varying frequency licences. In accordance with the common position taken by ERG, the four-year time limit is based on the assessment that on the mobile phone market, one may allow for a period of 3-4 years from entry into the market to achieve 15-20% market share and thus minimum economy of scale.

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<sup>66</sup> See ERG's Common Position on symmetry of fixed call termination rates and symmetry of mobile call termination rates ERG (07) 83 final 080312. ERG has now been incorporated into a new body, Body of European Regulators for Electronic Communications (BEREC).

<sup>67</sup> EFTA Surveillance Authority Recommendation of 13 April 2011 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EFTA States.

<sup>68</sup> The costing tool related to bottom-up models produces cost references coming from *costs elaborated through an engineering network model*, which is a *hypothetical mobile network*.

<sup>69</sup> The costing tool related to top-down accounting data produces cost references, which do correspond to direct references to *accounting records and asset registers*, and are based on *real existing mobile networks* and historical/current data.

208. The Recommendation has no impact on the decisions made prior to its publication, and all regulatory bodies should be prepared to introduce symmetrical rates, no later than 31 December 2012, having taken into account the above specified issues which can lead to a difference in rates.

209. As stated here above, ESA has issued an analogous Recommendation to that of the EU Commission with respect to termination rates which is to apply in the EEA. One should however note that such a Recommendation from ESA does not have legal impact in this country and nor is such a Recommendation a binding instrument.<sup>70</sup>

210. Despite the above, the PTA plans to take full account of the ESA Recommendation on termination rates. The PTA intends among other things to prescribe symmetrical termination rates and that termination rates should be based on the costs of an efficiently operated network in the EEA using benchmarking. The PTA however plans not to prescribe that cost analysis should be based on the going rate from a pure bottom-up LRIC model, because this would be very expensive for electronic communications companies and for the PTA, which is a very small regulatory body in a European context, and in addition to this such methods are time-consuming and require a great deal of preparation. The PTA plans to continue to apply benchmarking in accordance with the exemption provision in Article 12 of the ESA Recommendation.

#### **5.4.4.4 Termination rates in Europe**

211. Termination rates in Europe have dropped significantly in recent years and they have also become symmetrical in most countries as a result of the above specified Recommendation from the EU (ESA). In a report from the Body of European Regulators for Electronic Communications (BEREC)<sup>71</sup> on comparison of termination prices in 35 European countries which are parties to BEREC, the status of call termination prices in specific countries in Europe in July 2014 is shown.

212. Average rates in the relevant countries in Europe have dropped steadily in recent years and in July 2014 the price per minute using arithmetic mean was €cent 1.69 per minute and €cent 1.23 using weighted mean. The price of call termination in Iceland was at the same time €cent 1.05 per minute.

