Body of European Regulators for Electronic Communications

BEREC

BoR (10) 48

# BEREC Report
# Regulatory Accounting in Practice 2010

October 2010

# 1. Executive Summary

This is the sixth annual report in a series summarising the findings of a detailed survey of regulatory accounting frameworks across Europe. The information has been gathered from National Regulatory Authorities (NRAs) and covers the implementation of regulatory accounting methodologies, systems and processes.

These regulatory accounting frameworks provide NRAs with financial information essential to facilitate some of their significant regulatory decisions such as setting price controls, monitoring compliance with *ex ante* obligations (such as cost orientation of charges and non-discrimination) and informing market reviews.

The report provides an up-to-date factual report on the regulatory accounting frameworks implemented by NRAs and an assessment of the level of harmonisation achieved. The report sets out an overview of the regulatory accounting frameworks updated to June 2010 and also illustrates trends and comparisons with data collected each year from 2006.

This year's report layout has been restructured compared to last years' report in order to develop a deeper analysis that concentrates on the following four key wholesale markets: Line Rental, Unbundled Access, Broadband Access and Leased Lines Terminating Segments. Moreover an analysis is given of the cost base and accounting methodologies used for fixed and mobile termination markets.

Furthermore, compared to last year, the first chapter of the Report analyses separately the markets listed in the 2007 EC Recommendation and those listed in the 2003 Recommendation.

***Key findings***

The overall picture is relatively stable in comparison to last year with generally a small number of changes by NRAs since last year. There are clear preferences for price control methods (cost orientation alone or in combination with price cap), cost base (current cost accounting – CCA) and accounting methodologies (mainly long run incremental costs with fully distributed costs preferred only in a few markets). The degree of harmonisation of methodologies seems high and accommodates the use of elements or parameters that reflect national circumstances. These findings reflect the primary cost base or methodology selected by a NRA but do not bring out situations where a NRA would strengthen its financial analysis by comparing outcomes from one principal methodology with alternative approaches such as comparing bottom-up models with top-down or incurred costs.

The analysis of the key wholesale markets - Unbundled Access, Broadband Access and Leased Lines Terminating Segment - has shown a clear preference for cost orientation, a trend towards using CCA and a fairly even distribution of LRIC and FDC accounting methods. Slightly different results are observed for the Wholesale Line Rental, where the retail minus is the most used price control method, HCA and CCA are used quite in the same proportion and FDC is clearly the preferred choice as accounting methodology.

***Future development***

Good progress has been made in developing effective regulatory accounting frameworks to meet the needs of NRAs. However, this is a complex and highly technical topic which requires regular maintenance and enhancement of the regulatory accounting framework as competition develops, technology improves and new regulatory challenges emerge. We therefore anticipate carrying out more in-depth analysis of the regulatory accounting approaches.

# 2. Introduction

## *2.1 Background*

The ERG Regulatory Accounting Project Team (now the BEREC Regulatory Accounting Project Team) has been gathering and reporting data from National Regulatory Authorities (NRAs) with the aim of describing how regulatory accounting systems were implemented in Member States with respect to cost-orientation or non-discrimination obligations or to assist price control decisions. This is the sixth annual report summarising the results of this survey.

The report has been updated since 2005[1] in order to monitor the level and trend in harmonisation of regulatory accounting systems across Europe over time. By the end of the first 2006 quarter several countries had completed the first round of the market reviews, therefore it was possible to start evaluating how various Member States implemented the obligations provided for by articles 10, 11 and 13 of the Access Directive (for wholesale markets), by article 17 of the Universal Service Directive (for retail markets) and the principles contained in the new European Commission Recommendation on Cost Accounting and Accounting Separation of September 2005.[2] The previous years' reports showed a clear trend towards an increasingly harmonised approach to regulatory accounting obligation among ERG (now BEREC) countries. This trend is further confirmed by 2010 data, though with signs of stabilisation in applying particular methods for cost valuation or cost accounting.

## *2.2 Current report*

This report provides an update of the status of regulatory accounting systems across Europe (27 EU Member States plus Iceland, Norway, Switzerland and Croatia). It monitors how regulatory accounting methods and models developed as a consequence of the adoption by NRAs of decisions regarding market analyses. This year's report confirms the harmonisation trend already observed in last years.

The report benefits from information collected from the 30 authorities (listed in Annex 1) with most NRAs responding to the majority of the questions providing a solid base for further analysis.

The information provided in this report refers to those markets for which the market analyses are either concluded or under consultation. The report reflects, therefore, also measures which are planned to be

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[1] - ERG (06) 23 Regulatory accounting in practice 2006.
- ERG (07) 22 Regulatory accounting in practice 2007.
- ERG (08) 47 Regulatory accounting in practice 2008.
- ERG (09) 41 Regulatory accounting in practice 2009.

[2] Recommendation 2005/698/EC replacing Recommendation 98/960/EC on Accounting Separation and Cost Accounting of 8 April 1998. In September 2005 the ERG published a Common Position containing "Guidelines on implementing the EC Recommendation 2005/698/EC", cf. document ERG (05) 29.

implemented by the end of 2010, although the final decisions may be still subject to outstanding consultations and may therefore be part of the second or next market analysis rounds.

## *2.3 The data collection process*

NRAs can, in principle, use a variety of objective and appropriate regulatory accounting methodologies depending on their market analysis[3], however NRAs should aim at following regulatory best practice.

In order to obtain a general view of accounting systems across Europe, the Regulatory Accounting Project Team (RA PT) has collected a broad range of data since 2005, including, *inter alia*, a comparison between the cost-base (e.g. historical cost versus current cost) and the costing methodology (e.g. fully distributed cost - FDC- or long run incremental cost - LRIC) chosen by different NRAs.

Such data, providing a valuable source of information, form an IRG (now BEREC) database, which is an informal data exchange tool among Member States.[4] It includes, for each of the 18 markets identified by the old EC Recommendation as susceptible of *ex ante* regulation, the following information:

- cost base;
- accounting system;
- price control method;
- auditing process;
- WACC calculation methodology; and
- remedies imposed to SMP operators.

In order to improve data comparability the following pre-defined options were included in the data request:

For the Cost base:

- *HCA Family (Historical Cost Accounting)*
- *CCA Family (Current Cost Accounting and Forward Looking - Current Cost Accounting)*
- *Other cost base methodologies that do not appear in the above definitions*

For the Accounting System / Cost Model[5]:

- *LRIC, LRAIC (Long Run Incremental costs, Long Run Average Incremental costs)*
- *FDC (Fully Distributed Costs)*

For the Price control method:

- *Cost orientation (alone)*
- *Price Cap (alone)*
- *Retail Minus*

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[3] For an exhaustive explanation of how to implement a regulatory accounting system see the ERG (05) 29 "Common position on EC Recommendation on Cost accounting and accounting separation".

[4] The database contains confidential information therefore it is not published.

[5] According to Recommendation 2005/698/ EC "*The purpose of imposing an obligation to implement a cost accounting system is to ensure that fair, objective and transparent criteria are followed by notified operators in allocating their costs to services in situations where they are subject to obligations for price controls or cost-oriented prices."*

- *Cost orientation and Price cap*
- *Benchmarking*
- *Other price methods that do not appear in the above definition*

Besides the above mentioned data, some countries provided further information regarding the approach used to develop cost models (e.g. Top-Down).

Finally, in order to simplify the data presentation and also to respect the confidentiality request made by some NRAs for certain data, this report, as in the previous years, does not present and comment all the data collected. As last year, this year's report concentrates on those markets listed in the 2007 EC Recommendation[6] as susceptible of *ex ante* regulation. These are markets typically subject to regulatory accounting remedies and, in most countries, the market analyses have been completed and remedies implemented. For those markets not listed in the new EC Recommendation as susceptible of *ex ante* regulation, the 2010 report follows how the deregulation process is developing in Europe.

[6] Recommendation 2007/879/EC.

# 3. Outline of the Results

## *3.1 A snapshot of 2010 regulatory accounting data for markets listed in 2007 EC Recommendation*

The information collected for the Regulatory Accounting Report has always been referred to the 18 markets listed in the Recommendation 2003/311/EC. This Recommendation was substituted by a new Recommendation (2007/879/EC) in December 2007 which, following the evolution observed in electronic communication markets over recent years, revised the list of relevant markets of the previous one and reduced the number of markets susceptible to *ex ante* regulation.

Seven markets are now identified, one at the retail level[7] and the other six at the wholesale level.[8] Table 1 below lists the markets of the new EC Recommendation (first column) and the corresponding markets in the old one (second column).

**Table 1 - Markets identified by Rec. 2007/879/EC and correspondent markets in the 2003 Rec.**

| **List of Markets susceptible to *ex ante* regulation according to Recommendation 2007/879/EC** | **List of Markets susceptible to *ex ante* regulation according to Recommendation 2003/311/EC** |
|---|---|
| Market **1:** Fixed Call Access Residential and non Residential | Market **1** : Fixed Call Access Residential |
| | Market **2:** Fixed Call Access Non-Residential |
| Market **2:** Fixed Call Origination Wholesale | Market **8:** Fixed Call Origination Wholesale |
| Market **3:** Fixed Call Termination Wholesale | Market **9:** Fixed Call Termination Wholesale |
| Market **4:** Unbundled Access Wholesale | Market **11:** Unbundled Access Wholesale |
| Market **5:** Broadband Access Wholesale | Market **12:** Broadband Access Wholesale |
| Market **6:** Terminating Segments Wholesale | Market **13:** Terminating Segments Wholesale |
| Market **7:** Mobile Call Termination Wholesale | Market **16:** Mobile Call Termination Wholesale |

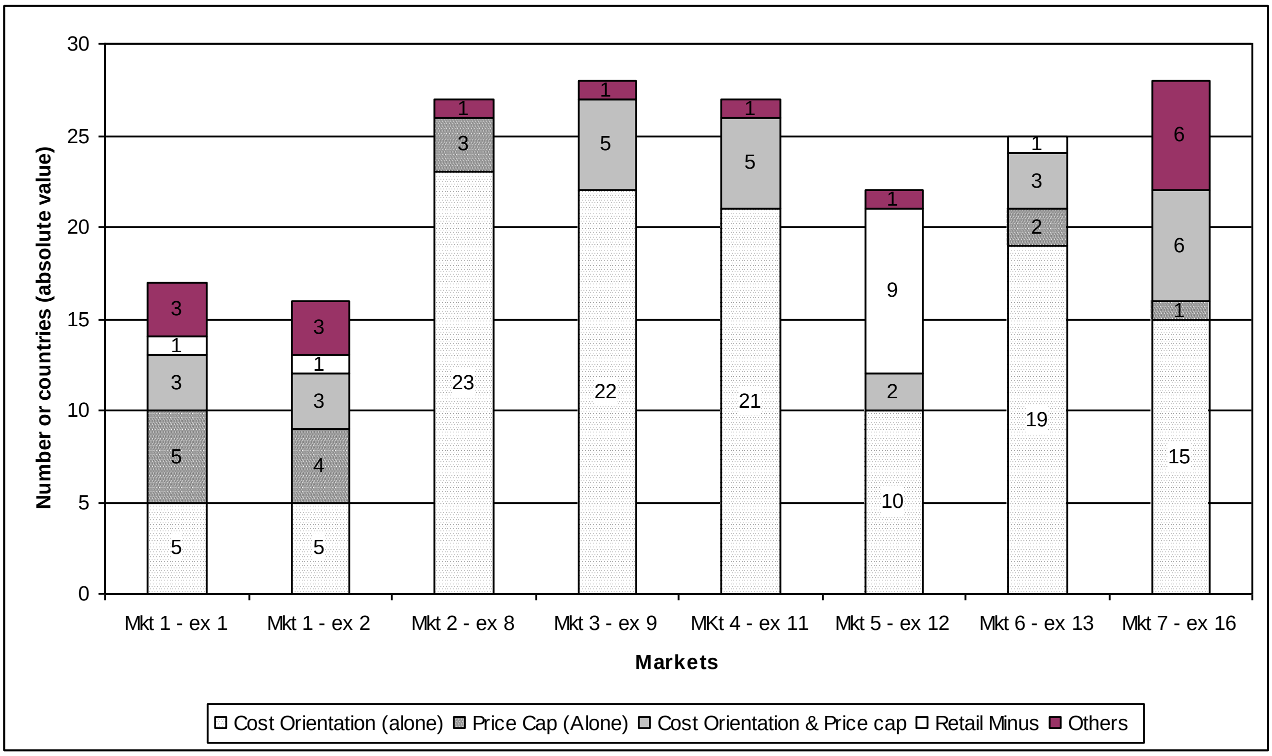
*Source: BEREC RA – PT 2010*

[7] Market 1: "*Access to the public telephone network at a fixed location for residential and non-residential customers*".

[8] Market 2: "*Call origination on the public telephone network provided at a fixed location*"; Market 3: "*Call termination on individual public telephone networks provided at a fixed location*"; Market 4: "*Wholesale network infrastructure access at a fixed location*"; Market 5: "*Wholesale broadband access*"; Market 6: "*Wholesale terminating segments of leased lines*" and Market 7: "*Voice call termination on individual mobile networks*".

