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Studies on the Impact of Liberalisation in the Postal Sector

Study on the Weight and Price Limits of the Reserved Area in the Postal Sector

by

Brussels and Vallendar, November 1998

The opinions expressed in this study are those of the authors and do not necessarily reflect the views of the European Commission.

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by

CTcon

Consulting & Training im Controlling GmbH,
Weitersburger Weg 10, D-56179 Vallendar
Phone: +49 261 / 96 274 70 Fax: +49 261 / 96 274 20

CONTENT OF THE DRAFT FINAL REPORT

1. MANAGEMENT SUMMARY

Aims and focus of the study

The „study on the weight and price limits of the reserved area in the postal sector“ analyses the mechanisms and impact of reduced weight and price limits. Based upon the analysis of historical experience in Europe, Australia and New Zealand and upon an in-depth quantitative analysis of the domestic mail flows in all 15 European Member States, CTcon develops competitive scenarios and estimates the impact of liberalisation on each of the incumbent national operators in Europe.

The study's focus is on those items of correspondence that can be reserved according to the European Directive 97/67/EC (letters[1] and direct mail up to 350g). Only domestic mail flows are covered, since the study is part of a parallel set of studies, covering „costing and financing of universal service“, „cross-border-mail“, „direct mail“, „liberalisation of clearance, sorting and transport“, „weight and price limits“ and a study that integrates the sectoral studies into one comprehensive model.

Historical analysis and findings

Looking for historical experience on the effects of weight and price limit changes, CTcon concentrates on those Member States that have introduced lower weight and price limits for letters than requested by the postal Directive (DK, D, E[2], FIN, S, UK). The research has been enriched by analysing the situation in Australia and New Zealand. For most of the countries analysed liberalisation of the postal sector is a recent development, so that competition may not have achieved the mature situation. In all analysed countries the incumbent postal provider still has an overwhelmingly strong market position. Further central findings are:

- Competition appears after liberalisation of significant volumes.
- Large players enter the market as niche suppliers.
- Large new entrants concentrate on business mail.
- Small competitors focus on local post products.

Scenarios on the development of competition in a more liberalised postal market

Different competitive developments can be expected in the 15 Member States. National postal providers offering service quality below European standard, will potentially be attacked both, on the quality and on the price dimension. They may risk to lose

[1] For the purpose of the study, letters are defined as items of correspondence other than direct mail (cf. chapter 2, figure 1).

[2] The Spanish postal market has been analysed because of the fact of a completely liberalised local post segment.

substantial market shares to competitors. Operators, who provide a high service quality, can only be attacked on the price dimension. They might primarily be forced to grant substantial discounts to major clients. This reduces the average price level while the quality offered is maintained.

Competitors are supposed to concentrate on attractive mail flows. Attractive mail flows are characterised by low collection costs due to a high number of items collected from one injection point and/or by - even more important - low distribution costs due to concentrated delivery. Consequently, attractive mail flows comprise business mail and mail into urban areas. Unattractive flows for competitors (e.g. rural to rural) are supposed to be carried by the incumbent national operator, regardless of liberalisation, since this operator is generally obliged to provide universal service.

Designing a set of relevant scenarios for the future stable competitive postal market, CTcon decided to point out four scenarios of reduced price and volume of the universal service provider in the non-reserved letter and direct mail market segments. The scenarios assume that volume losses to competitors can be avoided to a certain extent by reducing prices. All four scenarios are applied to all 15 Member States at five different weight limits. The impact of each scenario on the incumbent operator depends largely on the future weight limit of the reserved area. Although liberalisation will induce effects on competition only gradually, the results of the scenarios are calculated as if the effects would take place immediately. Therefore, market growth effects beyond 2003 are not taken into consideration.

Structure of the domestic mail flows

Analysing mail flows in Europe, CTcon used a two phase method. In phase one, mail flows were modelled based upon published and unpublished information, integrating postal operators' expectations and studies. In a second phase this data was verified in detail with all 15 national postal operators. As a result, CTcon can now present a comprehensive database on domestic mail flows on which the analysis of liberalisation impacts can be based concretely.

If the current weight limit (350g) was reduced to a general limit of 100g for all items of correspondence, this would keep 93% of the volume and about 85% of the revenues in the reservable area. Even a 50g weight limit would keep 85% of the volume and 77% of the reserved revenues. For further analysis and political discussion CTcon presents the reservable area in terms of volume and revenues for all combinations of standardised weight bands for letters and direct mail (cf. chapter 5, table 3 and 5).

Combining the findings on the attractiveness of mail flows and the degree of reservation, CTcon concludes that in a 50g weight limit scenario, 10,7% in terms of volume (16,9% in terms of revenues) of all items of correspondence below 350g are non-reserved and attractive for competitors. These items would be subject to competition and a certain share of them will be lost to competitors (cf. four different scenarios).

Estimated profit impact of reduced weight limits on the incumbent operator

Applying the extended profit impact model developed in the study on liberalisation of clearance, sorting and transport,[3] CTcon combines the detailed quantitative information on mail flows and the defined competitive scenarios. The model includes volume effects, price effects and the potential volume-driven cost effects in case of reduced weight limits of the reservable area. Profit impact estimations per weight limit and per scenario are calculated for each of the 15 Member States. All detailed data is included in a secret annex to the report. The published report outlines the relevant figures in the form of European averages.

The quantitative results show the importance of market growth for the postal sector. The presumably negative effects of liberalisation (price decrease and loss of market shares in the liberalised segments) are often (over-)compensated by the positive effects of market growth expected by the national operators. For example in case of a 50 gram weight limit, on average, postal operators could increase their profitability compared to today. The most negatively touched operator would suffer a decrease of 6,7%-points in profitability. Even in case of total liberalisation profit impact, calculated as profitability after liberalisation compared to profitability in 1997/1998, does not surpass on average a decrease of 7 percentage points in return on sales (letters plus direct mail). In this case the average postal operator would still operate a profitable core business.

The (positive) results have to be balanced against two aspects. At first, both, increasing and decreasing volumes are treated equally with regard to potential volume driven cost effects. Increasing volumes lead therefore to (strongly) degressive fixed costs. Moreover, the model assumes that increasing factor costs can be compensated by rationalisation or can be offset by charging higher prices for postal products.

However, CTcon excludes various managerial options allowing additional amelioration of the postal operators' position until and beyond further liberalisation: improvement of service quality, product and price differentiation, marketing and publicity or international activities.

Practical aspects of liberalisation by weight and price limits

The CTcon analysis is produced assuming that the reduced monopoly areas are accepted and realised in the markets. Some important practical aspects of regulatory policy are therefore to be illustrated:

- Weight limits are a superior „first dimension" to describe the limits of the reservable area; a price limit is however compulsory as a means to open markets for „value added" courier and express services.

3 The profit impact model has been enlarged by integrating the analysis of the delivery stage.

- The smaller the reservable area, the more important are clear definitions, information on the items transported by the operators and sanction mechanisms to effectively protect the granted monopoly.
- Practical legal workarounds to undermine the monopoly area should be watched, but they seem to be of limited relevance. However, weight limits of 20 grams or less may lead to a „de facto“ full liberalisation because of the fact that heavier envelopes or additional content may help going round the reserved area.

Finally, it can be said that liberalisation by reduced weight and price limits is in line with the tradition of European postal regulatory policy. Moreover, the weight and price dimension effectively opens options for a faster (complete) or slower (gradual) liberalisation, also with regard to the development of the internal market of Community postal services (further harmonisation of the reservable area). The stepwise procedure would provide national operators with an additional time frame to manage transformation into efficient and market oriented institutions (where necessary) possibly accompanied with (newly defined) adequate commercial freedom.

2. AIMS AND FOCUS OF THE STUDY

2.1 Background of the study

Traditionally the markets for postal services are highly regulated and served by sovereign or state-owned legally monopolised enterprises.

The main reason for this structure used to be the aim to secure the provision of postal services to all citizens independent of their place of residence (universal service), at a guaranteed basic quality, e.g. in delivery times or clearance and distribution frequencies at affordable and - if possible - uniform prices (necessity for cross-subsidisation of cost-intensive clearance and distribution areas).

Up to now, there are considerable differences between postal services in the Member States concerning legal regulations (e.g. predominant degree of liberalisation) as well as prices and especially the quality of postal services.

Now, the postal sector in Europe is to be developed into a single market and liberalised. Competition is to be promoted in order to secure an efficient development of high-quality postal services. Under liberalised conditions, the Member States are to introduce suitable measures for securing the universal service (permanent provision of postal service of specified quality at all points in their territory at affordable prices for all users). (Common Position (EC) 29.4.97 on common rules for the development of the internal market of Community postal services and the improvement of quality of service (97/C 188/02)).

2.2 Aims of the study

This study analyses the impact of liberalisation by reduced weight and price limits of the reservable area on the present universal service provider, on competitors without universal service obligation and - more generally - on the customer of postal services.

Different aspects are dealt with in detail:

1. Analysis and description of the historical consequences of changing weight and price limits.
2. Deduction of as well as conclusions and expectations on future consequences of changes in the weight and price limits out of the historical analysis.
3. Quantification of volumes and revenues in the weight bands in all 15 Member States.
4. Development of scenarios describing effects of future competition in the postal market in case of lower weight and price limits.

5. Estimation of profit impact on the national postal operators in different competitive scenarios and different weight/price limits of the reservable area.
6. Description of practical aspects of liberalisation policy especially with regard to decreasing weight and price limits.

2.3 Focus of the study: weight limits

The study has to focus on items of correspondence within today's reservable area as defined by the postal Directive 97/67/EC. Complying with the Directive the maximum weight limit of the reservable area amounts to 350 grams for items of correspondence. The price limit is settled at five times the basic tariff for a first class letter in the lowest weight band. National legislation may, and in some Member States actually does define lower limits and thereby reduces the volume and revenue reserved for the national universal service providers.