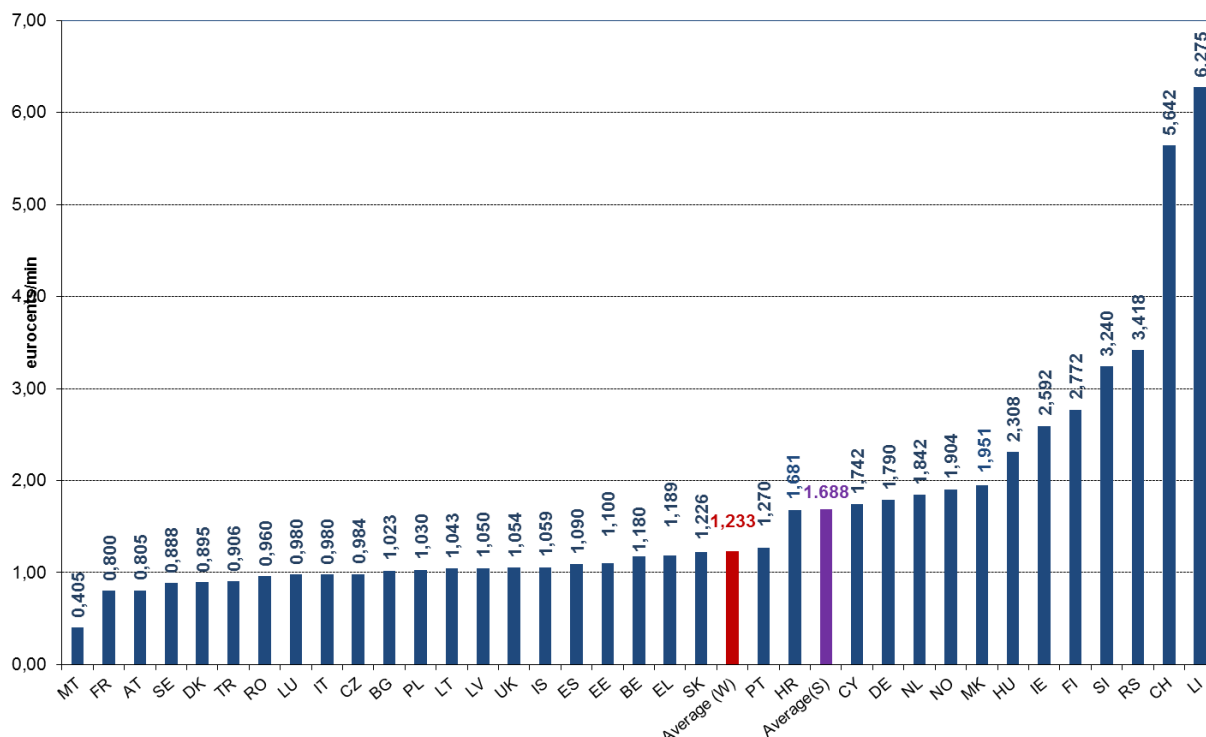
213. Figure 5.1 shows average termination rates in specific European countries within BEREC in July 2014 where Iceland is in 16th position of 35 countries in the comparison group.

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<sup>70</sup> In this respect one can refer to the ruling of the Appellate Committee for Electronic Communications and Postal Affairs number 1/2009, dated 22 May 2009 which deals with the Siminn appeal with respect to the PTA market analysis of the wholesale market for transfer of telephone calls in public telephone networks provided at a fixed location (Market 10). In that case, the Recommendations from the EU Commission and ESA on the relevant market were tested.

<sup>71</sup> Termination Rates Benchmark Snapshot (as of July 2014), BoR (14) 173, November 2014.

**Figure 5.1 Termination rates in mobile phone networks in specific countries in Europe (€cent per minute)**



Source: BEREC

214. Despite the fact that there has been significant progress in harmonising termination rates between countries in Europe, the comparison shows that there is still some way to go before this EU objective can be achieved. Cost analysis based on pure BU-LRIC models has in most countries returned results around 1 €cent (from 0.80 to 1.27) and they have come into force during the period 2012 to 2015. Malta is a salient exception where the result is even lower at 0.4 €cent. Since this first BEREC report was published, Norway has published results from its pure BU-LRIC model where the conclusion was 0.083 NOK (0.99 €cent), which is slightly lower than the current termination rate in this country. There is nothing to indicate that cost analysis in more sparsely populated countries such as Norway and Sweden returns higher termination rates.

#### 5.4.4.5 Previous PTA Decisions on termination rates in mobile phones with benchmarking

215. In accordance with the PTA Decision no. 3/2012, the Administration made benchmarking in the years 2012, 2013 2014 to decide termination rates for calls in mobile phone networks. The conclusion of the benchmarking was published in Decision no. 32/2012 dated 1 November 2012, Decision no. 25/2013 dated 31 October 2013 and Decision number 24/2014 dated 31 October 2014, on wholesale tariff for call termination in individual mobile phone networks on wholesale tariffs.