The following figures show a snapshot of the "Price control method", the "Cost base" and the "Accounting methodology" used in the year 2010 for regulating the 7 markets listed in the new Recommendation (2007/879/EC).

**Figure 1 - Price control method used in 2010 in the 7 market listed in Recommendation 2007/879/EC**




*Source: BEREC RA – PT 2010*
*For Market 5 one NRA has separate regulation for local and IP bitstream access. In this figure only regulation for local bitstream access is considered.*

In particular, the Figure above gives an overview of the price control methods used to regulate the market listed in the EC 2007 Recommendation in the year 2010.[9] In order to better reflect the actual price control methods in particular markets, BEREC has streamlined the possible price control options compared with previous years.

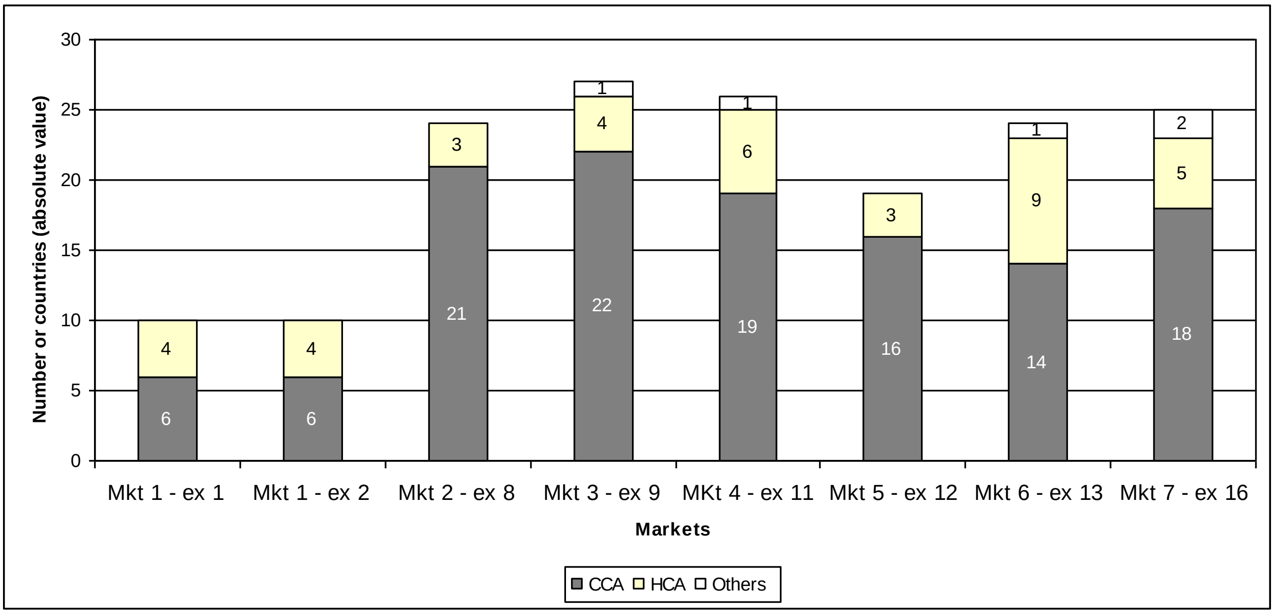
Figure 1 shows that cost orientation remains the most commonly used price control method in wholesale markets, with the exception of market 5 (WBA) for which nine NRAs use the Retail Minus method to set prices. The use of the "retail minus" method may be the preferred price control method where markets exhibit certain characteristics (e.g. where forecasted market growth is uncertain or very dynamic). Other common price control methods used in wholesale markets are cost orientation accompanied by a price cap. The situation is different for retail markets where price cap alone or together with cost orientation continues to be mainly used.

[9] The modality "Others" includes also "Benchmarking" and *ex-post* price control method.

Compared to 2009 data, where "Benchmarking" was adopted by one NRAs on markets 10 and 11, and two NRAs in market 16 of the old Recommendation, in 2010 "Benchmarking" is applied only by one NRA in markets 8, 9 and 11 and four NRAs in the market 16 of the old Recommendation.

As far as the cost base is concerned, Figure 2 shows that CCA is by far the most commonly used methodology both for retail markets (Market 1) and wholesale markets.

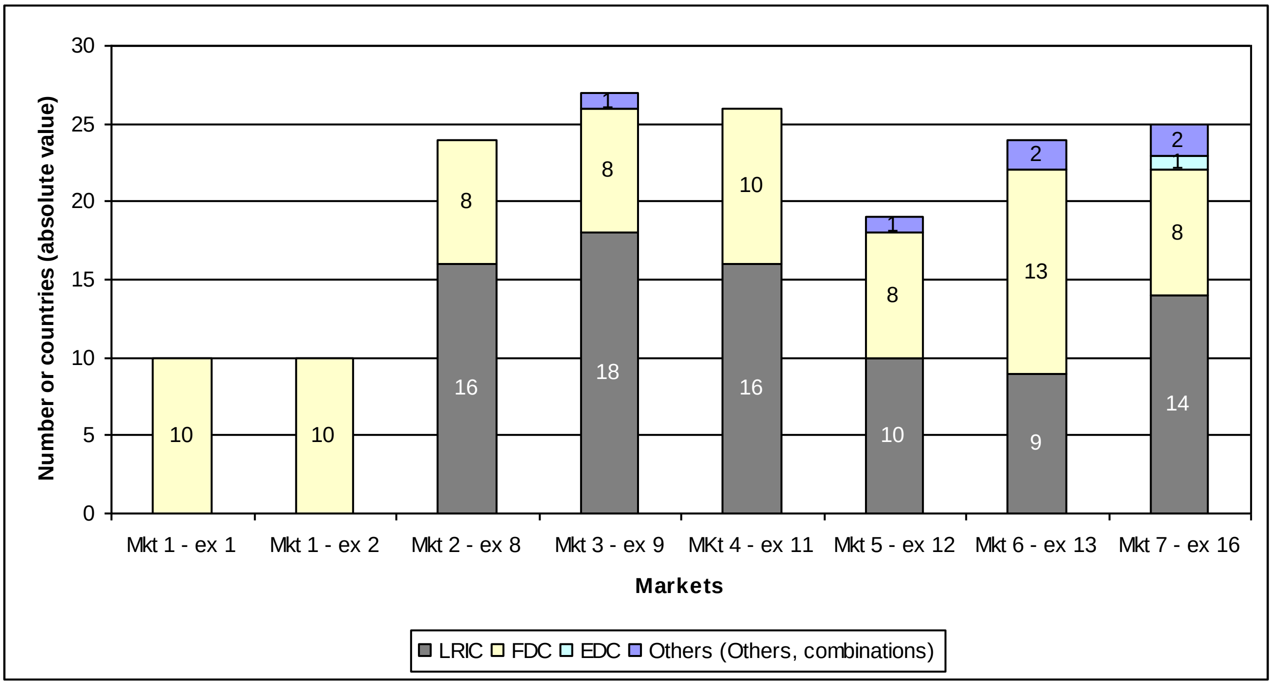
**Figure 2 - Cost base used in 2010 in the 7 market listed in Recommendation 2007/879/EC**




*Source: BEREC RA –PT 2010*
*In market 7 one NRA applies HCA+CCA method and this is presented under modality "CCA". "FL CCA" is presented under modality "CCA".*

Figure 3 below shows the accounting methodology used in the different markets. As in the case of the price control method a difference can be observed between retail and wholesale markets: while all respondent NRAs use FDC for retail markets, they mainly use LRIC in wholesale markets.

**Figure 3 – Accounting methodology used in 2010 in the 7 market listed in Recommendation 2007/879/EC**




*Source: BEREC RA – PT 2010*

## *3.2 A snapshot of 2010 regulatory accounting data for markets listed in 2003 EC Recommendation*

Table 2 shows markets listed in the 2003 EC Recommendation which, according to the Commission, are not anymore susceptible of *ex ante* regulation.[10]

As the remedies referred to these markets were adopted before the new Recommendation became effective, data referred to them have still been collected and monitored. It has also been taken into account that in some countries these markets are still regulated as NRAs assessed that they are not yet competitive.

Moreover, in order to monitor the process of deregulation of markets not anymore included in the EC Recommendation, Table 2 shows the number of countries with some price control[11] or accounting obligation[12] still in place in the years 2008, 2009 and 2010.

[10] NRAs deciding to maintain/modify/eliminate existing remedies in these markets have to run the so called "three criteria test" to proof if the relevant market is still susceptible of *ex ante* regulation. See ERG (08) 21 Report on Guidance on the application of the three criteria test.
[11] Art. 13 Access Directive, Art.17 Universal Service Directive.
[12] Art. 11 and Art. 13 Access Directive.

**Table 2 – Number of countries with price control and/or accounting obligation over time**

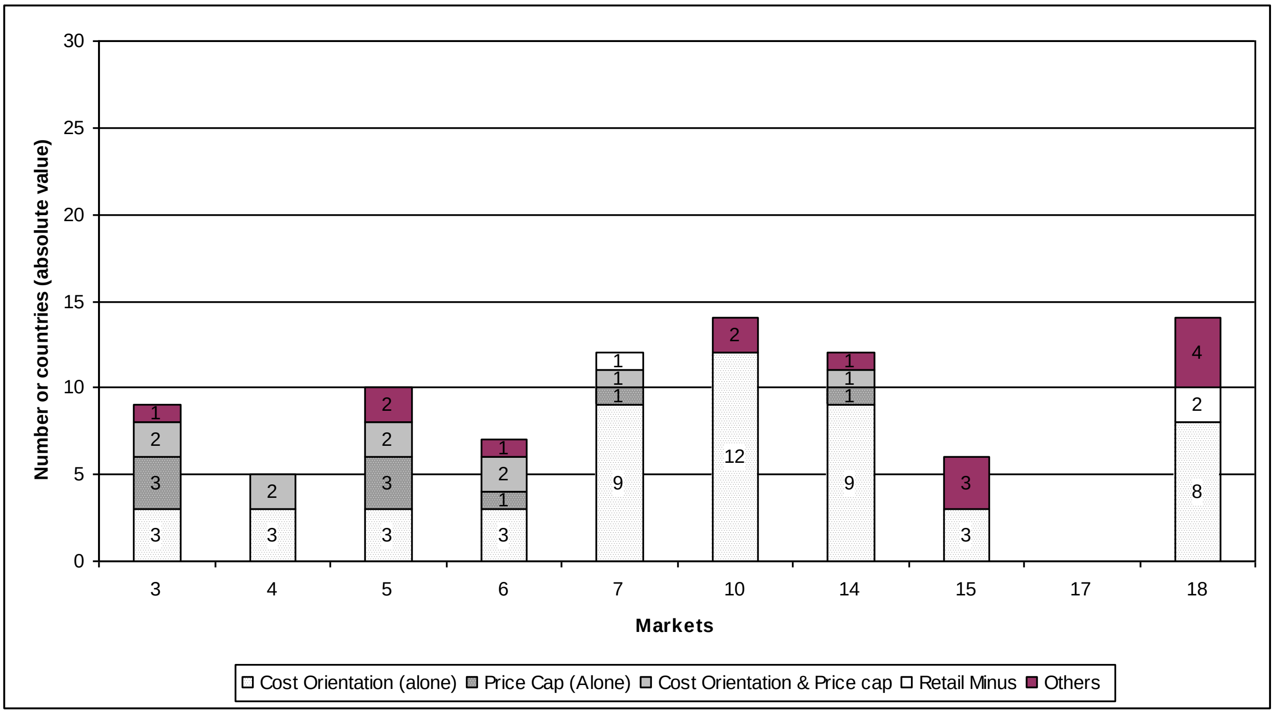
| List of Markets susceptible to *ex ante* regulation according to Recommendation 2003/311/EC | #of countries with price control and/or accounting obligation in 2008 | #of countries with price control and/or accounting obligation in 2009 | #of countries with price control and/or accounting obligation in 2010 |
|---|---|---|---|
| Market **3**: National fixed Residential Services | 15 | 15 | 8 |
| Market **4**: International fixed Residential Services | 9 | 9 | 4 |
| Market **5**: National fixed Non-Residential Services | 13 | 11 | 9 |
| Market **6:** International fixed Non-Residential Serv. | 10 | 10 | 6 |
| Market **7:** Leased Lines | 17 | 15 | 11 |
| Market **10:** Fixed Transit Services Wholesale | 19 | 16 | 12 |
| Market **14:** Trunk Segments Wholesale | 12 | 12 | 11 |
| Market **15:** Mob. Access and Origination Services | 3 | 3 | 3 |
| Market **17:** International Roaming | 1 | 1 | 0 |
| Market **18:** Broadcasting Services | 13 | 14 | 14 |

*Source: BEREC RA – PT 2010*

Table 2 shows that the number of countries in which some price control and/or accounting obligations is in place decreased over time, confirming that some NRAs have already started the liberalisation process envisaged by the new Recommendation (see for example market 3, 4, 6, 7 and 10). This trend is, as expected, particularly evident for retail markets.