From a practical perspective weight limits offer several important advantages, e.g. measurability, as opposed to price limits to describe a reserved area (cf. chapter 7). The only function of price limits is to open the market for „value added services" such as courier or express services. Since these services carry higher per item cost than classical mail services and are offered (and bought) at substantially higher prices they are regarded as a different market segment. This market segment is excluded from reservation.

To describe the different market segments and mail streams, CTcon uses the following system of terms:

<table>
<tr><td colspan="3">letter post items</td></tr>
<tr><td colspan="2">items of correspondence</td><td>other letter post items</td></tr>
<tr><td>letters
=
items of correspondence other than direct mail</td><td>direct mail
=
a communication consisting solely of advertising, marketing, or publicity material and comprising an identical message, except for the addressee's name, address and identifying number as well as other modifications which do not alter the nature of the message, which is sent to a significant number of addressees,...</td><td>such as:
- books,
- catalogues,
- newspapers,
- periodicals</td></tr>
</table>

reservable area up to 350g

Figure 1: Terms used in the study to describe postal products

„Other letter post items", unaddressed items or parcels are clearly not subject to this study. Moreover, the study exclusively addresses domestic mail flows. Cross-border mail (incoming or outgoing) is covered by another study on the impact of liberalisation in the postal sector.[4]

2.4 Focus on weight limit regulation as exclusive concept of liberalisation

In search of maximum clarity of results, CTcon analyses and discusses the (different) scenarios of (different) weight limits under „ceteris paribus“ conditions - as far as strategies of liberalisation are concerned. This approach is supposed to be most appropriate to the concept of the parallel studies, namely to the study that integrates the results of the sectoral studies in one comprehensive model.

4 Postal operators from two countries argue that, due to their exceptionally high percentage of cross boarder mail (20-40% of total mail volume) they might be subject to specific exceptional cross-effects. They argue that for these Member States weight/price limit changes and cross-border mail liberalisation should be jointly analysed.

3. ANALYSIS OF HISTORICAL CHANGES IN PRICE AND WEIGHT LIMITS

Looking for historical experience on the effects of changes in weight and price limits in the postal sector CTcon concentrates upon information from Member States that have introduced **lower weight and price limits for letters** than requested in the postal Directive. The research has been enriched by information from Australia and New Zealand. Furthermore, as local post is open to competition in Spain, the Spanish postal market has been analysed.

Changes of weight and price limits in the direct mail segments can be analysed on the basis of the German case. In Germany a recent change from 250g in 1995 to 100g in 1996 and to 50g in 1998 can be observed and analysed. In those other European Member States, where direct mail is open to competition, direct mail has never been subject to reservation (Finland, The Netherlands, Spain and Sweden).

The research work on historical changes in price and weight limits systematically treats following aspects for each of the countries:

- Actual price and weight limits.
- Observed steps in lowering price and/or weight limits.
- Date of liberalisation (steps).
- Facts on competitive behaviour in the newly liberalised segments, such as:
  - number and type of competitors,
  - market share acquired since liberalisation,
  - observable entry strategy of competitors.
- National particularities concerning the postal sector and its regulatory framework.
- Statements on future expectations, where available.

3.1 Australia

Changes in price and / or weight limits

Several steps of gradual liberalisation of the postal sector have been taken by the Australian government: 1975 limitation of the reserved area on letters below 500 grams amended by a price limit of 10 times the standard rate in 1983. The actual valid weight and price limits have been decided in **1994**: reduction of the letter monopoly barriers to **250 grams** and **4 times** the basic postage rate.

In 1998 the government announced that as from 1 July 2000 the letter monopoly barriers would decrease to 50 grams and 1 time the basic postage rate. Legislation has yet to be introduced to the Parliament.

Competitive situation after liberalisation

The process of liberalisation has been slow and gradual. Competition occurred in segments such as carriage of catalogues, magazines, newspapers, books and „non-letter“ printed matter. The new entrants have generally been much smaller than Australia Post and have concentrated on the lower value unaddressed mail. Competition from „premium“ letter service providers has further increased.

According to Australia Post the impact of liberalisation is judged as follows: „It is too early to make comments on these aspects given that substantial deregulation has yet to take place.“

Outlook / Remarks

It may be noticed that under the present regulatory framework, Australia Post is the sole operator with a universal service obligation.

Against the most probable decision of reserving the letter market up to 50 grams with a price limit at 1 time the standard rate, Australia's National Competition Council proposed to liberalise business mail and to reserve private letter mail (price limit at 2 times the standard letter rate).

3.2 New Zealand

Changes in price and / or weight limits

In 1987 a new postal legislation came into force, replacing the previous monopoly on all mail weighing less than 16 ounces - about 450 grams - (without any price limit). The new reserved area covered postal items weighing 500 grams or less, unless a charge of NZ$ 1.75 or more was made (price limit). The 1990 Post Office Amendment Act progressively reduced the monopoly to the following weight and price limits:

- 200 grams / NZ$ 1.25 from September 1990 to November 1990,
- 200 grams / NZ$ 1 from December 1990 to November 1991,
- 200 grams / NZ$ 0.80 from December 1991 on.

On **1 April 1998** the Postal Services Act 1998 came into effect. This Act removed New Zealand Post Limited's remaining reserved area and opened the former letter[5] monopoly (200 grams / 80 cents) to **full competition**.

Competitive situation after liberalisation

After the Postal Services Act 1987, which took effect from 1 January 1988, rapid growth and development of the courier

5 „Letter“ in New Zealand is defined as: „Addressed Mail carried for 0,80 NZ$ or less“.

industry, not really existing prior to that point, have been recognised. However, products were not priced close to the NZ$ 1.75 level. During the early-1990s, one company (Streetmail) was offering central business district deliveries for NZ$ 1, but the company ceased business some years ago. According to the regulatory authorities no other significant market entry occurred in the NZ$ 1.75 to 80 cent market between 1990 and 1991.

Nevertheless, a lot of companies (known as „mailing houses“) have been in operation for many years, providing sorting services to business customers. Using these services companies can take advantage of significant discounts offered by New Zealand Post for bulk, pre-sorted mail. The number of these mail houses and their market share are unknown. Neither registration nor postal licence are needed to offer this type of service.

After complete liberalisation of the postal market in 1998, nine postal operators, including the incumbent operator, are registered. One of these operators (New Zealand Document Exchange Limited) is seeking to achieve 20 % of the business-to-business segment on urban to urban mail flows[6]. Opposed to that, most of the other new operators are focusing on local post. One operator even stated that he has no intention to co-operate with other local postal operators. From his point of view, building up of a network would lead to overhead which is too expensive to be carried in his low margin business. Competitors to New Zealand Post are competing mainly on price, offering their services substantially cheaper than the incumbent operator.

According to the expectations of New Zealand's Ministry of Commerce, the discussed small business competitors will not be able to carry much more than 100,000 letters per annum. At the same time New Zealand Post carries more than 800 million items per year. Consequently, New Zealand Post's market share is to be expected to remain at a very high level. Nevertheless, it should be noted that it is very early to make estimates on (future) market shares (not even half a year after the final step of liberalisation).

Outlook / Remarks

Registration is a requirement for all companies involved in the delivery of letters (defined as addressed mail carried for 80 cents or less). To be registered, the operator has to pay a fee of NZ$ 95 (about ECU 40). Registration is not required for those who provide only counter services, sorting services or transport services. Nor is registration required by those who deliver letters as an employee or agent for a licensed postal operator or as a subcontractor for another postal operator. The independent rural delivery contractors, for example, are not required to be registered as they are delivering letters on behalf of New Zealand Post Limited.[7]

6 Source: Direct e-mail and interview contact to postal operators in new Zealand.

7 Rural delivery contractors gain their contracts by way of public tender. For further information on rural delivery service see: Ministry of Commerce, New Zealand, Postal Services in New Zealand, May 1998

New Zealand's Ministry of Commerce is judging from telephone calls and requests for information that there has been a good deal of interest in becoming registered as a postal operator, although only nine have been registered to date. There are no outstanding applications to be processed, and no applicants have been declined registration so far.

3.3 Denmark

Changes in price and / or weight limits

In **1995** a new postal legislation came into force in Denmark generally limiting the reserved area to **250 grams**. Moreover, the outbound international mail has been liberalised, too.

Competitive situation after liberalisation

A lot of private postal operators have established their businesses after the partial liberalisation in 1995. These operators concentrate on international mail. According to Post Danmark there is only one competitor serving the domestic letter market in the segment above 250 grams. Post Danmark estimates its market share to be negligible.

Outlook / Remarks

Lowering the weight limits to 250 grams for the domestic letter market seems to induce no massive market entry to this segment.

3.4 Germany

Changes in price and / or weight limits

In Germany postal legislation changed most recently. Since the beginning of **1998**, **letter items** weighing more than **200 grams** are open to competition. The weight limit for **direct mail items** (so called „Infopost") was reduced gradually in the years 1995 (250 grams) and 1996 (100 grams) and has been fixed to **50 grams** in the beginning of 1998.

Competitive situation after liberalisation

The number of companies holding postal licences grew very quickly. Actually, 73 companies do have a licence. 21 of these companies are licensed to offer nation-wide services. Licences are held by large postal operators (multinational integrators), local courier services, document exchangers and letter shops.

DPD, one of the large parcel services, offers a product „Parcel letter" (letter weighing more than 200 grams) nation-wide at a price slightly below the price of Deutsche Post AG. DPD is aiming at 5 million items in 1998 and 15 to 18 million items p.a. in the following years. DPD's market share in the relevant market segment can then be estimated at about 5 %. The market share of other licence-owners in the letter market segment cannot be identified yet.