216. In the implementation of the benchmarking the PTA took into account the above specified ESA Recommendation with respect to intervention by the regulatory authorities in call termination rates in mobile phones and fixed line networks. The PTA selected comparison countries in accordance with Article 12 of the ESA Recommendation in question. In June 2012, Belgium, United Kingdom, Denmark, France, Italy, Portugal and Spain had made decisions on termination rates in mobile phone networks that were based on the pure BU-LRIC model in

accordance with the Recommendation. A year later Bulgaria, Greece, Croatia, Poland, Slovakia, Sweden and the Czech Republic had joined this group and in the most recent benchmarking made by the PTA (PTA Decision no. 24/2012), Austria, Malta, Romania and Slovenia were included.

217. In the Decision of the PTA no. 32/2012 it was the conclusion of the PTA that the wholesale rate for call termination in individual mobile phone networks in Iceland should be ISK 1.66/minute for the period 1 July 2013 to 31 December 2013. In its preliminary draft the PTA had allowed for the reduced price coming into force from and including 1 January 2013. Because of objections from electronic communications companies and in order to respect proportionality, the PTA decided on the other hand to postpone the coming into force until 1 July 2013.

218. The Decision in question no. 32/2012 was appealed to the Appellate Committee for Electronic Communications and Postal Affairs on 29 November 2012. In its Decision no. 6/2012 the Appellate Committee made objections to the coming into force of the new call termination prices. The Appellate Committee considered it not clear that the coming into force of the new call termination tariff had been necessary on 1 July 2013 in this country in the light of, on the one hand, the number of comparison countries that had decided a later date for coming into force than the PTA or that had not made a decision on the adoption of the cost analysis method in question, and on the other hand in the light of the fact that this was a burdensome decision. The objective of harmonising termination rates with the comparison countries could have been achieved with a longer postponement of the coming into force of the new termination rates. For this reason the Appellate Committee considered it proper to rescind the part of the appealed Decision that related to its coming into force on 1 July 2013. The Appellate Committee assumed that a decision on the date of commencement of the call termination tariff would be taken subsequent to the ruling. The Appellate Committee dismissed that part of the appeal which related to the PTA Decision that call termination tariff on Market 7 should be based on benchmarking and to the methodology that should be applied in such comparison. The Ruling of the Appellate Committee is further discussed in Section 1.3 in the PTA Decision no. 25/2013.

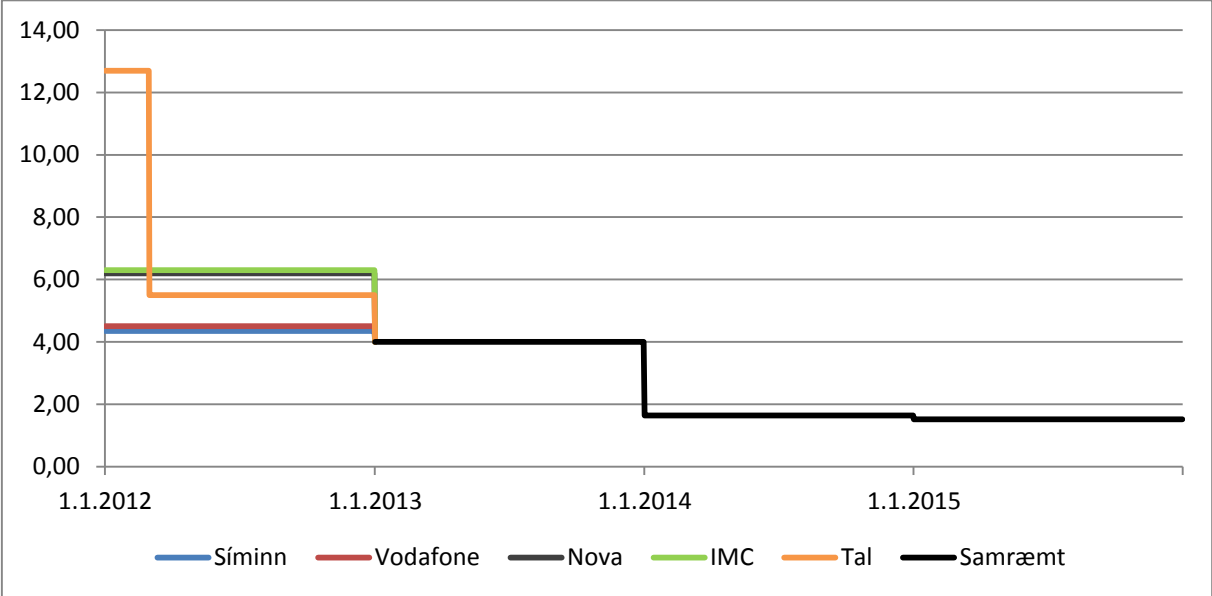
219. One could understand the wording of the above specified Ruling to mean that the Committee had opened the possibility for the PTA to make a decision on a new period of validity for termination rates, which could come into force sometime in the latter half of 2013. The PTA however considered there to be no basis for altering the annual review process, which shall be completed with a Decision, no later than 1 November each year with the coming into force of the Decision from 1 January of the next year, see the previously referenced PTA Decision no. 3/2012. The time required for processing such a Decision is a number of months if one includes domestic consultation and consultation with ESA. For this reason the PTA considered it not to be realistic to make an additional decision prior to the PTA Decision no. 25/2013 being made. This meant that the new tariff for call termination in individual mobile phone networks of ISK 1.66/minute according to the PTA Decision no. 32/2012 never came into force, and the older tariff of ISK 4.00/minute remained in force until a new tariff was decided with the PTA Decision no. 25/2013.