Figure 4 shows the price control method used in the market listed only in the 2003 Recommendation. In this case the evidence is mixed particularly for retail markets (Markets 3, 4, 5, 6 and 7) where NRAs adopted more or less in equal proportion the different price control methods, with the exception of market 7 for which the prevailing price control method is clearly cost orientation, as it happens in the three remaining wholesale markets.

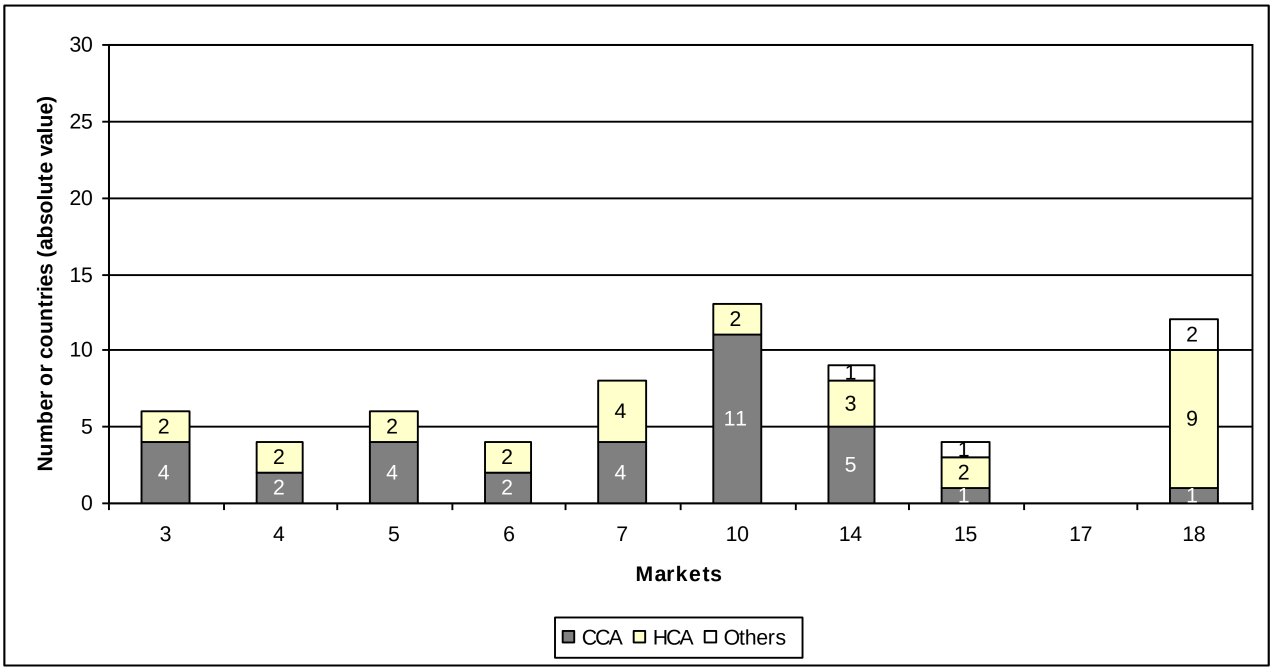
**Figure 4 - Price control method used in 2010 in the 10 market listed only in Recommendation 2003/311/EC**




*Source: BEREC RA – PT 2010*

Figure 5 below shows a variable picture for the cost base used in the analysed markets. As for wholesale markets, in market 10, CCA is clearly the prevailing cost base and in market 18, on the contrary, the prevailing cost base is HCA. CCA and HCA seem to be used in the same proportion in retail markets.

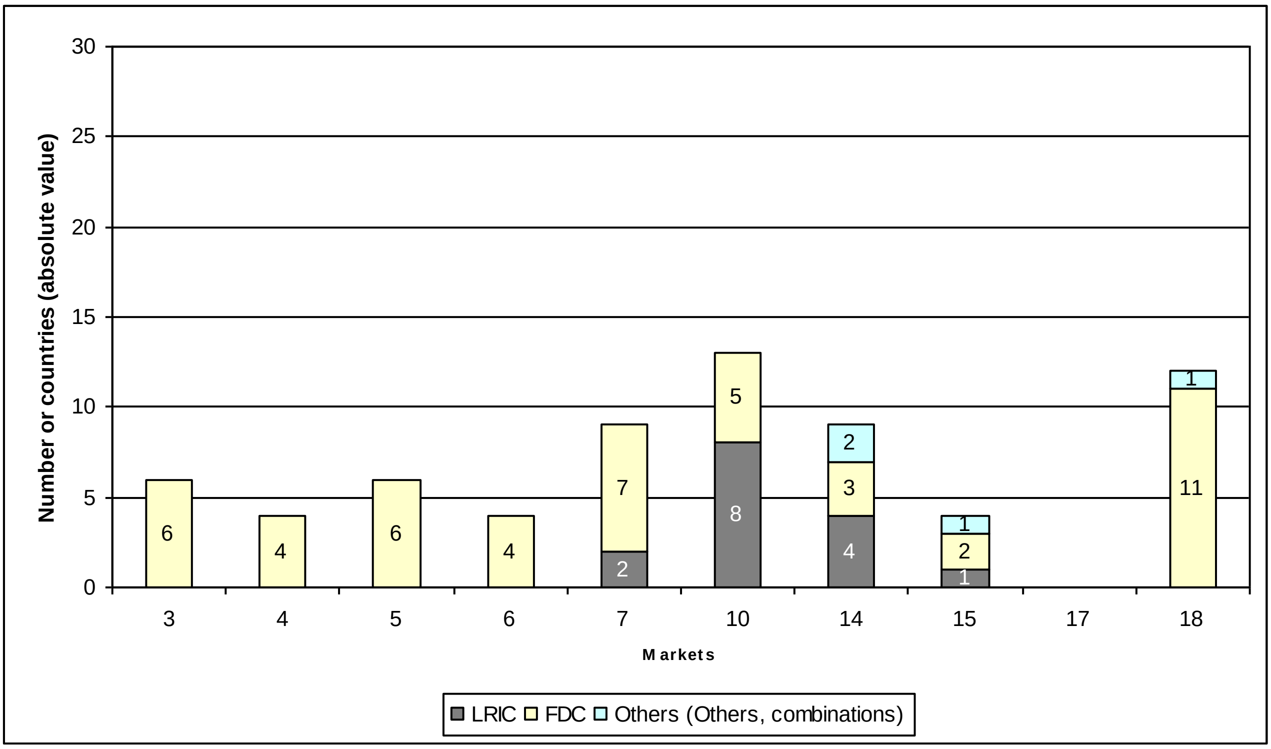
**Figure 5 - Cost base used in 2010 in the 10 market listed only in Recommendation 2003/311/EC**




*Source: BEREC RA – PT 2010*
*"FL CCA" is presented under modality "CCA".*

A clear pattern can be identified for the accounting methodology used in the 10 market listed only in the old Recommendation. As shown in Figure 6 below, FDC is by far the most used accounting methodology in retail markets and in market 18, while several countries use also LRIC or other methodologies in wholesale markets.

**Figure 6 – Accounting methodology used in 2010 in the 10 market listed only in Rec. 2003/311/EC**




*Source: BEREC RA – PT 2010*

## *3.3 Cost base, accounting methodology and price control method over time*

While in the previous paragraphs a snapshot of the current situation (year 2010) in the various markets has been illustrated as far as price control, cost base and accounting methodology are concerned, the following paragraphs illustrate the development of regulatory accounting practices across Europe over time. To put it another way, the paragraphs illustrate the evolution of accounting and price control remedies over time, concentrating on WLR services and on the following three wholesale markets listed in the new EC Recommendation as still susceptible of *ex ante* regulation: ULL (market 4), WBA (market 5) and Terminating Segments of Leased Lines (market 6).

In order to present reliable trend analysis, data has only been included where respondent NRAs provided information for at least three years. Therefore the number of countries analysed may vary from figure to figure[13] and may differ from the number of countries taken into account in the previous paragraphs.

As far as the cost base and the accounting methodology are concerned, it is often the case that an NRA, when setting up its regulatory accounting framework for the fixed notified operator/s, will apply a

[13]The actual number of countries considered is reported in the footnote below each figure.

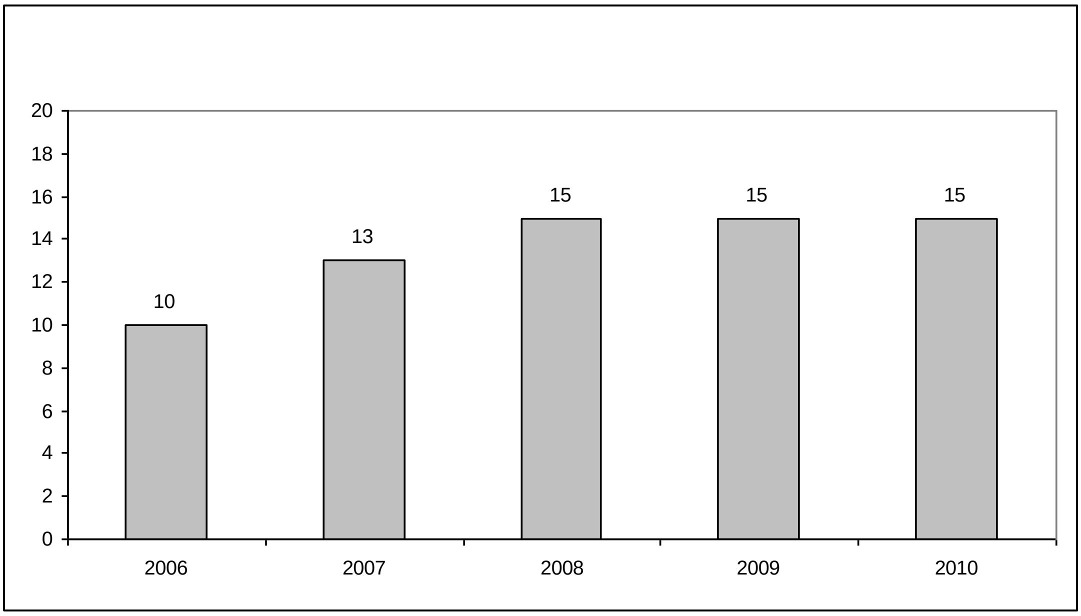
consistent cost base and accounting methodology to all regulated fixed markets. In the following paragraphs it is therefore to be expected that those countries that moved for example from HCA to CCA, did that for all relevant markets.

### *3.3.1 Wholesale Line Rental*

Wholesale Line Rental Services are those services enabling alternative operators to enter the retail narrowband access market without sustaining the high investments required by ULL services, hence bearing a lower risk. Moreover, the WLR obligation benefits final customers allowing them a larger choice among different access providers.

The number of countries where the WLR obligation is in force increased over time. In 10 out of 24 NRAs providing information, the WLR obligation has been in place since 2006, but the number increased to 15 in 2010 (Figure 7). It should be pointed out that in those countries where WLR is not mandatory, NRAs do not have information about commercial WLR offers.

**Figure 7 – Number of countries with WLR obligation by year**



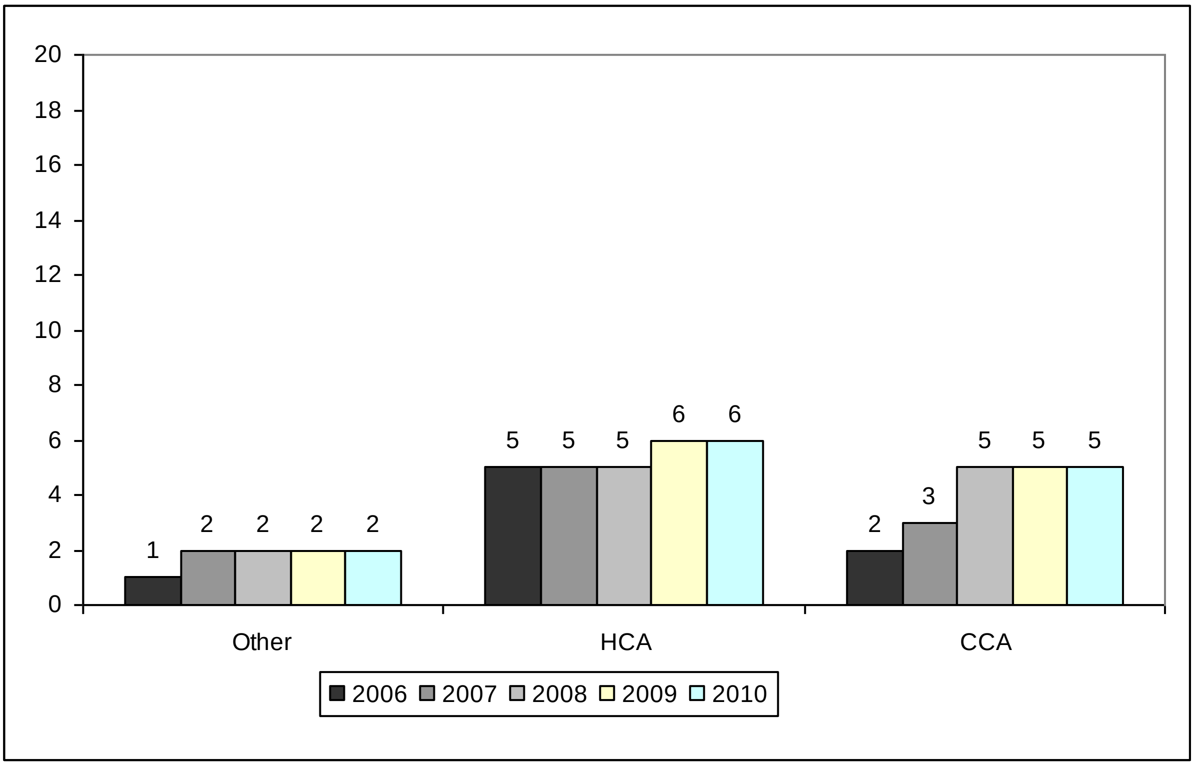

*Source: BEREC RA – PT 2010*
*Number of countries: 24*

**Trend analysis:**

***Cost base***

Taking into account only those NRAs declaring to impose the WLR obligation, it can be observed that in 2010 the number of countries declaring to have HCA as cost base exceeds those declaring CCA (Figure 8). However, the trend over time suggests that CCA is the choice preferred by those NRAs starting regulating this service after 2007.