At the end of 1996 the German regulatory authority (Bundesamt für Post und Telekommunikation at that time) launched a market research study on the development of competition in the direct mail segment in Germany. As major result of the research, it is worth to notice that in 1996 only 1% (in terms of volume) of all direct mail items were carried by competitors of Deutsche Post AG. 1% of the total direct mail volume correspond to a market share of 5% in the non-reserved direct mail segment. According to official estimates, the competitors' market share nearly doubled in 1997[8]. Due to the new weight limit of 50 grams for direct mail items since 1 January 1998, competitors' volumes increased further. Nevertheless, it is expected that private competitors' market share will not exceed 5% of the total direct mail market in 1998.

Market research for the direct mail market segment done by the German regulatory body in 1996[9] notices a significant decrease of market prices for direct mail items in the German market. A further significant decrease in prices was expected for 1997. At the same time only less than half of DPAG's private competitors generate profits from their activities in the direct mail market segment.

Outlook / Remarks

Besides competition for letter items weighing more than 200 grams, locally acting operators entered the letter market offering D+0 (local post) services for all items independent of their weight at prices below the DPAG 20 grams standard letter tariff. It is not yet finally decided whether this type of competition is legally allowed or if it illegally undermines the regulatory monopoly.

3.5 Spain

Changes in price and / or weight limits

During the 1960's, **local post** (mail remaining in the same city) has been **completely opened to competition** (no weight and / or price limit). In relation to the implementation of the postal Directive, local post remains part of the non-reserved area as well as direct mail which has never been subject to reservation in Spain. Only letters and postcards up to 350 grams (excluding local post) are carried within the monopoly area.

Competitive situation after liberalisation

According to the regulator's information, there are about 2.000 competitors active in the postal market. These competitors are small or medium sized locally acting businesses, courier services, transport companies (carrying mainly parcels and small packages) and large internationally acting players (carrying mainly international mail). Most of the competitors are small businesses carrying local mail and acting moreover as consolidators for the national postal operator (Correos y Telégrafos). These companies („agencias colaboradoras") can be considered to be competitors and customers vis-à-vis the

8 In 1997, the volume of direct mail items carried by DPAG increased by 5,4% (see annual report 1997 of DPAG).

9 Bundesamt für Post und Telekommunikation, Zweite Marktunter-suchung zur Infopostlizensierung, Dezember 1996

incumbent operator at the same time. The licences for the „agencias colaboradoras“ are issued by the incumbent operator. In total the market share of competitors is supposed to be about 25% of the total mail volume.

Outlook / Remarks

Taking into account that transportation of mail between cities was not controlled until present, the Spanish postal sector may be considered as completely liberalised. Only within the new regulatory framework[10] competitors' activities can be controlled and therefore, illegal activities within the postal sector may diminish.

Furthermore, it is worth to notice that the tariffs in Spain are very low compared to tariffs charged in other European countries. Consequently, future increase in competition on price is not very likely to happen.

3.6 Finland

Changes in price and / or weight limits

In 1991 the decision has been taken to liberalise the letter market completely. The **zero weight and price limit** took effect from **1994**.

Competitive situation after liberalisation

Actually, 100 % of the domestic letter market is still served by Finland Post. In 1997, the first licence has been issued to Suomen Suoramainonta Oy which traditionally handles only unaddressed mail. This company has not yet started business in the letter market due to an additional fee on turnover claimed by the governmental authorities on urban mail. According to the area served operators are presently obliged to transfer an additional fee between 0 % (remote areas) and 20 % (densely populated areas) on turnover to governmental authorities.

Outlook / Remarks

It seems that this additional fee prevents potential competitors either to apply for a licence (exception Suomen Suoramainonta Oy; other companies withdrew their applications recently) or to start business in the domestic letter market. However, Finland Post is of the opinion that the entry of further new competitors in the letter market segment should not be excluded in the future.

3.7 Sweden

Changes in price and / or weight limits

In 1992 the decision was taken to open the letter market completely to competition. The **zero weight and price limit** came into force in **1993**.

[10] Ley 24/1998, de 13 de julio, del Servicio Postal Universal y de Liberalización de los Servicios Postales.

Competitive situation after liberalisation

Actually, 81 private companies are registered of which 70 are active in the postal business. The largest competitor of Sweden Post is CityMail AB which carries more than 100 million items per year. CityMail covers about 3.5 % of the complete Swedish letter market. Regarding the fact that CityMail serves only a limited region (Stockholm, Gothenburg, Malmö) their market share is substantially higher than 3.5% in the regions effectively served.

The other operators do not process more than 1.5 million items each, several of them even less than 100,000. Some locally operating competitors, for example WisbyMail in Gotland, have established their businesses quite well. However, Sweden Post's market share in the letter market remains dominant (about 96 %).

Outlook / Remarks

According to the Swedish regulator, Post & Telestyrelsen, the volume of industrial mail (computer-addressed mail) will grow in the future. Therefore, CityMail offering mainly services within this segment is supposed to gain importance (but is supposed to operate still without profit in 1998)[11], while the share of other competitors will most probably remain at the current low level.

[11] Source: CTcon interview with CityMail. CityMail's net loss in 1996 amounted to 83,6 million SEK (9,87 million ECU) and 90,3 million SEK (10,66 million ECU) in 1997.

3.8 United Kingdom

Changes in price and / or weight limits

In **1981** a **£ 1** price limit of the reserved area was introduced. Today, the price limit represents nearly 4 times the basic tariff for a first class standard letter in the lowest weight band (0 - 60 grams in the United Kingdom) and equals about the price charged for a 400 gram first class standard letter.

Competitive situation after liberalisation

„At this distance in time, it is difficult to draw any firm conclusions from the introduction of this limit, which kept the vast majority of letter traffic in the reserved area." (Statement by Royal Mail)

Outlook / Remarks

Lowering the price limit to £ 1 (actually about four times the standard letter rate) seems to induce no massive market entry serving the domestic letter market segment.

3.9 Conclusions from the analysis of effects of lowered weight and price limits

Conclusions from the historical analysis of liberalisation can be summed up with regard to two different cases:

1. Competition in liberalised market segments in case of a clearly defined regulatory framework for postal services:

Australia, New Zealand, Denmark, Germany, Finland, Sweden and United Kingdom.

2. Competition by going round the monopoly in case of a lack of regulatory clarity: e.g. Spain and to a certain degree Germany, too.

In the **first case**, it has to be noticed that in nearly all countries that have been taken into consideration, lowering weight and price limits is a **recent change** in the postal sector. The incumbent operator is still the dominant postal provider in the market and the **level of competition is very moderate**. This is also true in case of complete liberalisation (e.g. Sweden).

CTcon draws the following conclusions from this part of the analysis:

- Only in case of massive reduction of the weight and price limits, significant volumes are served by (new) private competitors (e.g. in Sweden and in Germany in the direct mail segment).
- Large players (national universal service providers, international or national parcel and courier services) do enter the market offering services only as specialised niche supplier (e.g. DPD „parcel letter“ in Germany and industrial urban mail by CityMail in Sweden).
- Large (new) private competitors concentrate on business mail and urban regions, such as Document Exchange in New Zealand.
- Small competitors (start up companies) do offer mainly local post services, such as in New Zealand or in Sweden.

In the **second case**, competition takes place in a **„de facto liberalised“** market such as in Spain. Due to the fact that local mail is completely liberalised and transportation of mail between cities has not been controlled until the new Spanish postal law came into force in July 1998, quite a number of the actual 2.000 competitors in the Spanish market do carry mail from within the still reserved area[12]. At present, competitors' market share amounts to about 25% (official estimate) of the total mail market.[13] According to official Spanish statements, this situation may therefore be considered as (country-specific) scenario of a completely liberalised postal market.

12 The reserved area comprises actually non-local items of correspondence other than direct mail up to 350 grams.

13 Although the reserved areas in Italy and Greece are defined quite widely similar results in quantity have been found in these countries.

4. THESES ON THE DEVELOPMENT OF COMPETITION IN CASE OF LOWERING WEIGHT AND PRICE LIMITS

4.1 Competitors' expected field of activity in the newly opened postal market segments

Analysing the national postal operators 15 European Member States from a processes-perspective as CTcon did in the study on „upstream liberalisation“[14], it becomes obvious that the national situations differ significantly. CTcon has identified four dimensions to describe the „competitive attractiveness“ of the postal markets: (1) the adjusted[15] price of the letter product, (2) the letter volume per 1000 inhabitants, (3) the quality of service delivered by the actual dominant operator and (4) the efficiency of the dominant operator.

It is obvious that a national postal market is more attractive, the higher the adapted price and the higher the volume per 1000 inhabitants. It is equally clear that a market is more attractive the lower the quality provided by the dominant operator and the lower his efficiency.

[14] See The European Commission DG XIII / CTcon „Studies on the Impact of Liberalisation in the Postal Sector: On the Liberalisation of Clearance, Sorting and Transport.“: especially chapter 5.4).

[15] The absolute price of the standard letter product is adjusted by a standardised measure of costs per working hour. The higher the adapted price, the higher the potential margin in the postal business (70% of postal costs are costs of personnel).

In the 15 Member States multiple combinations of price, volume, quality and efficiency can be observed.

For the further analysis on the development in competition with respect to a change in the weight and price limits, CTcon concentrates on two typical starting situations:

(A) A national postal market being served by a dominant high quality provider (e.g. D, DK, NL).[16]

Quality level is defined „high“, if the rate of first class items delivered the day after injection (d+1) is higher than 90%. In this situation, a potential competitor offering services in the formerly reserved area can almost exclusively differentiate his services in terms of price. At the same time he will have to guarantee a similar quality level as the incumbent operator. Therefore, in national markets that are dominated by a high quality provider, competitive attacks can primarily be expected on the price dimension.