220. In the PTA Decision no. 25/2013 it was the PTA conclusion that the wholesale tariff for call termination in individual mobile phone networks in Iceland should be ISK 1.64/minute for the period 1 January 2014 until 31 December 2014. Before the Decision was made, the draft Decision was submitted for national consultation and for consultation to ESA. ESA made no comments on the PTA planned Decision.

221. In accordance with the PTA Decision no. 24/2014 the current call termination tariff on the market for call termination in individual mobile phone networks is ISK 1.52/minute and this applies until the end of the current year. Before the Decision was made, the draft of the Decision was sent for national consultation and for consultation to ESA. ESA made no comments on the PTA planned decision.

222. Figure 5.2 shows development of termination rates in mobile phone networks in Iceland from 2012

**Figure 5.2 Reduction of termination rates in mobile phone networks, 2012 to 2015<sup>72</sup>**



Source: Post and Telecom Administration

**5.4.4.6 Planned PTA Decision on obligation for price control**

223. As previously stated the PTA considers it necessary to maintain the obligation for price control of termination in mobile phone networks.

224. As previously stated in Section 5.4.4.3, ESA published a Recommendation on obligations with respect to termination rates on 13 April 2011. The Recommendation pronounced on various issues that the electronic communications regulatory bodies shall have in mind when elaborating obligations on monitoring of tariff, including calculations of termination rates.

225. According to the above specified ESA Recommendation, electronic communications regulatory bodies are granted a general period of notice for adaptation until 31 December 2012 to prepare and introduce the pure BU-LRIC cost model. Mobile phone companies had the same notice to adapt their business plans to such a cost analysis methodology. Less well-resourced regulators were granted longer notice, i.e. until 1 July 2014, and longer if it would breach the principle of proportionality to force the relevant authorities to adopt such a cost analysis methodology, unless BEREC assisted them professionally and/or financially to make such a model. It is authorised to apply for benchmarking when making a decision on termination rates instead of LRIC cost analysis methodology where the price shall not be higher than the average

<sup>72</sup> On the basis of price obligation, see PTA Decision no. 3/2012.

price in EEA states that apply in the pure bottom-up LRIC methodology for calculation of termination rates for mobile phones.