**Figure 8 - Cost Base Wholesale Line Rental**

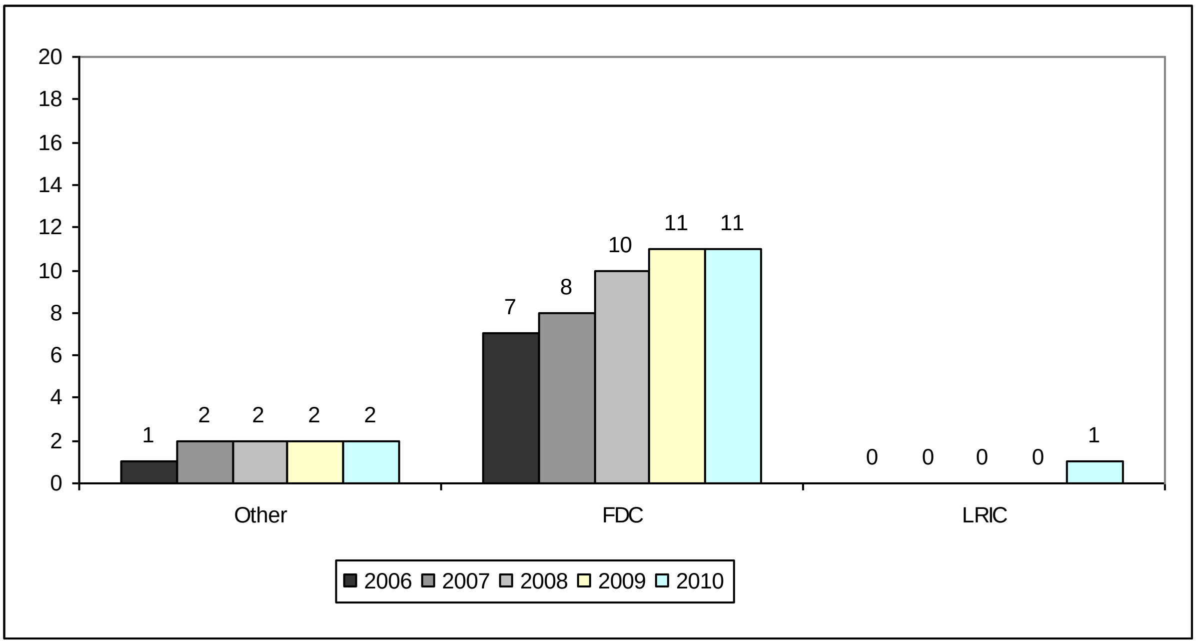



*Source: BEREC RA – PT 2010*
*Number of countries: From 8 for 2006 to 13 for 2010*

***Accounting methodology***

There is a clear evidence that FDC is the preferred accounting methodology (Figure 9). As a matter of fact its use has seen an increase over time passing from 7 countries declaring it in 2006 to 11 countries in 2010. LRIC has been declared by one NRA in 2010. Two NRAs declared to use other accounting methodology and the pattern has been stable since 2007.

**Figure 9 - Accounting Methodology Wholesale Line Rental**

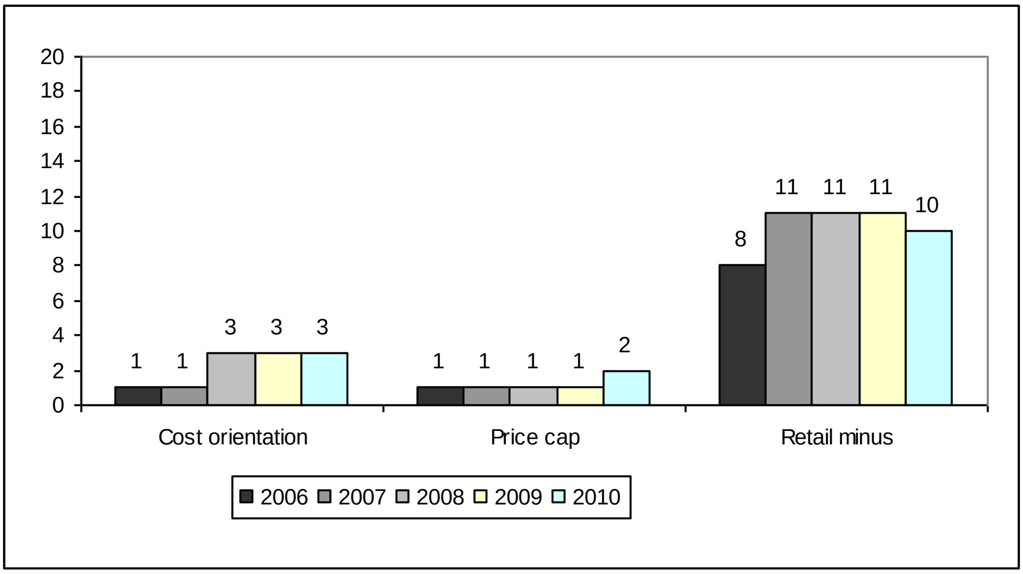



*Source: BEREC RA – PT 2010*
*Number of countries: From 8 for 2006 to 14 for 2010*

### *Price control method*

The most used price control method declared in 2010 by 10 NRAs out of 15 is retail minus. It was the most common methodology also for previous years. However it can be observed (Figure 10) that in 2010 one NRA changed from retail minus to price cap so the number of countries using it increased by one unit.

**Figure 10 – Price Control Method Wholesale Line Rental**




*Source: BEREC RA – PT 2010*
*Number of countries: From 10 for 2006 to 15 for 2010*

**<u>Key points for WLR over time:</u> CCA and HCA are declared quite in the same proportion in the last two years while FDC and retail minus are respectively the most popular accounting methodology and price control method.**

### *3.3.2 Wholesale network infrastructure access at fixed location (Market 4, previously Market 11)*

The new EC Recommendation on relevant markets defines Market 4 (previously Market 11) as the market for "*wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location*".

In this market all countries notified at least one operator. Typically the SMP operator is the national incumbent with the exception of two NRAs that defined sub-national geographic market identifying the corresponding local incumbent operators as having SMP.

**Trend analysis:**

***Cost base***

CCA is the cost base declared by 19 NRAs taking part in the survey for year 2010 (see Figure 2). Unlike Figure 2, which is based on data for the 26 countries that answered the 2010 BEREC questionnaire, the figure below gives an insight into how the choice of cost base changed over time, taking into account only data provided by 22 NRAs every year since 2007. Figure 11 shows a seemingly stable and sustainable situation. In this market, CCA is by far the most commonly used cost base methodology and the number of countries using this method has been stable since 2008 with an increase of 3 countries from 2007 to 2008. Also the number of countries using HCA has been stable since 2008, though there was a reduction of 2 countries from 2007 to 2008. Only one country declared to adopt another methodology.[14]

It is important to observe that the change of cost base (from HCA to CCA) is particularly relevant for this market. Unlike other markets where a high percentage of total costs is represented by network equipment subject to technical progress, in the ULL market the highest percentage of costs is related to duct civil engineering which inherently has a very long economic life and is not subject to significant technological advance. Broadly speaking this may imply that the expected reduction in real terms of asset values, which is normally observed in other markets when adopting CCA cost base, due to technical progress reducing equipment costs (e.g. routers are generally cheaper than switches), is not necessarily observed in the unbundled access market. In addition to that, it has to be taken into account that recently copper prices have been fluctuating significantly and the picture is still showing real price increases over time; this price increase could be a further element determining higher service prices when moving from HCA to CCA. While such considerations apply to regulated PSTN services, their validity has yet to be assessed in a NGA environment.[15] In this regard, according to some observers, the use of CCA might be relevant in a time of roll-out of fibre access networks and could send better investment signals to promote infrastructure-based competition as well as investment in infrastructure.

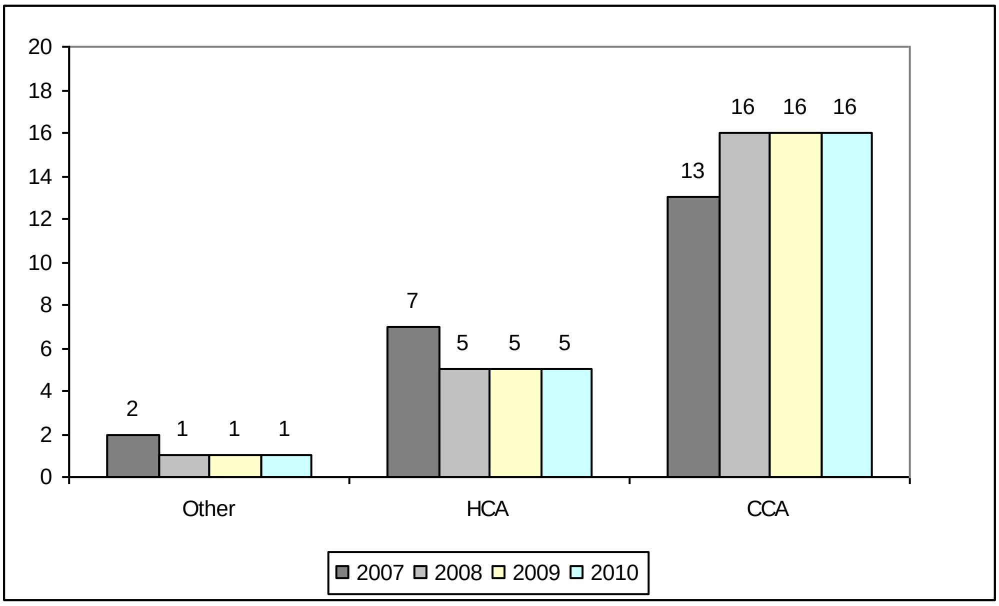
If these considerations are correct they may have an impact on all the other access services that use the same assets to provide ULL services.

Generally speaking, countries still using HCA in this market, use the same cost base for other fixed wholesale markets.

[14] In particular this Country uses CCA method for network assets and HCA method for non network assets (vehicles, real estate, machinery, liquid assets, etc.).

[15] For the NGN core network it is generally acknowledged that NGN technology bears cost savings to a considerable extent (cf. e.g. ERG IP-Interconnection Report 2007 and ERG Common Statement on Regulatory Principles of IP-IC/NGN Core – A work program towards a Common Position, ERG (08)26 – Oct 2008, pp. 21, pp. 82).