(B) A national postal market being served by a dominant low quality provider (e.g. E, GR, I).

[16] See The European Commission DG XIII / CTcon „Studies on the Impact of Liberalisation in the Postal Sector: On the Liberalisation of Clearance, Sorting and Transport.“: page 45, Table 6 „Quality of Service (d+1) of the national postal operators“.

In these markets potential competitors can differentiate either performance vis-à-vis the customer by offering better quality or by offering equally low quality at lower prices. Observation from different national markets show, that even under formal monopoly conditions competitors manage to achieve substantial market shares, if they can offer better postal quality (speed, reliability). In more than one Member State competition on quality allows the realisation of prices slightly above the prices of the dominant national provider. Observations from several „low quality" systems support the thesis that in these markets quality improvement (at a comparable price level) is an effective competitive mechanism.

These two basic situations will have to be discussed again when concrete scenarios on competitive impact are designed in order to finally estimate profit impact of weight / price limit reductions.

In both cases (A) and (B) the attacker has to compete against a dominant player that takes advantage of his established national presence, existing customer relations and substantial economies of scale at least in the clearance and distribution processes. On the other hand, the dominant provider generally is obliged to provide postal services according to a universal service obligation in all parts of the country. The attacker does not have such obligations. He can and must focus his activities on such segments of the business where he can easily reach reasonable economies of scale and thereby reach a production cost level comfortably below the actual price paid by the relevant postal customers. If he finds such segments, the difference between costs and potential price can be used to generate a combination of

- supreme quality of service,
- a certain price advantage as compared to the incumbent operator and
- a profit to remain on the attackers side

that is attractive to the special group of customers addressed. The attacker has to identify the mail flows, where:

- a high number of items can be collected per collection point, and / or
- a high number of items can be delivered per delivery point, and / or
- a low ratio of driving time to delivery time exists and / or
- product related gains in efficiency can be achieved from preparatory work already done by the customers (e.g. industrial mail[17]).

High clearance and distribution efficiency can be reached serving urban[18] regions. Both processes, clearance and

[17] According to CityMail AB, Sweden, the market of postal products can be split in, on the one hand, industrial mail and, on the other hand, single piece items. Industrial mail is labelled and pre-sorted during its production (printing and/or enveloping) according to the delivery agents' sequencing. Therefore, sorting becomes unnecessary and there is no need to invest in expensive sorting plants. The final sequencing is done by the delivery agents.

distribution show substantial economies of scale. Distribution in the urban region is more important than clearance since distribution accounts for 55% of total processing cost (EU-average)[19]. High efficiency and low per item costs can also be achieved collecting from and delivering to business customers. These customers inject/receive large numbers of items each time they are served.[20]

Local post items are those items that come from and stay in the same (local) geographical region. Therefore, some sorting and transport activities are not necessary. Total production costs are below average. Local post is an even more attractive part of the urban to urban mail flow.

It can be concluded that competitors will most probably serve the following concrete segments of the postal market further referred to as „attractive mail flows“ [21]:

- in the letter segment
  - urban to urban[22],
  - urban-business to rural-business,
  - rural-business to urban (business and private).
- in the direct mail segment[23]
  - urban to urban,
  - rural to urban.

Only very limited competition is to be expected in the following segments:

- (letter) items sent by private customers[24],
- items (small quantities) from rural (remote) origin.

The basic reason for lack of competition in this segment is the lack of attractiveness of these mail flows at the given price levels. Current price levels originate from an average calculation under monopoly conditions. These prices may provide some accepted cross-subsidisation for the unattractive (cost intensive) mail

18 For quantitative analysis CTcon uses the United Nations „World Urbanization Prospect. Details will be outlined in chapter 5.

19 See The European Commission DG XIII / CTcon „Studies on the Impact of Liberalisation in the Postal Sector: On the Liberalisation of Clearance, Sorting and Transport.“: page 47, Table 8 „Cost per stage of the value chain as percentage of total operational costs“.

20 Consolidators may act selectively: insufficient volumes (lack of economies of scale) to be distributed will most probably be left or passed to the incumbent operators. Therefore, CTcon assumes that unattractive volumes with regard to competitors will remain with the incumbent operators.

21 For the quantification see chapter 5.2.4.

22 Includes local post volume.

23 Direct mail items are close to always injected by business senders.

24 In Sweden, for example, a private operator tried to enter the market for local post collecting items from private senders by putting street letter boxes next to existing boxes of the incumbent operator. However, the business had to cease very quickly, since the corresponding delivery network became too expensive. Synergies by using already existing newspaper delivery network could not be realised, as delivery agents refused to carry newspapers and letter items (difficulty of common handling).

flows. However, the existence of unattractive mail flows for competitors does not necessarily mean that these volumes are generally inducing losses at the incumbent operators' side.[25]

4.2 Potential competitors in the letter and direct mail market

As already stated in the parallel CTcon-study on „Upstream liberalisation“[26], there are - among others - three major types of potential new competitors in the postal market:

(1) Large (multi-)national and international express and parcel services (integrators)

(2) National postal operators (universal service providers) from neighbouring countries

(3) (Start-up) small businesses or small businesses from neighbouring branches (such as letter shops, local courier services, document exchangers etc.)

Large national and international **express integrators** are actually offering premium services at premium prices mainly in the business-to-business segment. They would be established service providers for exactly those customers that are most attractive for the mail business. Integrators would have the know-how, the client base and the financial power to manage a large scale entry into the mail market („immediate“ nation-wide presence and operation). However, traditional mail is a large-volume-low-price (commodity) segment. Entering this segment could have negative influences of their core express business.[27]

Within their core business large national or international **parcel services** cover those (parcel) market segments that have been identified to be attractive in the mail market: urban-to-urban, business-to-business, and business-to-private items. Offering mail services to these customers could be a logical extension to their current business. However, production systems for parcel services largely differ from the efficient mail production system. Additional investment for large scale entry would be needed. Consequently, large scale market entry can only be expected if the market conditions are very attractive in terms of price level, items per inhabitant, efficiency and quality level offered by the incumbent operator. Specialised entry (integration of larger / heavier letters from/to business customers into the parcel process) is probable.

National postal operators are expected to enter new national markets in order to internationally extend their business and to balance the market share lost to competition in their home markets. It is rather probable that national operators avoid

[25] Due to the fact that (for competitors) unattractive volumes are supposed to remain completely with the incumbent operators they may still benefit from existing economies of scale generated by large quantities (see also chapter 5.2.4).

[26] See: The European Commission DG XIII / CTcon „Studies on the Impact of Liberalisation in the Postal Sector: On the Liberalisation of Clearance, Sorting and Transport.“

[27] Premium prices for special services may become under pressure by offering large-volume-low-price services (standard letters).

to set up new operations internationally. It can be expected that they buy smaller private postal competitors integrating these in order to manage specialised (business) mail flows on a nation-wide or international basis. This strategy would combine low cost levels of a start up private provider with high technical and market experience of the national provider. Rapid market action is to be expected where national providers can add business using existing capacities (e.g. along geographical borders), thus adding generating additional revenues with only marginal investment.

The market entry of **start-up small businesses** is supposed to be very likely because starting to run a local postal business does not require large investment. Even in case of failure, there is only a very limited monetary loss to be expected. Start-up businesses are most probably limited to offer services on a local or regional basis. Regional or nation-wide integration of small businesses may take place later, potentially driven by the competence (and investment) of a large integrator or a national postal operator from a neighbouring Member State.

Small businesses active in neighbouring branches (print shops, document exchangers etc.) may enter the mail market offering specialised services prolonging their core value chain (printing) by distribution of mailings they designed and printed. From this stage of occasional delivery service, they might start offering „pure“ postal (delivery) services and thereby ameliorate their economies of scale in delivery. These companies will basically behave and develop as the start-up companies mentioned above. Their special advantages are to possess a customer-base of mail-intensive business customers and to - in some cases - possess a background organisation covering several sites in several cities. They may therefore gain volume and importance faster than pure start-ups.

4.3 Scenarios on future market shares within today's reservable area

The previous discussion on the questions which mail flows are most interesting to competitors, which type of competitor may enter the market and what will be their focus with regard to different market segments leads to the aspect of possible scenarios on market shares in case of lowering weight and price limits. Regarding 15 specific starting situations in the Member States it is obvious that for country specific strategic analysis there should be 15 sets of scenarios developed. CTcon has reduced the set of scenarios to four. Scenario A and B are more relevant for the „high quality“ providers, scenarios C and D primarily apply to „low quality“ starting points. All four scenarios will later be applied individually to 15 countries for five weight limit-options (0 gram to 150 grams[28]). This multiplies to 300 scenarios to be treated in the course of this study.

The scenarios are meant to describe stable market situations in the new - more liberal - regulatory situation. The changes in

[28] Given the distribution of volume (see chapter 5) in the weight bands, scenarios for higher weight limits do not offer any substantially new information and are therefore skipped.

market share will not be realised immediately after the liberalisation date; they will develop over a period of several years. The speed of price effects is basically controlled by the incumbent national operators. Some national operators may choose a strategy of pre-emptive action and offer substantially new prices from the date of liberalisation or even earlier to prevent competitors from starting the set-up of new business. Others may choose a slower strategy reacting to competitors' observed action, hoping to avoid substantial price reductions for a while. These short term dynamics in the first years after liberalisation are not part of the CTcon model.