226. Experience in the EEA had shown that the cost in making a BU-LRIC model was in the order of ISK tens of millions for each model and for each update. Were the PTA to intend to use this methodology for deciding termination rates, it would need to develop a model for a fixed line telephone network for the Icelandic mobile phone market with attendant costs for the PTA and for parties to the market. The PTA considers that because of the small size of the market and the considerable cost and inconvenience that would be created both for parties to the market and for the PTA if work was to be launched on making a PU-LRIC model, it would not be proper at this point in time to prescribe the making of such a model, as the cost would in all likelihood be eventually paid by consumers in the form of higher rates. The PTA plans to take advantage of the exemption in Article 12 of the ESA Recommendations described here above, see also the authority in Paragraph 4 of Article 32 of the Electronic Communications Act, and prescribe a cost analysis methodology on the relevant market based on benchmarking.

227. In the opinion of the PTA, given current status, the Administration is not in a position to apply the BU-LRIC cost analysis methodology on the market in question in the coming years because of a lack of budget, staff and specialised knowledge. It is furthermore clear that given unchanged electronic communications legislation, the PTA does not have the option of using assistance from BEREC. Nor did the PTA consider it appropriate to base cost analysis on the relevant market on the LRIC methodology, which is based on an electronic communication company's historical costs (top-down model) in the coming years, as such a methodology did not harmonise with the above specified ESA Recommendation. In the light of this, the PTA considers it most reasonable to use benchmarking as the comparison is made with states that use the pure BU-LRIC methodology pursuant to the Recommendation.

228. The PTA therefore plans to prescribe that termination rates in this country shall continue to be decided on the basis of benchmarking. In the opinion of the PTA, a predictable procedure for deciding termination rates with benchmarking has been created, which gives electronic communications companies a more stable and predictable operating environment. Benchmarking has also proven to be an economic and efficient way to achieve the objectives for termination rates that were tabled in the above specified ESA Recommendation.

229. This means that the PTA will continue to make benchmarking on an annual basis, which will be the basis for maximum termination rates. The PTA shall conclude its annual benchmarking with a decision, subsequent to national consultation and consultation with ESA, no later than 1 November each year. The first benchmarking shall therefore be completed not later than 1 November 2015 for prices that will apply from and including 1 July 2016.

230. The PTA plans to impose an obligation for price control on the following companies:

- Call termination in the Siminn mobile phone networks.
- Call termination in the Vodafone mobile phone networks.
- Call termination in the Nova mobile phone networks.
- Call termination in the IMC Ísland/Alterna mobile phone networks.
- Call termination in the 365 (Tal) virtual mobile phone network.

231. The PTA believes that the pricing obligation will lower entry barriers to the market in question as new parties need to pay lower termination rates to those mobile phone companies incumbent on the market. The PTA points out that as termination rates drop there is less

likelihood that the PTA will authorise new parties to charge higher termination rates than those that the PTA has prescribed, particularly after 1 January 2013. The obligation requires that the termination rate in mobile phone networks and in virtual networks is from 1 January 2015 ISK 1.52 per minute for all companies in accordance with the amount shown by PTA benchmarking in 2014. This applies until the end of 2015.

232. As specified above the PTA plans to apply price comparison, in accordance with Administration's authority pursuant to Paragraph 4, Article 32 of the Electronic Communications Act and of Article 12 of the above specified ESA Recommendations. The PTA plans to apply the following main criteria as a basis for calculations of termination rates when benchmarking is applied:

- Reference should be made to those EEA states where the termination rates of companies with market dominance on the markets in question are subject to price control by the electronic communications regulatory body of the state in question, on the basis of cost analysis where the results are based on a pure BU-LRIC model.
- Comparison of prices should be based on conclusions on termination rates according to calculations based on the pure BU-LRIC model which are available in April of the year when the benchmarking was made in each instance. When benchmarking, a formal Decision shall have been made by the regulatory authority in question.
- It is expected that the resulting price is not higher than the arithmetic average in those countries that fulfil the above conditions.