**Figure 11 - Cost Base Unbundled Access Wholesale (Mkt 4, previously Mkt 11)**

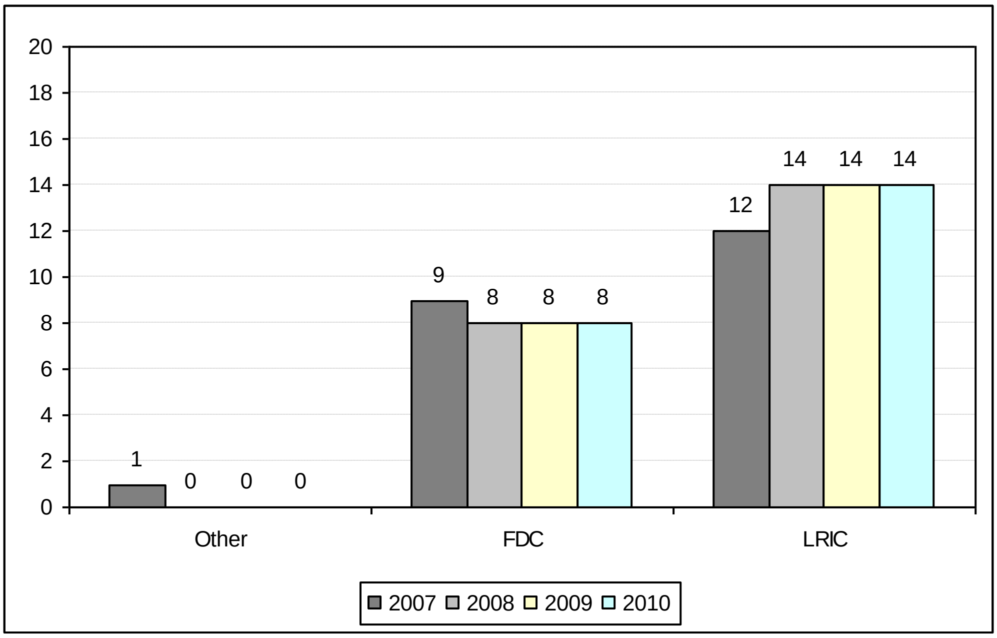



*Source: BEREC RA – PT 2010*
*Number of countries: 22*

***Accounting methodology***

Figure 3 shows that the most common accounting methodology in 2010 is LRIC. Taking into account only those countries providing information since 2007 in Figure 12 an apparently stable and sustainable situation can be observed, starting from 2008. As a matter of fact the number of countries using LRIC changed from 12 countries in 2007 to 14 in 2008, 2009 and 2010. Correspondingly, a slight reduction in the number of countries using FDC is observed (from 9 in 2007 to 8 in 2008, 2009 and 2010).

**Figure 12 - Accounting Methodology Unbundled Access Wholesale (Mkt 4, previously Mkt 11)**

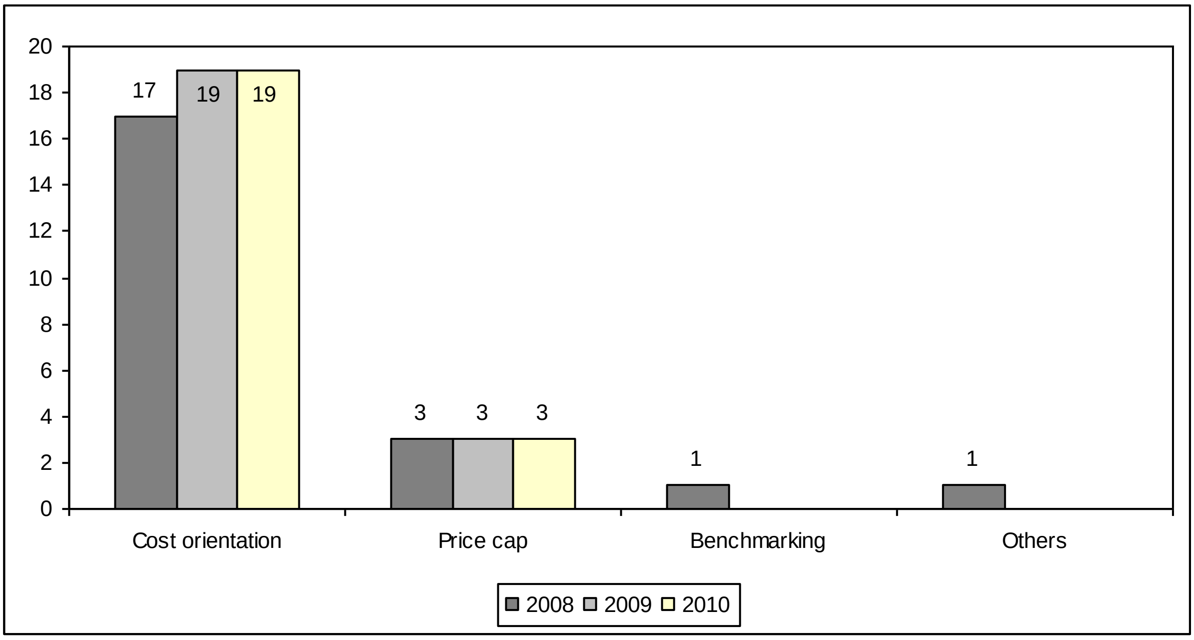



*Source: BEREC RA – PT 2010*
*Number of countries: 22*
*A country considered in previous Reports as "Other" requested to be considered as "FDC" in all years, because the adopted accounting methodology is actually very close to FDC. Consequently this figure is not comparable with the corresponding figure in previous Reports*

### *Price control method*

The most common price control method for 2010 in unbundled access wholesale market is by far cost orientation (Figure 1), which is declared by 21 NRAs (although for 5 NRAs it is combined with price cap). Figure 13 provides a picture of how this method changed over time, taking into account 22 countries participating in the data collection since 2008. It can be observed that between 2008 and 2009 two NRAs moved from benchmarking or another type of price control to cost orientation.

**Figure 13 – Price Control Method Unbundled Access Wholesale (Mkt 4, previously Mkt 11)**




*Source: BEREC RA – PT 2010*
*Number of countries: 22*

**Key points for Market 4 over time: CCA is the preferred cost base combined with LRIC as the costing methodology and cost orientation as the price control method. This trend is likely to be reinforced by the NGA Recommendation expected to be adopted in September 2010.**

### *3.3.3 Wholesale broadband access (Market 5, previously Market 12)*

The 2007 EC Recommendation on relevant markets defines Market 5 (previously Market 12) as the market for "wholesale broadband access".[16]

Also in this market all the analysed countries notified at least one operator in the first and second round of market analysis. Typically the notified operator is the national incumbent with the exception of four NRAs that defined sub-national geographic market identifying the corresponding local incumbent or the national incumbent operator as having SMP in these markets.

**Trend analysis:**

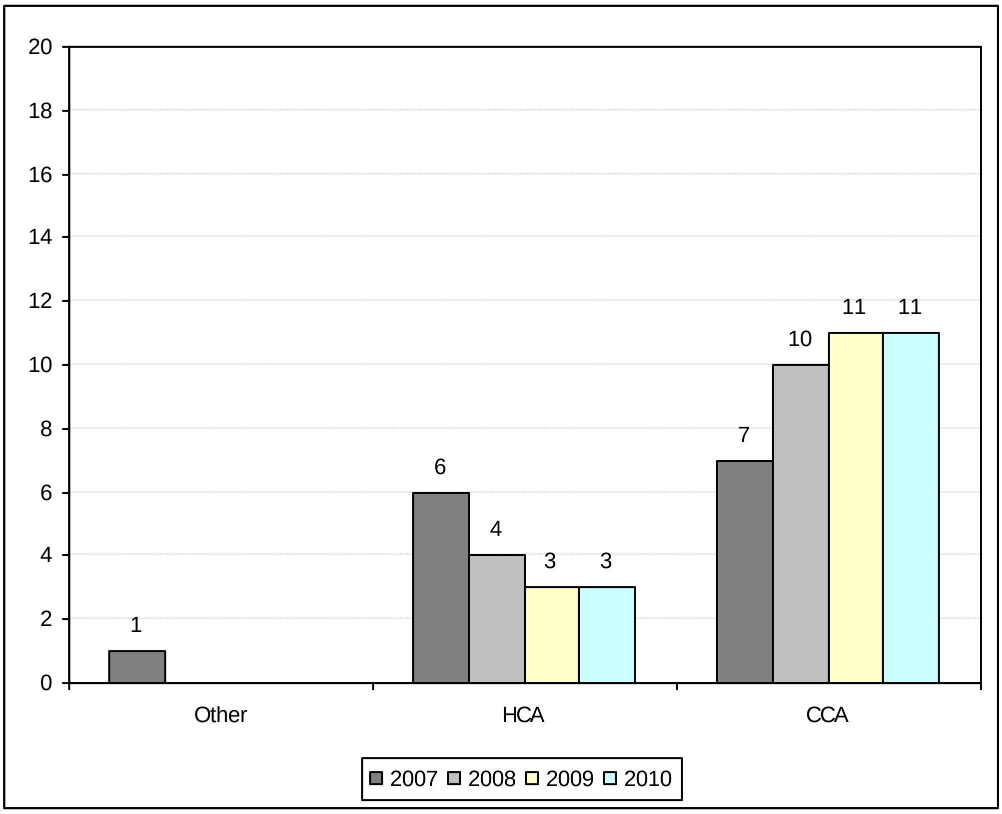
***Cost base***

Figure 14 shows data for 14 countries that provided relevant information since 2007 and, as such, is less than the number of countries in Figure 2, reflecting those counties with no missing data in the 2010 survey.

[16]The Recommendation clarifies that "*This market comprises non-physical or virtual network access including 'bit-stream' access at a fixed location. This market is situated downstream from the physical access covered by market 4 listed above, in that wholesale broadband access can be constructed using this input combined with other elements*".

The market for wholesale broadband access shows a similar trend to that of the unbundling market in terms of the cost base used. Also it can be observed that CCA is by far the most commonly used cost base methodology and 11 of the 14 observed countries have used this method since 2009. Despite the observed decrease from 2007 to 2009, the HCA method remained stable in 2010 compared to 2009.
This market is characterised by the prevailing use of network elements subject to rapid technological change, whose asset value in real terms can be expected to decrease over time using a CCA cost base.

**Figure 14 - Cost Base Wholesale Broadband Access (Mkt 5, previously Mkt 12)**

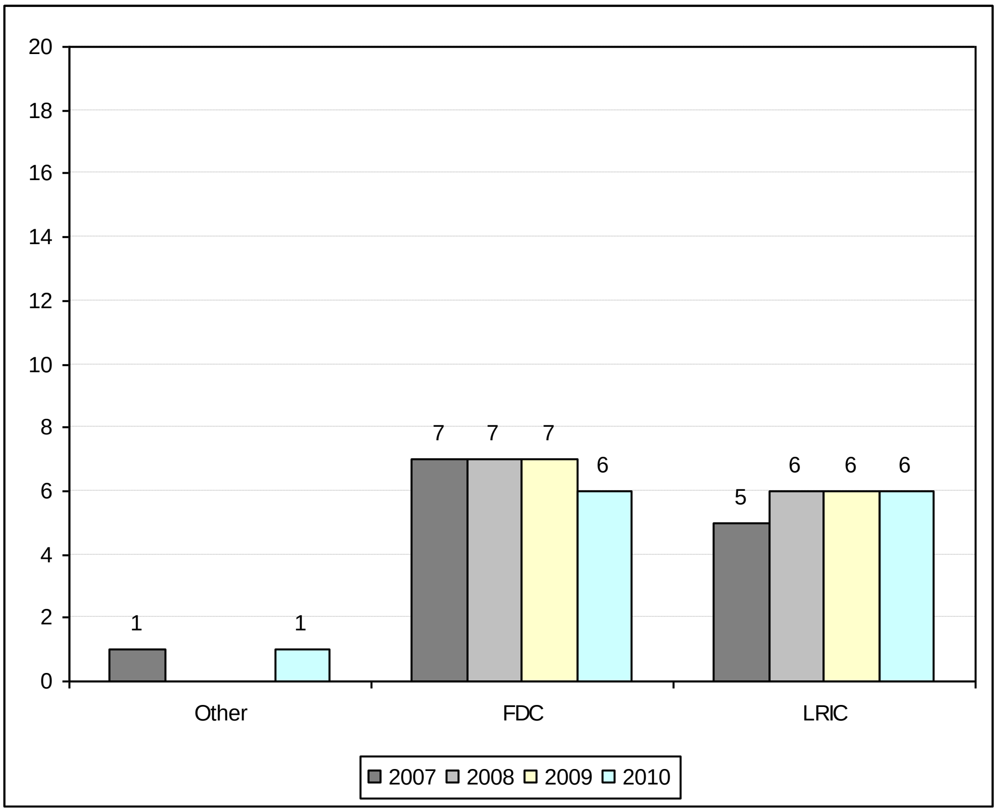



*Source: BEREC RA – PT 2010*
*Number of countries: 14*

***Accounting methodology***

Figure 15 shows the accounting methodology used in the wholesale broadband access market by 13 countries since 2007. It can be observed that one NRA passed from using the FDC method to another accounting methodology in 2010 while countries using LRIC have remained stable in the choice of their accounting methodology since 2008.