Four basic scenarios are specified for reasons of analysis. Price and volume effects concern the universal service provider (not the market). The 100% basis is set by 1997 volumes and 1998 prices:

Scenario A „Fierce Competition on Price, Volume Defended"

- up to 25% price reduction as compared to today's official prices on all non-reserved and attractive mail flows
- up to 5% market share of (new) competitors in the non-reserved and attractive mail flows

Scenario B „Moderate Action on Price, Niche Competitors Established"

- up to 15% price reduction as compared to today's official prices on the non-reserved and attractive mail flows
- up to 10% share of non-reserved and attractive volume lost to (new) competitors

Scenario C „Moderate Price Reduction, Substantial Market Share Lost"

- up to 10% price reduction as compared to today's official prices on the non-reserved and attractive mail flows
- up to 25% share of non-reserved and attractive volume lost to (new) competitors

Scenario D „Prices Substantially Stable, Large Scale Entry"

- only very limited (up to 5%) price reduction as compared to today's official prices on the non-reserved and attractive mail flows
- up to 50% share of non-reserved and attractive volume lost to (new) competitors

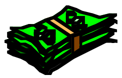
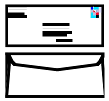
Reaction of / effects on the u.s.p.	Scenario A	Scenario B	Scenario C	Scenario D
 Price reduction (on the remaining non-reserved attractive volumes)	up to - 25%	up to - 15%	up to - 10%	up to - 5%
 Volume reduction (in % of the non-reserved attractive volume)	up to - 5%	up to - 10%	up to - 25%	up to - 50%

Table 1: Maximum price and volume reduction in different scenarios

The **Scenario A** refers to a situation where the incumbent high quality operator systematically reduces prices in the liberalised and attractive segments (e.g. substantial general discounts for major business customers, introducing a flatter price structure for heavier business items). He thereby eliminates the attractiveness of the market in the eyes of potential large attackers. Only (very) small businesses will start activities in the postal market, basically using their factor cost advantages for operations in (local) niches. Experience and expectations e.g. from Sweden and New Zealand (completely liberalised postal markets) underline the relevance of a scenario in which the „high quality" incumbent operator loses only a small portion of market share.

In some markets this strategic effect may already be reached at price reductions of less than 25%.

Scenario B reflects a situation where the incumbent operator moderately works on the price dimension, namely to prevent major customers from changing / splitting postal suppliers. Small businesses arrive to enter the market successfully as in scenario A and on top of that some medium size companies will be able to gain a significant market share, establishing operations in specific niches (e.g. „industrial mail" that can be processed without sorting or heavier „parcel letters" that can be processed in a parcel processing system).

The **Scenario C** describes the situation where the national postal provider is attacked by large scale market entry of large integrators or neighbouring national postal operators. The integrator would probably combine efficiently operating local businesses (small low cost distributors) by establishing regional or nation-wide networks, specialised on attractive segments. However, successful market entry of large integrators may depend mainly on the efficient network structure of incumbent operators. Thus, assuming that some national operators have achieved or will - until the date of liberalisation - build up an efficient processing system and network structure, this scenario seems to be rather improbable in countries with high quality service providers. Nevertheless, Scenario C applies for those operators where an attacker can offer substantially higher quality of service compared to the incumbent provider.

The **Scenario D** may refer to a situation where large scale entry is launched with the clear perspective to replace the incumbent operator in complete market segments. It reflects a situation of successful market entry and business expansion of one or several large integrators acting profitably on a nation-wide level. This type of entry would include building up a parallel network including automated sorting capacity for the segments (liberalised and) attacked.

Since scenario D includes the build up of substantial capacity, it is more relevant for providers who can be attacked on both strategic dimensions: price and quality of service. It seems to be unrealistic that competitors try very large entry including large investment just based on a (temporary) price argument.

General adaptation of the scenarios to national particularities

In principle, CTcon applies these scenarios to all individual postal operators in order to estimate profit impact (see chapter 6). But, regarding the particular national situation, two general adaptations are included in order to provide a comparable basis for the interpretation of profit impacts:

1. Adaptation for already granted discounts (as far as these discounts could be identified)

Discussion with the operators and delivered data show that some operators do already grant discounts on their price lists to certain (business) clients. For those cases where discounts could be calculated from the delivered figures, CTcon subtracts this discount percentage from the price reduction stated in the scenario[29]. CTcon assumes that the discounts granted within the monopoly today are an anticipated price reaction to expected future market conditions, meant to keep important clients.

2. Adaptation for already lost market share in the area below 350g

In several countries competitors have already gained substantial market shares within the 350g weight limit. In Spain, for example, liberalisation of local post items lead to a substantial loss of volume below 350g for the Spanish Post. In other Member States, ineffective protection of the monopoly has led to losses of market share.[30] CTcon assumes that the effectively lost volumes below 350g anticipate volume losses from future liberalisation by weight bands. Therefore, the scenarios are adapted[31] for these countries.

[29] If there are 10% discounts measured by CTcon today, a 25% price reduction scenario for this operator would „only“ mean a further reduction of 15% for this operator.

[30] Items are carried more or less illegally by competitors on a regular basis.

[31] If competitors have 20% market share below 350 g, a 50% volume decrease (scenario D) would only mean a further volume decrease of 30% for this specific operator.

5. QUANTITATIVE STRUCTURE OF DOMESTIC MAIL FLOWS IN THE MEMBER STATES

5.1 Procedure of the data collection on mail flows

CTcon has created a database on domestic mail flows comprising a concrete and systematic set of tables for each of the Member States.

First of all (phase I of the data collection), these tables were filled in by CTcon with data from different sources („Market data" study of the European Commission from 1997, „Study on the liberalisation of clearance, sorting, and transport", annual reports of the national postal operators from 1996 and 1997, official statistics etc.). If for one country some of the information was not available, the blanks were filled using European average data.

Then (phase II of the data collection), each set of tables was sent to the correspondent postal operator to be verified. CTcon travelled to the national postal operators in order to ensure a comprehensive and common understanding of the analysis. Discussing the data with the postal operators, the material was partly updated, adjusted, corrected and/or confirmed in the proposed form.

Finally, each collected data set was checked by CTcon, filled in the nationally specific set of tables again and sent to each postal operator for final approval. The approved data have been transmitted to the European Commission as final version of the set of tables. All tables are considered secret[32] and therefore enclosed in separate annexes.

In order to complete the analysis, personal interviews either during the on-site verification phase (part of phase II) or via telephone / e-mail were carried out with representatives from regulatory authorities, private postal operators and different associations (consumer associations as well as postal competitors' associations). The main issues for discussion were related to practical aspects of further liberalisation, namely by lowering weight and price limits, such as regulatory control of weight limits, grey areas resulting from a regulatory lack of clarity (definition of products), regulatory behaviour with regard to licensing, financing of a universal service obligation etc. Some of these are discussed in chapter 7, which summarises practical aspects of liberalisation by reduced weight and price limits.

32 Some elements, such as excerpts from official public statistics, are not secret material, but these elements alone are of no interest. They gain importance only if combining them with secret information from the national operator. Therefore, the complete set of tables is classified „secret".

5.2 Quantitative description of mail flows in Europe

5.2.1 Structure of research and results

The information on domestic mail flows was collected within an exhaustive database. The data for **letters**[33] and **direct mail** have been collected separately in two different sets of tables. In Spain, The Netherlands, Finland and Sweden direct mail has not been subject to the detailed analysis[34]. The database for these four countries contains only tables on letters. Each of the 15 national providers was asked to provide figures on:

- the distribution of mail volumes in different weight bands,
- sender-recipient relations (business versus private senders),
- distinction of mail according to formats (standard and large formats),
- localisation of population and businesses (urban versus rural) and
- the identification of local post volume.

The data has afterwards been analysed in the form of standardised weight bands: 0 to 20g, 20 to 50g, 50 to 100g, and then in 50 gram steps up to 350 grams. The major focus of the analysis has been set on:

- the distribution of **volumes** in the standardised weight bands,
- the **revenues** generated within these weight bands as well as
- the quantification of **attractive mail flows** in terms of volume and revenues.

To ensure the confidentiality of country-specific or operator-specific data, these data are only included in the secret annexes. Nevertheless, findings are presented on an aggregate European basis, indicating an European average, the highest and lowest figure observed in the Member States.

5.2.2 Distribution of volume in the weight bands

Table 2 shows that the average amount of direct mail accounts for about one quarter of the total volume of items of correspondence.

33 Letters are defined as items of correspondence other than direct mail (cf. Figure 1, page 9).

34 In these four countries direct mail is explicitly not subject to reservation and has therefore not been included in the analysis. In some other countries the situation whether direct mail should be considered reserved or non-reserved has to be clarified. Consequently, all eleven remaining countries are taken into account.

	Volume in million items	in %
Letters	38.855	73,4%
Direct mail	14.107	26,6%
Items of correspondence	**52.962**	**100%**

Table 2: Letters and direct mail in terms of volume (Basis: EU-11)[35]

Further analysis shows that letters and direct mail are not equally distributed with regard to different weight bands (cf. Figure 2). The portion of heavy items in the direct mail segment is higher than in the letter segment. Nearly 78% of the total volume of letters up to 350 grams are counted within the lowest weight band from 0 to 20 grams. Direct mail items weighing less than 20 grams represent less than 50% of the total volume of direct mail items below 350 grams. Figure 2 impressively illustrates the dominance of lower weight items of correspondence.