The above specified conditions are in accordance with the procedures applied by the PTA in recent years when deciding termination rates with benchmarking on this market.

233. The PTA will conduct benchmarking again in the year 2015 which shall be completed with a decision, no later than the coming 1 November, which shall apply for termination rates from and including 1 January 2016 and so annually for the period of validity of this decision. This rate is a maximum wholesale rate per minute<sup>73</sup> ex VAT and individual mobile phone companies can therefore offer lower termination rates should they so choose, but they must of course respect the non-discrimination obligation and may not discriminate between companies using subjective criteria.

234. The PTA will during the period of validity of this market analysis (3 years), that is to say in the years 2016, 2017 and 2018, update termination rates in accordance with annual results of the PTA benchmarking, which shall be completed with a decision by 1 November each year. This will be done without the PTA having made a new market analysis of the relevant market, as this is simply a case of technical implementation of a specific obligation. Such a change does however require domestic consultation and consultation with ESA before a final decision is made.

235. As electronic communications companies outside the EEA are generally not subject to price control obligations, Icelandic mobile phone companies may need to pay them considerably higher termination rates than they can expect to pay counterparties within the EEA. Such a difference can prove disadvantageous for Icelandic mobile phone companies and Icelandic mobile phone users could possibly need to pay a significantly higher retail price for telephone companies to such countries, than users in those countries pay for calls to Iceland.

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<sup>73</sup>When invoicing, the total time in each billing period is calculated as the sum of registered seconds of traffic of all telephone calls where termination is invoiced, converted to minutes.

For this reason maximum termination rates according to benchmarking that the PTA plans to subscribe shall only apply to telephone calls that originate in networks of mobile phone companies that are operated within the EEA. The obligation for maximum rates that the PTA plans to impose does not apply to telephone calls that originate in networks outside the EEA.

## **5.5 Assessment of impact of imposed obligations**

236. An assessment must be made of whether the onerous impact of the obligations that the PTA plans to impose on the companies, or to maintain, on the relevant market is proportionate in the light of the objective is to be achieved. Those obligations that the PTA intends to impose or maintain are as a whole quite onerous for the companies. On the other hand the PTA considers that they are in accordance with proportionality and that they are not a greater burden than is necessary. The obligations are analogous to obligations that have been in force on the relevant market with the exception that the obligation for separation of accountancy has been withdrawn.

237. As is shown above the PTA considers it necessary to impose the obligations in question on companies on the relevant market. As other obligations are not better suited to achieve the intended results the PTA considers that with the initial investment in mind and the risk taken with the investment, this is not an unreasonable requirement.

### **5.5.1 The necessity to impose the relevant obligations**

238. In accordance with the principle of proportionality it is normal to assess the necessity to impose the obligations that have been described here above. The obligations are conducive to achieving the objectives of the Electronic Communications Act no. 81/2003 on active competition and efficient electronic communications. In the light of the competition problems that exist and of the strong position of each company on the relevant market, the PTA considers it necessary to impose all of the above specified obligations on the mobile phone companies in order to support increased competition and to assure consumers' interests. The PTA believes each individual obligation to be necessary and subsequent to the PTA examination of the relevant market the Administration has come to the conclusion that no other measures can be found that could be as effective in solving the competition problems that exist on the market.

239. The obligation for access to termination at wholesale level is an essential pre-requisite for competition to become active on the mobile phone market. It is not possible to solve the competition problems described here above in any other way than by imposing the obligation for access to call termination.

240. The obligation for non-discrimination with respect to call termination from other mobile phone networks and fixed line networks is necessary for companies, whether on the mobile phone or fixed line market, to be able to compete on a level playing field. The obligation should mean that all electronic communications companies that purchase termination in mobile phone networks receive comparable services and prices and in this way the competition problems related to discrimination will be solved.