**Figure 15 - Accounting Methodology Wholesale Broadband Access (Mkt 5, previously Mkt 12)**

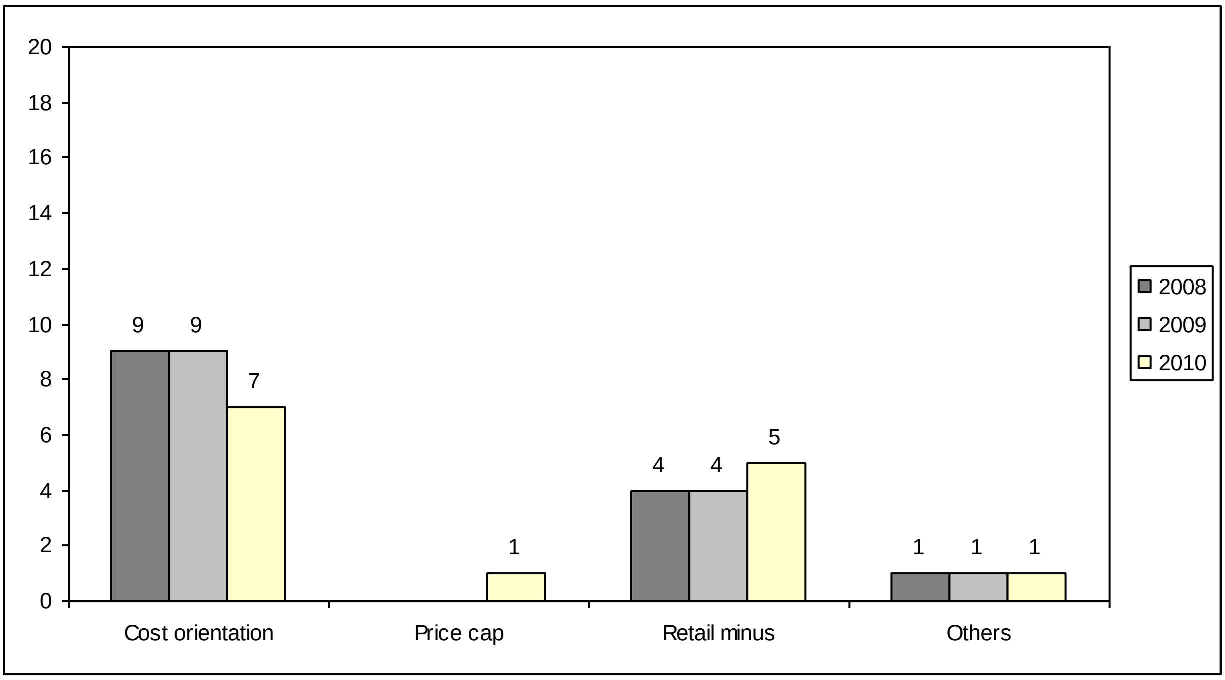



*Source: BEREC RA – PT 2010*
*Number of countries: 13*

### *Price control method*

The most used price control methods for 2010 in wholesale broadband access market are cost orientation and retail minus (Figure 1), declared respectively by 10 and 9 NRAs. However, taking into account 14 countries answering the questionnaires since 2008, it can be observed (Figure 16) that since 2009 two NRAs changed methodology in favour of price cap and retail minus.

**Figure 16 – Price Control Method Wholesale Broadband Access (Mkt 5, previously Mkt 12)**




*Source: BEREC RA – PT 2010*
*Number of countries: 14*

It should be taken into account that the adoption of the EC Recommendation on Next Generation Access networks may introduce several changes to the observed situation in Market 5 in coming years.

**<u>Key points on Market 5 over time:</u> CCA is, by far, the most common cost base in 2010. As far as the accounting methodology is concerned, the number of countries using LRIC is almost the same of those using FDC, while both cost orientation and retail minus are chosen as price control method.**

### *3.3.4 Leased Lines Terminating Segment (Market 6, previously Market 13)*

The new EC Recommendation on relevant markets defines Market 6 (previously Market 13) as the market for "*Wholesale terminating segments of leased lines, irrespective of the technology used to provide leased or dedicated capacity*".

All countries notified at least one operator in the first round of market analysis.[17] Typically the notified operator is the national incumbent with the exception of one NRA that defined sub-national geographic market identifying the corresponding local incumbent operators as having SMP in this markets.

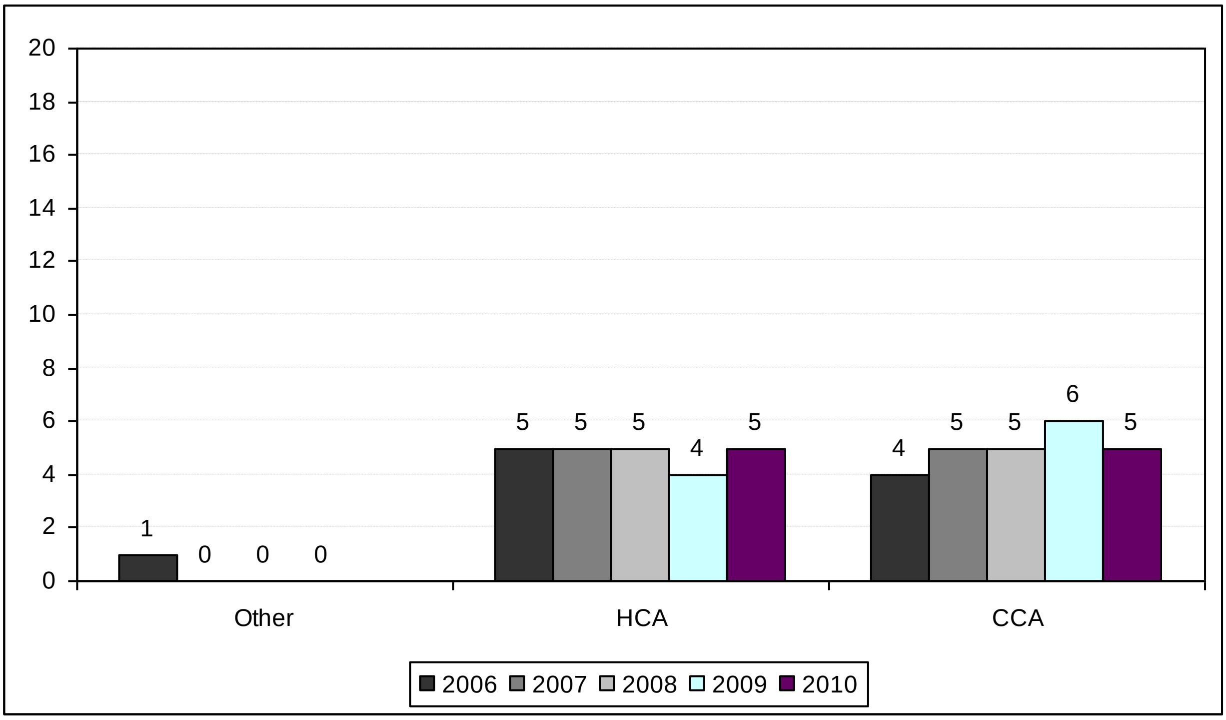
[17] In one country the NRA notified the incumbent only in the market of wholesale terminating segments of low speed leased lines, whereas did not find any SMP operator in the market of wholesale terminating segments of high speed leased lines.

**Trend analysis:**

***Cost base***

The figure below – unlike Figure 2, which shows data for 24 countries – shows the 10 countries adopting CCA, HCA or a combination of other accounting methodologies to set leased line charges for the terminating segments from 2006 to 2010. It could be said that from 2009 to 2010 one NRA moved from CCA to HCA so that CCA and HCA are equally spread in 2010 for those countries observed since 2006.

**Figure 17 - Cost Base Leased Lines Terminating Segment (Mkt 6, previously Mkt 13)**




*Source: BEREC RA – PT 2010*
*Number of countries: 10*

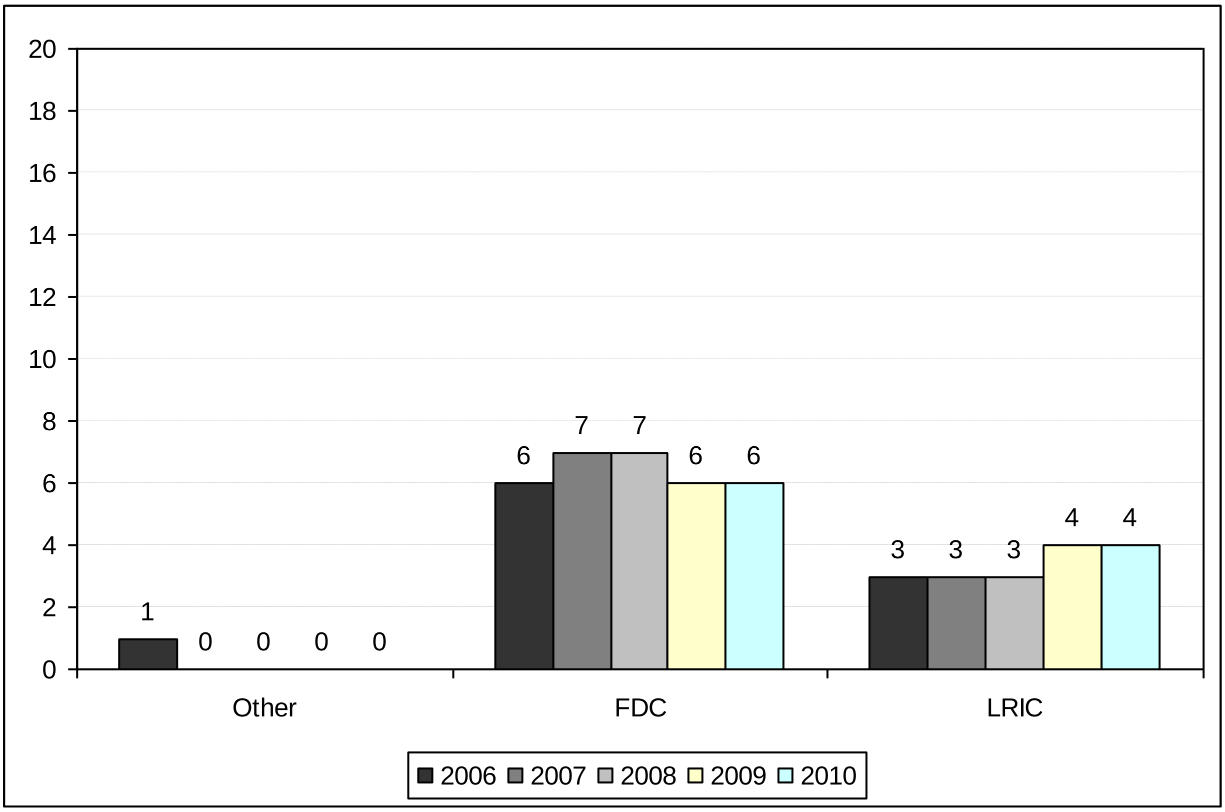
***Accounting methodology***

Figure 18 shows the number of countries adopting LRIC, FDC or other mixed allocation methodologies in the leased line (LL) wholesale terminating segment for the five year period analysed.

The most common accounting methodology in the leased line wholesale terminating market for the 10 countries under observation since 2006 is FDC (60 per cent) and this has been stable since 2009. At the same time, the number of countries using LRIC has been stable since 2009.[18]

[18] As far as other methodologies are concerned, the country declared to use adjusted FDC, taking into account efficiency adjustments.

**Figure 18 - Accounting Methodology LL Terminating Segment (Mkt 6, previously Mkt 13)**

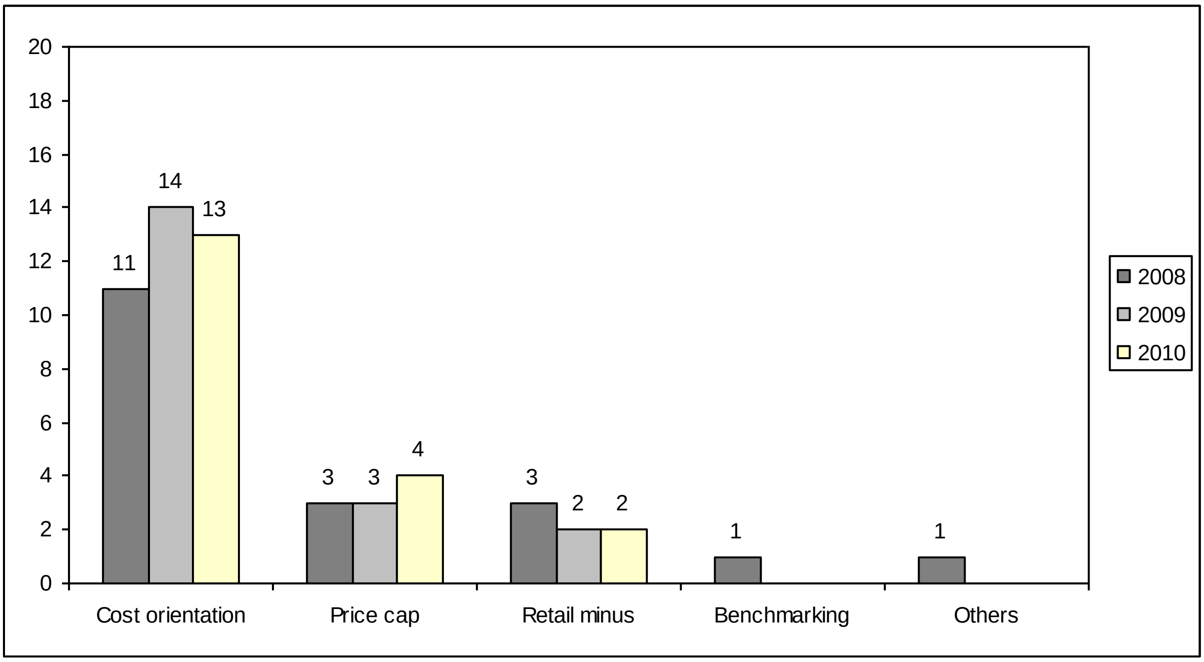



*Source: BEREC RA – PT 2010*
*Number of countries: 10*
*A country considered in previous Reports as "Other" requested to be considered as "FDC" in all years because the adopted accounting methodology is actually very close to FDC. Consequently this figure is not comparable with the corresponding figure in previous Reports.*

### *Price control method*

Cost orientation is the price control method used by more than 70 per cent NRAs in 2010. Taking into account the 19 countries whose data were collected since 2008, it can be observed that cost orientation is spread more than other methods over time.