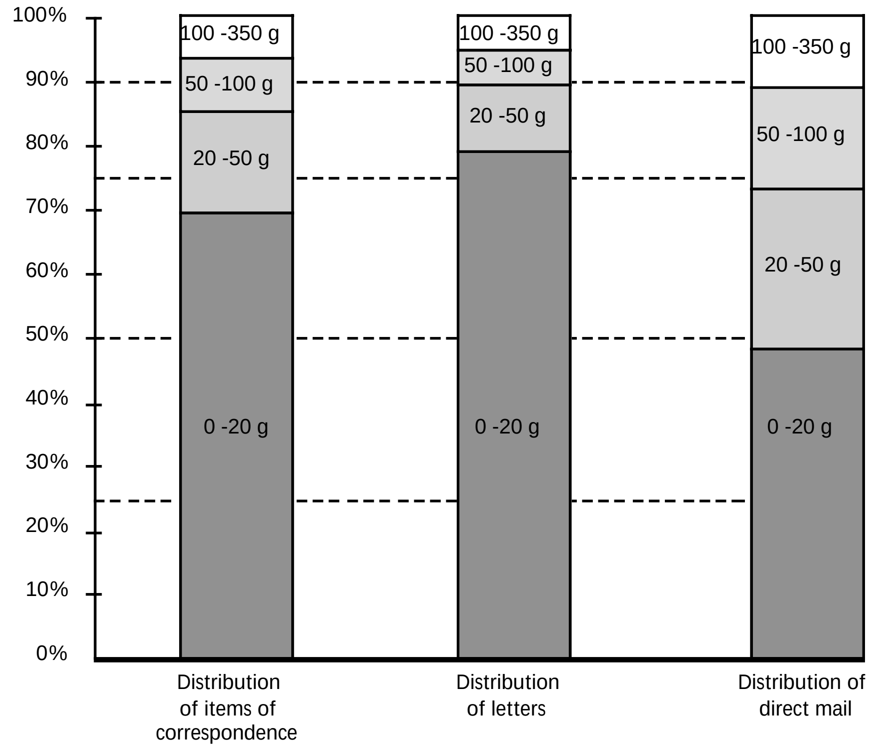


Figure 2: Distribution of volumes in the weight bands (EU-11)[36]

[35] Belgium, Denmark, Germany, Greece, France, Ireland, Italy, Luxembourg, Austria, Portugal, United Kingdom. In order to have a comparable basis for the aggregate distribution in the weight bands for all items of correspondence (letters and direct mail) the national postal operators from Spain, The Netherlands, Finland and Sweden are excluded here. In these four countries direct mail is traditionally non-reserved.

[36] For a better presentation of the volume-distribution in the weight bands from 100 to 350 grams have been added up. The shares of items of correspondence in these five weight bands (100 to 150, 150 to 200, 200 to 250, 250 to 300 and 300 to 350) are as follows: 2,0%, 1,7%, 1,6%, 0,6% and 0,5% of all items of correspondence below 350 g.

If the weight limit was reduced to a new limit of 100 grams, this would only open 5% of the letter volume and slightly more than 10% of the direct mail volume to competition. In the 100 gram case the total volume of items of correspondence remaining reserved would account for 93,6%. In case of a general weight limit of **50 grams** for all items of correspondence **85,4%** of the volume below 350 grams would be kept reserved. A further decrease in weight limits down to 20 grams would still reserve 69,6% of the items of correspondence below 350 grams.[37]

Letters \ Direct mai	0 g	up to 20 g	up to 50 g	up to 100 g	up to 150 g	up to 200 g	up to 250 g	up to 300 g	up to 350 g
0 g	**0,0%**	12,9%	19,5%	23,7%	24,7%	25,5%	26,2%	26,4%	26,6%
up to 20 g	56,7%	**69,6%**	76,2%	80,4%	81,4%	82,2%	82,9%	83,2%	83,4%
up to 50 g	65,9%	78,8%	**85,4%**	89,6%	90,6%	91,4%	92,1%	92,4%	92,6%
up to 100 g	69,9%	82,8%	89,4%	**93,6%**	94,5%	95,3%	96,1%	96,3%	96,5%
up to 150 g	70,9%	83,8%	90,4%	94,6%	**95,6%**	96,4%	97,1%	97,4%	97,6%
up to 200 g	71,8%	84,7%	91,3%	95,6%	96,5%	**97,3%**	98,0%	98,3%	98,5%
up to 250 g	72,7%	85,6%	92,2%	96,4%	97,4%	98,2%	**98,9%**	99,1%	99,3%
up to 300 g	73,0%	85,9%	92,5%	96,8%	97,7%	98,5%	99,2%	**99,5%**	99,7%
up to 350 g	73,4%	86,3%	92,9%	97,1%	98,0%	98,8%	99,5%	99,8%	**100,0%**

Table 3: Reserved volumes as a function of weight limits

[37] Assuming that customers will not go round the reserved area by using heavier envelops or heavier paper than today.

Based on the observed distribution of items of correspondence in the standardised weight bands, table 3 shows the reservable area in percent of total volume for possible combinations of weight limits for letters and direct mail. A complete liberalisation of direct mail (0 gram weight limit) in combination with a 50 gram weight limit for letters, for example, would actually reserve about 66% of all items of correspondence up to 350 grams.

5.2.3 Distribution of revenues from items of correspondence in the weight bands

As postal operators charge higher prices for heavier items than for lighter ones, it is necessary to reflect on the remaining reservable area in terms of revenues. In total, the calculated revenues[38] from the items of correspondence up to 350 grams in the 11 analysed countries amount to 23.742 million ECU. About one fifth of the revenues are generated from direct mail, more than 80% from letters (cf. Table 4). This means that nearly three quarters of the total volume of items of correspondence (=letters) generate about four fifth of the revenues.

[38] Not all operators were able to provide figures referring to net prices (= prices reduced by discounts). In order to have a comparable basis for all eleven countries analysed, calculated revenues (multiplication of 1997 volume data with 1998 prices) instead of directly measured revenues have therefore been used.

	Revenues in million ECU	in %
Letters	19.266	81,1%
Direct mail	4.477	18,9%
Items of correspondence	**23.742**	**100%**

Table 4: Letters and direct mail in terms of revenues (EU-11)

Analysing the distribution of revenues from different weight bands it can be noticed that - due to the general price structure of postal items - the relative portion of revenues from heavier weight bands is more important than their respective part in terms of volume.

Nevertheless, the overwhelming part of the revenues in the European postal business is generated from items in the lower weight bands. Nearly two third of the revenues generated from letters up to 350 grams are counted within the lowest weight band from 0 to 20 grams. Direct mail items weighing less than 20 grams represent about 40% of the revenues of direct mail below 350 grams.

A decrease of the reservable area to a limit of 100 grams would keep more than 85% of the revenues from all items of correspondence reserved. A 100 gram limit for direct mail would reserve 80% of direct mail revenues, while a 100 gram limit for letters would reserve 88% of letter revenues.

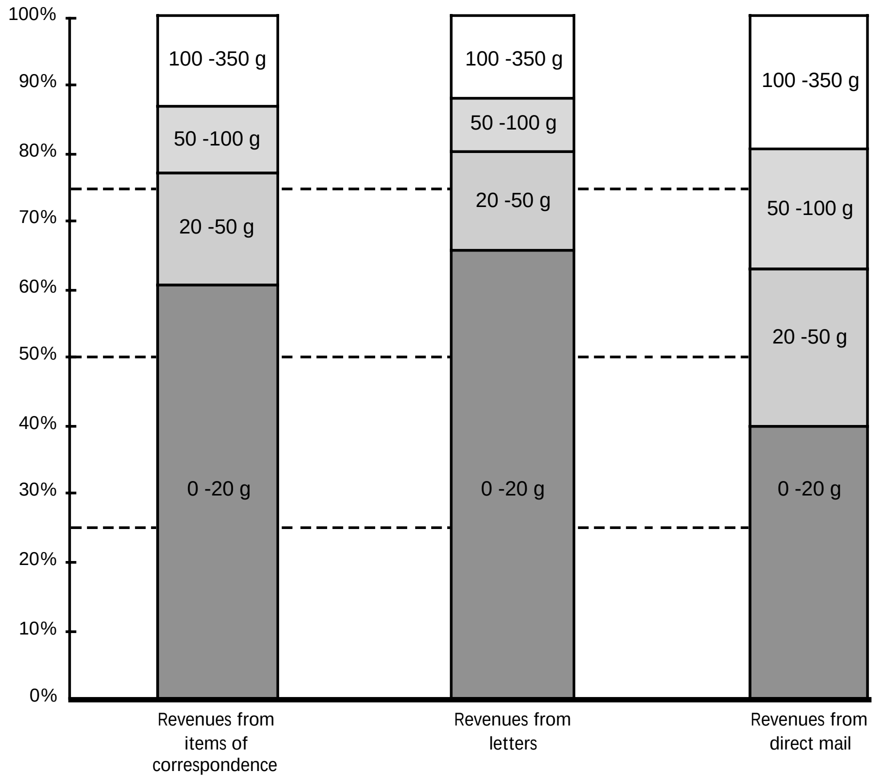


Figure 3: Distribution of revenues in the weight bands 0 to 350g (EU-11)[39]

[39] In order to have a comparable presentation in terms of volume and revenues the standardised weight bands from 100 to 350 grams are shown on an aggregate level. The shares of items of correspondence in terms of revenues in these five weight bands (100 to 150, 150 to 200, 200 to 250, 250 to 300 and 300 to 350) are as follows: 3,7%, 3,3%, 3,1%, 1,6% and 1,6%.