241. The PTA believes the obligation for price control to be absolutely necessary as it has been shown that mobile phone companies have no incentive to offer termination rates based on costs with a reasonable mark-up, at their own initiative. The PTA therefore considers it necessary to maintain the obligation that was introduced with the PTA Decision no. 3/2012 on price control with benchmarking with EEA states. With this, it has been possible to significantly

reduce termination rates in recent years, which can be seen in Figure 5.2 here above. The PTA considers that the obligation for price control will lead to more economical operations in mobile phone networks which will eventually lead to lower prices to consumers.

### **5.5.2 The impact of obligations**

242. An assessment must be made of whether the onerous impact of the obligations that the PTA plans to impose on the companies on the relevant market is proportionate in the light of the objective is to be achieved. Those obligations that the PTA intends to impose or maintain on the companies are as a whole quite onerous. On the other hand the PTA considers that they are in accordance with proportionality and that they do not constitute a greater burden than is necessary to achieve its objectives. The obligations are analogous to obligations that have been in force on the relevant market with the exception that the obligation for separation of accountancy has been withdrawn from Siminn and Vodafone.

243. As is shown above the PTA considers it necessary to impose or maintain the obligations in question on companies on the relevant market. As other obligations are not better suited to achieve the intended results the PTA considers that with the initial investment in mind and the risk taken with the investment that this is not an unreasonable requirement.

244. The obligation for access is something of a burden on the companies but it is an essential prerequisite for active competition on the relevant markets. It is not possible to solve the competition problems described here above in any other way than by imposing the obligation for access. It is in fact necessary for mobile phone companies to offer interconnection with other networks in order to be able to offer their customers adequate service which enables them to make a call to any user. Such interconnection is in fact an obligation pursuant to Article 24 of the Electronic Communications Act. The obligation should first and foremost ensure that the companies do not discriminate in making interconnection agreements and delay the entry of new companies by extending contract negotiations. It can be considered burdensome to deal with all counterparties for interconnection in a satisfactory manner. Through a connection with other networks the companies gain better use of the electronic communications equipment in which they have invested.

245. The PTA does not consider the obligation for non-discrimination to be particularly onerous, as it cannot be seen that it requires special costs or inconvenience. In addition to this the obligation has applied to all companies in recent years. Furthermore, the non-discrimination obligation is limited to call termination originating in other mobile phone networks or fixed line networks and does not apply to on-net calls.

246. The PTA considers the obligation for price control to be rather burdensome. It is clear that all of the companies will lose some revenue as a result of this obligation but conversely they will save through lower termination rates from their competitors. If mobile phone traffic between companies is symmetrical, then termination rates will in all likelihood have no impact on the performance of mobile phone companies. The PTA believes that given the need for the obligation to solve competition problems, as described here above, then it is not excessively burdensome. Pricing is decided on the basis of cost analysed prices in the EEA with benchmarking which uses the average price of the countries in question. Pricing is based on cost analysed prices and the methodology is the same as has been used in recent years. Cost analysis was made at Siminn previously but the company no longer needs to maintain the cost analysis that it had introduced. Nor is there any requirement that other companies on the market make a special cost analysis. Instead of this, the PTA will continue to use the procedure of deciding rates annually on the basis of benchmarking made by the PTA. The implementation

of the obligation for price control based on benchmarking is thus on the whole not significantly burdensome for companies on the relevant market.

247. The obligations will not, in the opinion of the PTA, inhibit the development of efficient mobile phone networks as the pricing of call termination will be based on average costs of an efficiently operated mobile phone network in Europe and will allow for normal return on investment. Price control should thus not inhibit willingness to make profitable in the long-term. In addition to this, it is clear that the electronic communications companies have their main income from operation of mobile phone networks from sources other than call termination.

248. In the opinion of the PTA the above specified obligations are reasonable and necessary to support active competition and should not be considered unnecessarily onerous. The PTA considers obligations to be in the interests of competition in the long-term and that they will encourage an increase in service offers on the market for mobile phone service and for the electronic communications market as a whole.