**Figure 19 - Price Control Method LL Terminating Segment (Mkt 6, previously Mkt 13)**




*Source: BEREC RA – PT 2010*
*Number of countries: 19*

**<u>Key points for Market 6 over time:</u> CCA is the prevailing cost base for 2010 but, taking into account trend analysis, over time CCA and HCA are used by the same number of countries. FDC is the prevailing accounting methodology in 2010, also for those countries whose data were collected since 2006. Cost orientation is the recurrent price control methodology in this market both in the current year and over time.**

### *3.4 Termination Markets*

### *3.4.1 Fixed call termination (Market 3, previously Market 9)*

The 2007 EC Recommendation on relevant markets defines Market 3 (previously Market 9) as the market for "call termination on individual public telephone networks provided at a fixed location" and identifies a relevant market for each operator. It is common, therefore, to see both incumbents and alternative operators having been notified as SMP operators.

However, as clearly explained in the ERG Common Position on symmetry[19], in this market, for all countries, a clear distinction can be observed between remedies imposed on incumbents on the one side, and remedies imposed on other authorised operators (OAOs) on the other side. In particular, OAOs are regulated less strictly than the incumbent and are not usually subject to accounting separation, price control and cost accounting obligations, as the obligations related to tariff setting

[19] ERG (07) 83 Common Position on symmetry of fixed call termination rates and symmetry of mobile call termination rates.

for OAOs often take the form of “fair and reasonable”, “non-abusive” prices or “delayed reciprocity”.

Meantime this paragraph reports data on cost base and price control evolution over time, referred to incumbent operators. Unlike Figures 2 and 3, which show data only for those countries participating in the 2010 survey with no missing information, the figures below show data for those NRAs that have provided the relevant information since 2006.

**Trend analysis:**

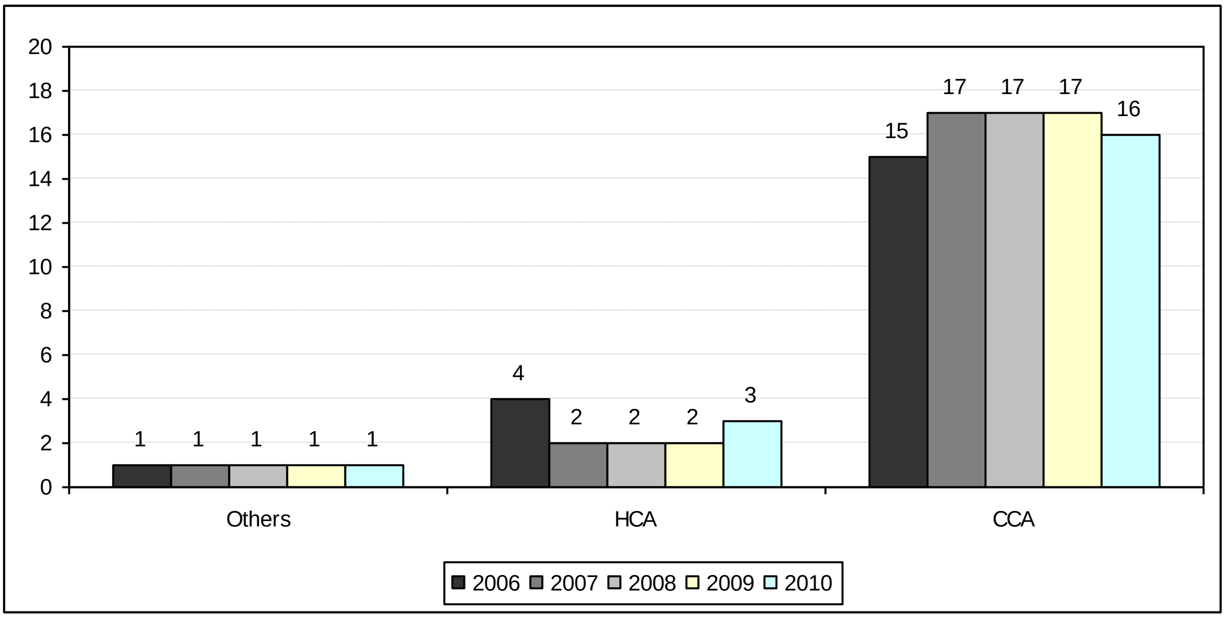
***Cost base***

Figure 20 shows the absolute number of countries adopting CCA, HCA or a combination of accounting methodologies to set incumbent’s fixed terminating charges in the five year period under observation.

It results that the most common cost base for fixed networks is CCA (always above 75 per cent of observed countries). It has to be noted that this is the sixth consecutive year in which such a result is observable, as in fixed networks HCA had already been replaced with CCA by the majority of Member States since 2005. The number of countries using HCA increased slightly in 2010 compared to 2009 where one NRA changed from CCA to HCA. Only one country declared to have been using another type of cost base, since 2006.[20]

[20] In particular this Country uses CCA method for network assets and HCA method for non network assets (vehicles, real estate, machinery, liquid assets, etc.).

**Figure 20 - Cost Base Fixed Call Termination (Mkt 3, previously Mkt 9)**



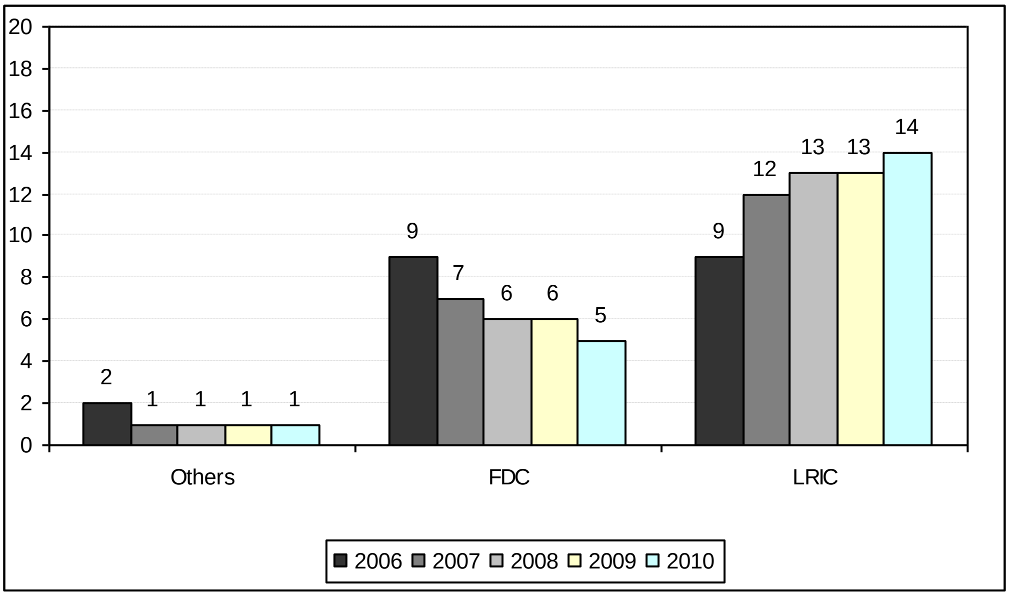

*Source: BEREC RA – PT 2010*
*Number of countries: 20*

***Accounting methodology***

Figure 21 shows the number of countries using LRIC, FDC or other mixed methodologies for fixed termination services from 2006 to 2010.

The figure shows a significant number of countries using LRIC for determining fixed termination tariffs since 2007. As consequence of this trend, a sharp reduction in the number of countries using FDC is observed (FDC passed from 45 per cent in 2006 to 35 per cent in 2007, to reach the value of 30 per cent in 2008 and 2009 and further to decrease to 25 per cent in 2010). One country declared to use another methodology. Though application of LRIC was quite stable in 2010, one NRA moved from LRIC to "Others", one NRA from FDC to LRIC and one NRA from "Others" to LRIC.

**Figure 21 - Accounting Methodologies Fixed Call Termination (Mkt 3, previously Mkt 9)**




*Source: BEREC RA – PT 2010*
*Number of countries: 20*

**<u>Key points for Market 3 over time:</u> CCA is the preferred cost base for this market combined with LRIC as the costing methodology. This trend will likely be reinforced with the implementation of the EC Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2009/396/EC).**

### *3.4.2 Mobile call termination (Market 7, previously Market 16)*

The new EC Recommendation on relevant markets defines Market 7 (previously Market 16) as the market for "Voice call termination on individual mobile networks" and identifies a relevant market for each operator. In all countries all mobile operators have been found to be SMP in the termination market.

Unlike Figures 2 and 3, the figures below show data for those NRAs that have been providing the relevant information since 2006, therefore they show data for 14 countries.

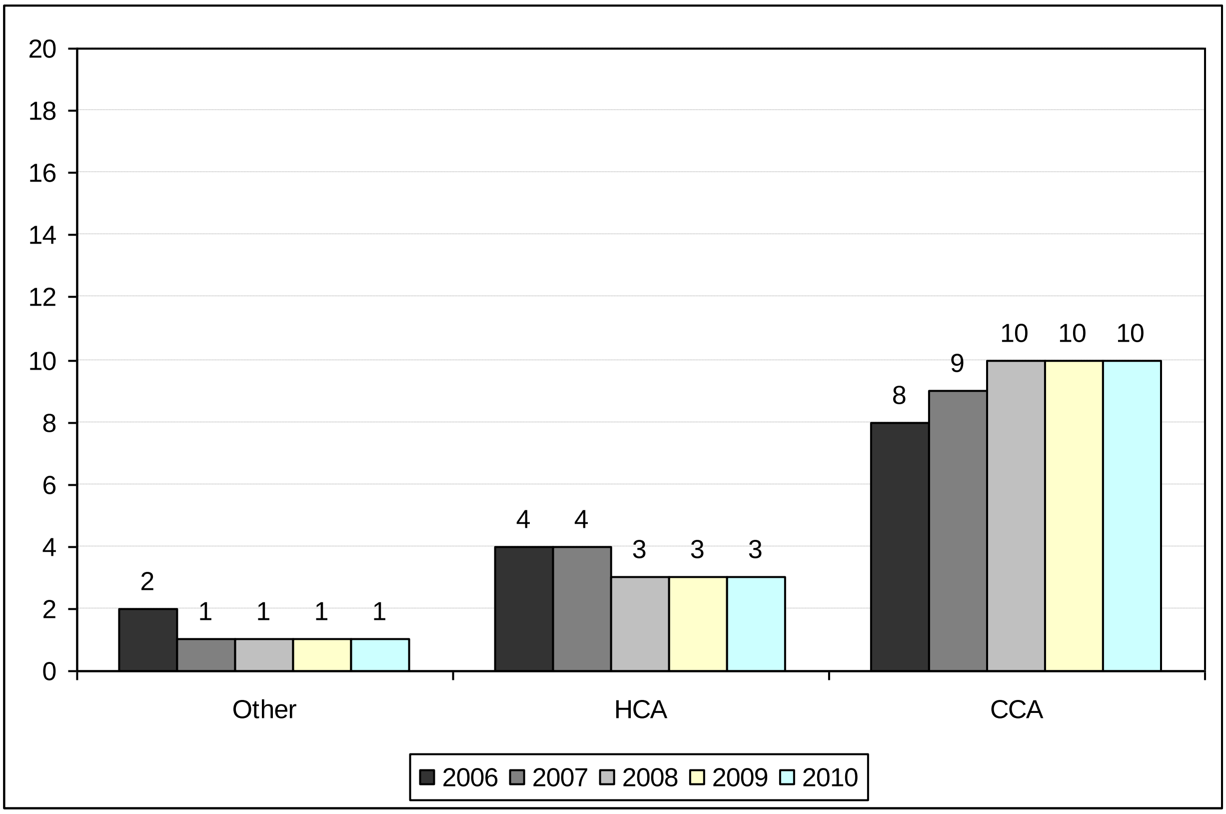
**Trend analysis:**

***Cost base***

Figure 22 shows the number of countries adopting CCA, HCA or a combination of accounting methodologies to set mobile interconnection terminating charges from 2006 till 2010. Since 2006 the most commonly used cost base for mobile networks has been CCA. 10 NRAs out of 14 are applying CCA in 2010 and this number has remained stable since 2008. Application of other methods also remained stable since 2008 showing that 3 NRAs were using the HCA method and one NRA was applying another method.[21]

Despite stable figures for the last three years the overall trend shows a decrease in HCA application and an increase in application of CCA.