Further liberalisation of items of correspondence to a general weight limit of **50 grams** would open about 25% of the revenues to competition. **75% of the revenues** would remain reserved. With a 20 gram weight limit almost 40% of the actual revenues from all items up to 350 grams could be subject to competition.[40]

Letters \ Direct mail	0 g	up to 20 g	up to 50 g	up to 100 g	up to 150 g	up to 200 g	up to 250 g	up to 300 g	up to 350 g
0 g	**0,0%**	7,5%	11,9%	15,2%	16,2%	17,2%	18,1%	18,5%	18,9%
up to 20 g	53,2%	**60,7%**	65,1%	68,3%	69,4%	70,4%	71,3%	71,7%	72,0%
up to 50 g	65,2%	72,7%	**77,1%**	80,3%	81,4%	82,4%	83,2%	83,7%	84,0%
up to 100 g	71,5%	79,0%	83,4%	**86,7%**	87,7%	88,7%	89,6%	90,0%	90,3%
up to 150 g	74,1%	81,6%	86,0%	89,2%	**90,3%**	91,3%	92,2%	92,6%	92,9%
up to 200 g	76,4%	83,9%	88,3%	91,6%	92,6%	**93,6%**	94,5%	94,9%	95,3%
up to 250 g	78,6%	86,1%	90,5%	93,8%	94,9%	95,8%	**96,7%**	97,1%	97,5%
up to 300 g	79,9%	87,4%	91,8%	95,1%	96,1%	97,1%	98,0%	**98,4%**	98,7%
up to 350 g	81,1%	88,7%	93,1%	96,3%	97,4%	98,3%	99,2%	99,7%	**100,0%**

Table 5: Reserved revenues as a function of weight limits (EU-11)

In analogy to table 3, table 5 allows to identify the remaining reserved revenues for different combinations of weight limits based on the actual calculated revenues. A 50 gram weight limit for letters in combination with a fully liberalised direct mail segment, for example, keeps about 65% of the actual calculated revenues reserved.

5.2.4 Quantification of attractive mail flows

In chapter 4 the competitors' possible field of activity has already been described. According to the geographical distinction of urban and rural areas attractive mail flows have been identified as follows:

- urban to urban,
- rural to urban in case of businesses as senders[41],
- urban to rural in case of business to business relations (only for letter items, not for direct mail[42]).

In order to have a maximum comparable basis for the distinction of rural and urban areas for all countries analysed, CTcon used the „United Nations World Urbanization Prospects: The 1994 Revision, Estimates and Projections of Urban and Rural Populations and of Urban Agglomerations". For most of the

40 Assuming that customers will not go round the reserved area by using heavier envelops or heavier paper than today.

41 Large volumes sent from businesses located in rural areas are interesting volumes whenever a high number of items can be collected at one or only a few points to be then delivered in densely populated or business areas (=concentrated delivery).

42 Direct mail is supposed to be sent less regularly than letter items. Therefore, the mail flow of business relations from urban to rural areas for direct mail is considered to be unattractive for potential competitors in the postal sector.

countries the distinction of urban and rural is settled at 2.000 or more inhabitants to define urban areas.[43] This wide definition of urban has of course an impact on the quantity of attractive mail flows. Attractive mail flows may be slightly overemphasised by this definition. Nevertheless, interpreting agglomerations of 2.000 and more inhabitants as attractive (urban) corresponds to the fact that these agglomerations already allow for efficient distribution processes. Smaller agglomerations definitely induce substantially less efficient and much costlier postal processing.

With regard to the geographical distinction of urban and rural areas and according to the figures provided and/or approved by the 15 national operators, the mail flows are distributed as illustrated in figure 4: on average 63% of the analysed mail flows are urban-to-urban flows, 18% are urban-to-rural, 13% are rural-to-urban and 6% are rural-to-rural flows.[44]

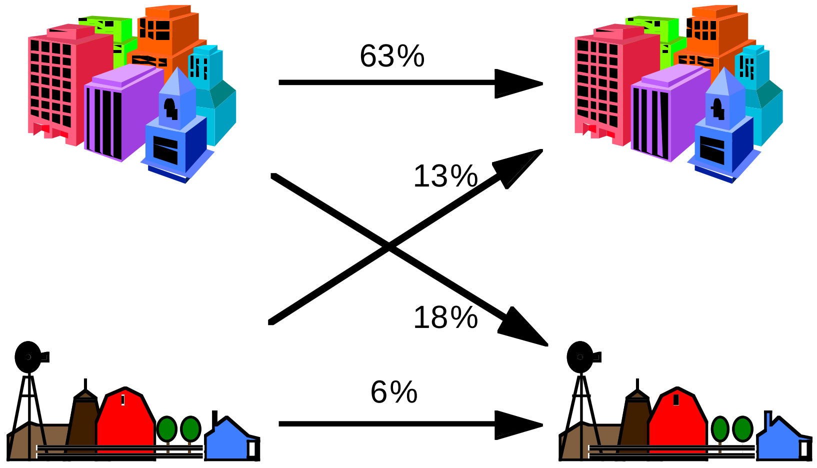


Figure 4: Average sender-recipient relation by geographical distinction (urban versus rural)

Concerning the quantification of sender-recipient relations by separating into business and private senders respectively recipients the following results (shown in figure 5 below) have been found: on average 31% of the volume is sent from business to business, 55% from business to private, 6% from private to business and 8% from private to private.[45]

43 In countries where the distinction of urban and rural is defined differently, the postal operators were asked to provide more adequate figures regarding the split of urban and rural population.

44 Figures for the quantification of sender-recipient relations by geographical distinction vary significantly from country to country.

45 The common definition of business and private senders applied in all countries analysed distinguishes business senders as all senders other than private households.

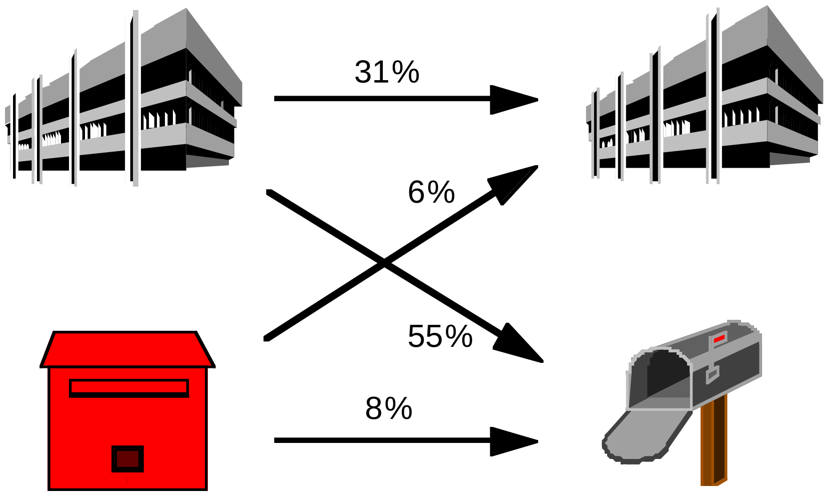


Figure 5: Average sender-recipient relation by type of user (business versus private)

Applying the country specific findings on sender-recipient relations by geographical distinction and type of user the attractive letter mail flows can be quantified as illustrated in table 6.

Taking all 15 Member States into account, 75,8% of the total volume of letters below 350 grams are attractive for competitors.

Attractive **letter** flows	**EU-average**	lowest	highest
urban - urban	**63,2%**	30,8%	88,7%
rural - urban (only business senders)	**7,1%**	2,0%	21,5%
urban - rural (only business to business)	**5,5%**	0,8%	8,4%
Total attractive letter flows	**75,8%**	43,4%	92,2%

Table 6: Share of attractive letter flows in percentage of the volume of letters below 350 grams (EU-15)

Based on the findings of the eleven Member States analysed regarding all items of correspondence, on average 73,2% of the total direct mail volume up to 350 grams has been identified as attractive to competitors.

Attractive **direct mail** flows	**EU-average**	lowest	highest
urban - urban	**58,5%**	30,8%	86,3%
rural - urban	**14,7%**	4,5%	28,7%
Total attractive direct mail flows	**73,2%**	55,5%	90,9%

Table 7: Share of attractive direct mail flows in percentage of the volume of direct mail below 350 grams (EU-11)

Combining the results for letters and direct mail (on EU-11 basis) it can be noticed that the average of attractive mail flows of items of correspondence amounts to 73,1% of their total volume below 350 grams. 26,9% of all items of correspondence are identified as „unattractive". It can be assumed that these items will only be processed by the universal service provider, regardless of their degree of liberalisation.[46]

5.2.5 Attractive volumes open to competition at different weight limits

Based on the detailed knowledge on the weight / price structure of the domestic mail and on the attractive flows, CTcon is now able to quantitatively combine those aspects. The resulting figures quantify the attractive and non-reserved volumes and revenues at different weight limits.

Figure 6 shows the different segmentation of the total volume of items of correspondence. In a first step, the total volume is segmented into attractive and unattractive mail flows. The attractive flows are supposed to be attacked by competitors whereas the total (for competitors) unattractive segment will most probably be served by the incumbent operator on the basis of his universal service obligation. As a second step it is taken into account that depending on the respective weight limit, parts of the attractive mail flows remain reserved. Consequently, at least these volumes are granted to the incumbent operator.

46 (Cf. chapter 4.1)

Only a share of the remaining non-reserved **and** attractive volume will probably be lost to competitors in the course of liberalisation and market interaction.

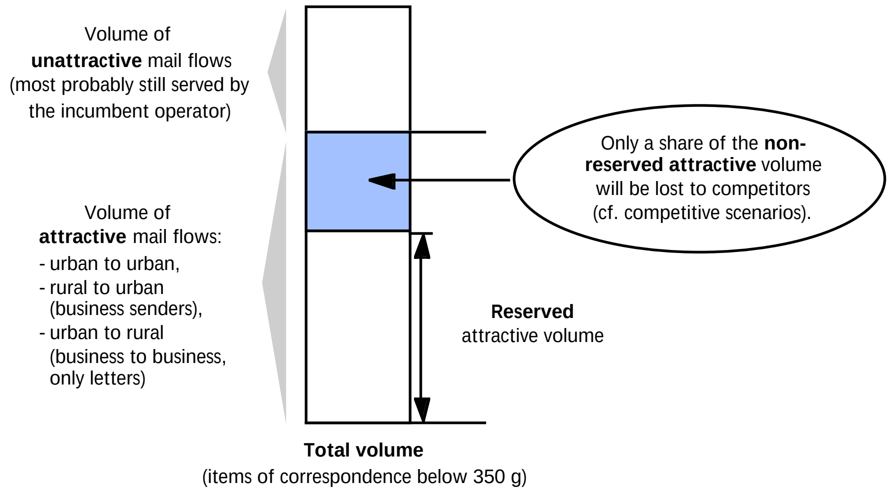


Figure 6: Principal of the market segmentation after liberalisation by lowering weight and price limits

Figure 7 below shows the volumes of non-reserved and attractive items of correspondence for different weight limits[47] as percentage of all items of correspondence up to 350 grams. At a general weight limit of **50 grams** for letters and direct mail, for example, **10,7% of the volume** of items of correspondence

47 For the quantification of non-reserved and attractive volumes at several weight limits, the weight limit for letters and direct mail is assumed to be the same for both products.

below 350 grams are non-reserved and attractive at the same time. These 10,7% of the volume would be subject to competition. In scenario B (see chapter 4), for example, this would mean that 10% of 10,7% volume would be lost to competitors (1,07% of total volume below 350g).