**Figure 22 - Cost Base Mobile Call Termination (Mkt 7, previously Mkt 16)**




*Source: BEREC RA – PT 2010*
*Number of countries: 14*

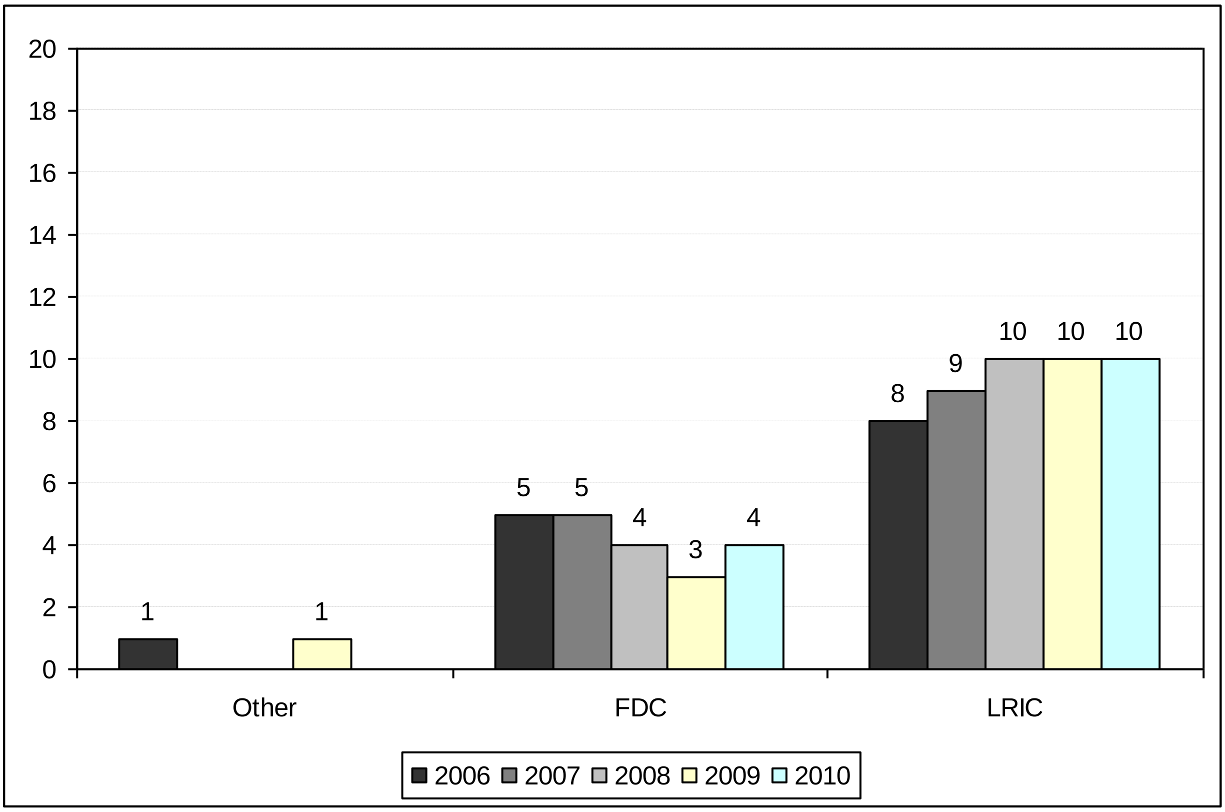
***Accounting methodology***

Figure 23 shows the number of countries using LRIC, FDC or other mixed methodologies as the costing methodology for call termination in mobile networks during the five year period.

In the mobile sector the most commonly used accounting methodology is LRIC. The number of countries using LRIC methodology increased from 8 countries in 2006 to 10 countries in 2008 and has remained stable since 2008. In the same time frame, the number of countries using FDC and other methods has been decreasing.

[21] One country, for the year 2009-2010, is applying Multi-annual model which combines CCA and HCA used for particular assets.

**Figure 23 - Accounting methodology Mobile Call Termination (Mkt 7, previously Mkt 16)**




*Source: BEREC RA – PT 2010*
*Number of countries: 14*

In conclusion, the analysis of the mobile termination market shows a stabilisation at a high level in the use of both CCA and LRIC.

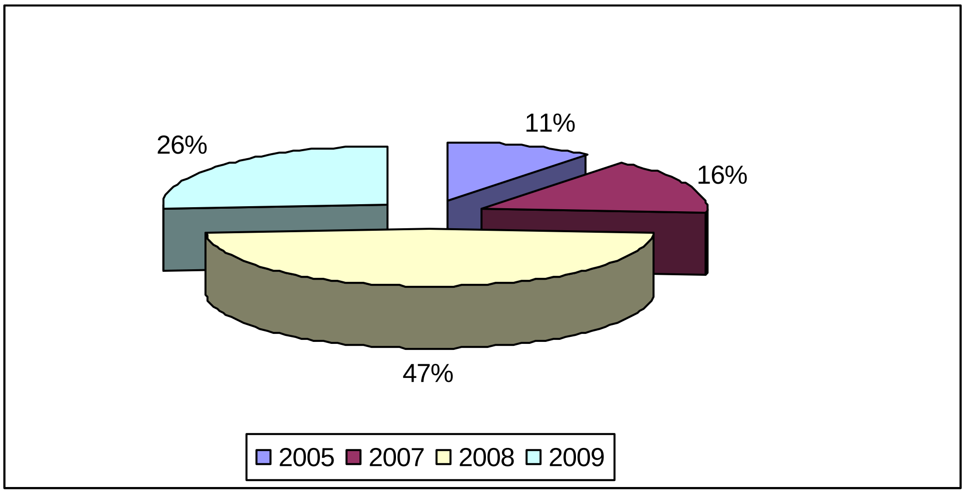
**<u>Key points for Market 7 over time:</u> CCA is the preferred cost base for this market combined with LRIC or LRIC variant as the main costing methodology. The trend analysis suggests that the development of costing tools is still relatively new. But this could change in the near future with the implementation of the EC Recommendation on the Regulatory Treatment of Fixed and Mobile Terminations Rates in the EU (2009/396/EC) where CCA and LRAIC (BU-LRAIC alone or combination of BU-LRAIC and TD-LRAIC) is foreseen as a first option.**

# 4. The auditing process

Data collected from NRAs concern also the accounting separation. As article 13 of Directive 2002/19/EC predicts, the compliance of the incumbent's accounting system should be verified by a qualified independent body.

According to data updated to June 30th 2010, for 26 per cent of NRAs[22], the last year audited was 2009 and 47 per cent of NRAs the last year audited was 2008 (Figure 24). Only 11 per cent of NRAs declared 2005 as the last year audited.

**Figure 24 - Last year audited - 2010**




*Source: BEREC RA – PT 2010*
*Number of countries: 19*

Comparing 2009 and 2010 data[23], it can be observed that for more than 50 per cent of the countries the auditing process progressed by at least one year, while two NRAs declared this year that their last auditing process took place in 2005. Table 3 is an origin-destination table showing respectively in rows and column the last audited year as declared by NRAs in 2009 and 2010. Four countries, that last year declared that their last audited year was 2006, this year declared respectively 2007, 2008 and 2009, pointing to an acceleration of the auditing process. Six NRAs have now audited data for 2008 rather than for 2007 and three NRAs have up to date for 2009.

[22] Percentages are calculated on countries with no missing data on this topic.
[23] The comparison takes into account only those countries with no missing data in 2009 nor in 2010.

**Table 3 – Comparison between 2009 and 2010 data**

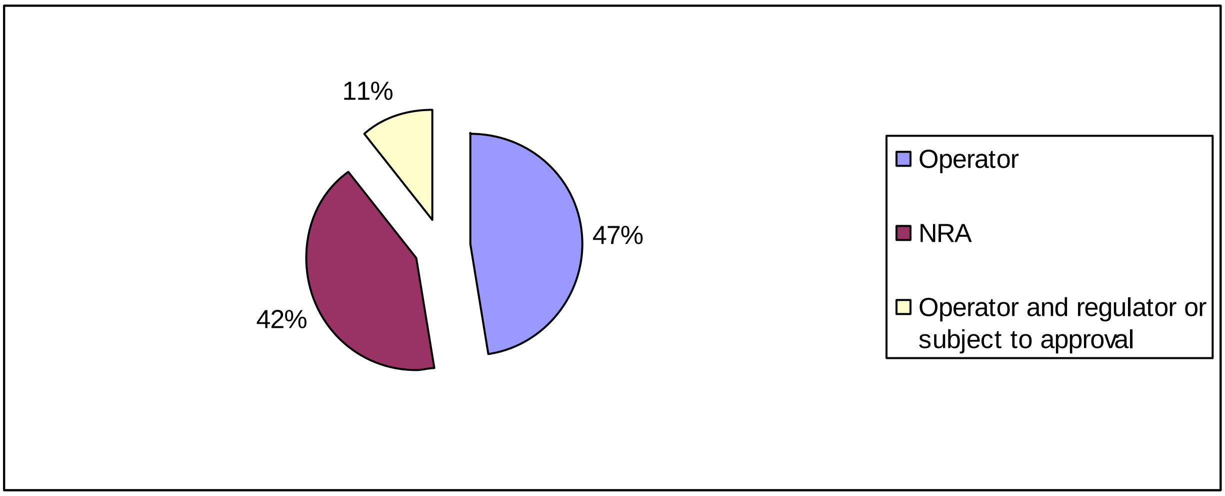
| | Last audited year in 2010 | | | | | |
|---|---|---|---|---|---|---|
| **Last audited year in 2009** | 2005 | 2006 | 2007 | 2008 | 2009 | Total |
| 2005 | 2 | | | | | 2 |
| 2006 | | | 2 | 1 | 1 | 4 |
| 2007 | | | 1 | 6 | 2 | 9 |
| 2008 | | | | 1 | 3 | 4 |
| Total | 2 | | 3 | 9 | 5 | 19 |

*Source: BEREC RA – PT 2010*
*Number of countries: 19*

In terms of the auditing process, several national and international firms were identified as the independent auditor responsible for the last set of audited financial statements, though 11 per cent NRAs declared to carry out the auditing process internally.

The choice of the auditor firm varies from country to country (Figure 25). In 2010, in 47 per cent of the cases it is up to the operator to choose an auditor, in 42 per cent of the cases the decision is up to the NRA. In around 11 per cent of all cases the auditor firm is subject to NRA's approval or it is chosen jointly by the operator and the NRA.

**Figure 25 – Auditor chosen by**




*Source: BEREC RA – PT 2010*
*Number of countries: 19*

As far as confidentiality of accounting data is concerned, 26 per cent of the NRAs declared to have access to the incumbents' operative cost accounting system in use; 74 per cent of the NRAs declared not to have access to the incumbents' operative cost accounting system in use, although some of them are entitled to ask specific detailed information of the incumbent or may have access only in exceptional circumstances.

# Appendix

## A.1 Countries participating to 2010 survey

| | |
|---|---|
| 1. | Austria |
| 2. | Belgium |
| 3. | Bulgaria |
| 4. | Croatia |
| 5. | Cyprus |
| 6. | Czech Republic |
| 7. | Denmark |
| 8. | Estonia |
| 9. | Finland |
| 10. | France |
| 11. | Germany |
| 12. | Greece |
| 13. | Hungary |
| 14. | Iceland |
| 15. | Ireland |
| 16. | Italy |
| 17. | Latvia |
| 18. | Lithuania |
| 19. | Malta |
| 20. | The Netherlands |
| 21. | Norway |
| 22. | Poland |
| 23. | Portugal |
| 24. | Romania |
| 25. | Slovakia |
| 26. | Slovenia |
| 27. | Spain |
| 28. | Sweden |
| 29. | Switzerland |
| 30. | United Kingdom |

## A.2 References


- COMMISSION RECOMMENDATION of 19 September 2005 on accounting separation and cost accounting systems under the regulatory framework for electronic communications (2005/698/EC).
- ERG (05) 29 Common position on EC Recommendation on Cost accounting and accounting separation, published in September 2005, available on http://erg.ec.europa.eu/.
- ERG (06) 23 Regulatory accounting in practice 2006.
- ERG (07) 22 Regulatory Accounting in Practice Report 2007.
- ERG (08) 47 Regulatory Accounting in Practice Report 2008.
- ERG (09) 41 Regulatory Accounting in Practice Report 2009.
- ERG (07) 83 ERG CP on symmetry of fixed call termination rates and on symmetry of mobile call termination rates.
- IRG (05) 24 Regulatory accounting in practice 2005, available on http://www.irg.eu/template20.jsp?categoryId=260350&contentId=543311.