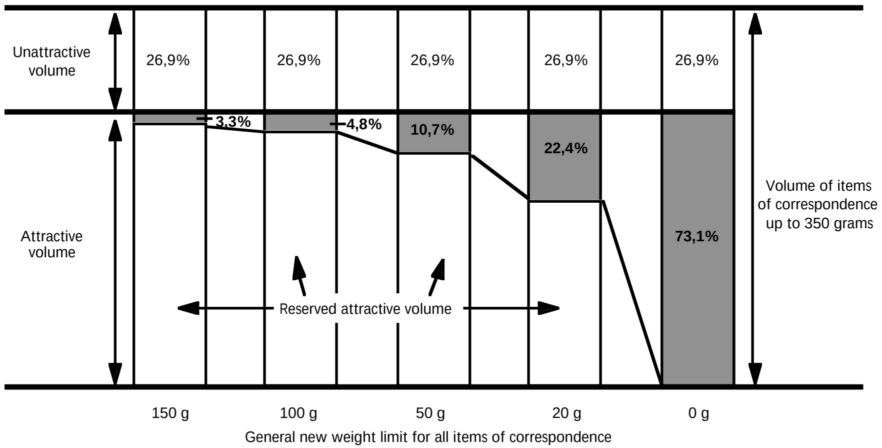


Figure 7: Non-reserved *and* attractive items of corres-pondence as percentage of total volume at different weight limits (EU-11)

Attractive mail flows can also be quantified in terms of revenues. Figure 8 points out the revenues from non-reserved and attractive items of correspondence in different weight bands.[48] In case of a general **50 gram** weight limit for all items of correspondence (letters and direct mail) **16,9% of its calculated revenues** from items up to 350 grams would be subject to competition. Losing a share of 10% to competitors (Scenario B, as specified in chapter 4) would account for 1,69% of current revenues from items of correspondence up to 350 g.

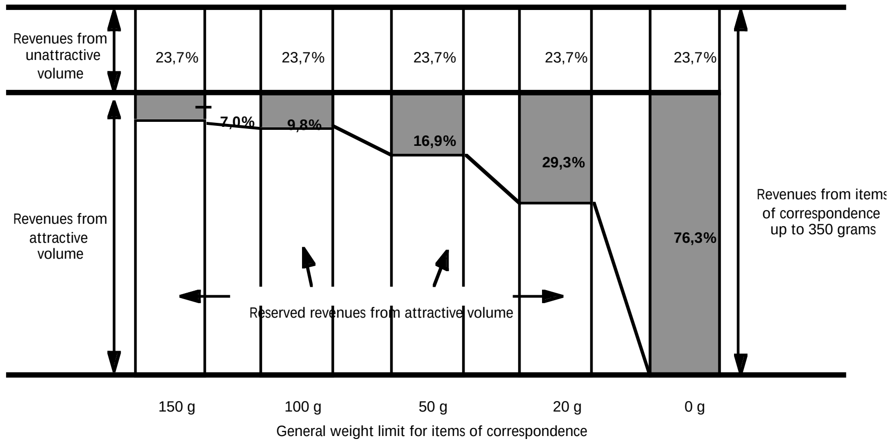


Figure 8: Revenues from non-reserved *and* attractive items of correspondence as percentage of total revenues below 350g at different weight limits (EU-11)

48 For the quantification of revenues from non-reserved and attractive volumes at several weight limits, the weight limit for letters and direct mail is assumed to be the same for both products.

5.3 Actual prices and the discussion of a future price limit

Within the framework of the postal Directive, items of correspondence charged with 5 times the first class standard letter tariff of the lowest weight band or more are no longer considered reserved. The current function of price limits is to open the market for „value added services" such as courier or express services. These companies are, already at the current price limit (5 times the standard tariff), well established in the market for postal services (cf. chapter 3).

According to several postal experts' statements, courier and express services' actual field of activity will not expand dramatically in case of a lower price limit. In case of a reserved area by weight, a general price limit is nevertheless compulsory. Otherwise, value added services such as courier and express services would not be allowed to carry lighter items at premium prices.

Representatives from postal users' associations hold the opinion that large senders are not willing to pay significantly higher prices than today. They estimate a possible surcharge for special (not express or courier) services, e.g. early delivery before 8 o'clock, at a maximum of 10 to 20% of the actual prices for standard (first class) products. Consequently, only a significantly reduced price limit would allow competitors to offer those special products.

In order to discuss possible effects from different price limits below the actual fivefold level, CTcon has calculated the prices for a first class standard letter of 50, 100 and 150 grams as a manifold of the basic tariff.[49]

tariff of first class letters	Belgium	Denmark	Germany	Greece	Spain	France	Ireland	Italy
up to 20 g	basic tariff	basic tariff	basic tariff	basic tariff	basic tariff	basic tariff	basic tariff	basic tariff
up to 50 g	1,88 fold	1,33 fold	2,00 fold	1,40 fold	1,29 fold	1,50 fold	1,17 fold	**2,25 fold**
up to 100 g	2,12 fold	1,33 fold	2,73 fold	1,40 fold	2,14 fold	2,23 fold	1,50 fold	2,50 fold
up to 150 g	2,94 fold	2,33 fold	2,73 fold	2,00 fold	3,57 fold	3,83 fold	2,33 fold	**5,63 fold**

tariff of first class letters	Luxembourg	The Netherlands	Austria	Portugal	Finland	Sweden	United Kingdom *
up to 20 g	basic tariff	basic tariff	basic tariff	basic tariff	basic tariff	basic tariff	basic tariff
up to 50 g	1,25fold	2,00 fold	1,14 fold	1,50 fold	basic tariff	2,00 fold	basic tariff
up to 100 g	2,00 fold	**3,00 fold**	1,29 fold	1,50 fold	1,50 fold	2,00 fold	1,50 fold
up to 150 g	3,00 fold	4,00 fold	2,00 fold	3,63 fold	2,33 fold	4,00 fold	1,88 fold

* In the UK the basic tariff is charged for items up to 60 grams.

Table 8: Actual letter prices expressed as multiples of the national basic tariff

[49] All prices disregarding potential discounts for e.g. volume directly injected in sorting plants, use of franking machines etc.

At present in one of the Member States (Italy) the price for a standard letter weighing 100 to 150 grams exceeds the current price limit settled in the postal Directive. Consequently, competitors are able to charge items above 100 grams at lower prices than the universal service provider. This shows that the price limit fixed in the postal Directive may not necessarily correspond to the reserved area defined by weight.

However, assuming that a price limit of the reserved area should generally cover the reserved area defined by the weight limit, a 3 fold price limit would correspond to a 100g weight limit. A 2,5 fold price limit would - given 1998 price lists - cover all items included in a 50g weight limit in all 15 Member States.

6. Estimation of the Profit Impact on the Incumbent Operators for Different Scenarios

6.1 The profit impact model

Modelling profit impact of different weight / price limits on the national providers' profitability, CTcon follows the concept developed and applied in the „upstream liberalisation study“[50]. Profit impact calculation compares profitability after liberalisation (expected 2003) to profitability of each national postal operator in 1997.

Profitability is measured as the profit on turnover. For this study CTcon defines profit impact of liberalisation as the difference in profit rate on sales after liberalisation as compared to the profit rate on sales in 1997[51]. The relevant profit rate refers to sales from items of correspondence up to 350 g.

Estimating current and future profit rates, CTcon refers to data received from the postal operators directly during the course of the two CTcon studies on postal liberalisation. Figures given in the 1996 or 1997 annual reports are also applied.

Profit impact is basically calculated as:

$$\text{Profit Impact} = \text{Revenue Impact}_{abs} - \text{Cost Reduction}_{vol}$$

and

$$\text{Revenue Impact}_{abs} = V_{lost} * P_{today} + V^{lib/attr}_{left} * (P_{today} - P_{compet})^{52}$$

Volume impact on revenues

The revenue impact is composed of the volume impact and the price impact of liberalisation. The volume lost is measured as the volume lost to competitors according to the four scenarios specified in chapter 4.3. CTcon compares the measured volume processed by the incumbent operator in 1997 to the volume calculated from the new market share in 2003. The 2003 volume includes 5 years of market growth. Some operators who serve rapidly growing markets, gain volume, since market growth over-compensates their loss of market share. Other operators suffer a net loss of volume in spite of market growth.

Market growth expectations for the mail market regularly reflect e.g. expectations of changes in gross national product which varies largely between the European Member States.

50 See: The European Commission DG XIII / CTcon „Studies on the impact of Liberalisation in the Postal Sector: On the Liberalisation of Clearance, Sorting and Transport“, page 48-49.

51 For some operators CTcon received only data for 1996.

52 V_{lost} = Volume lost, P_{today} = Price (according to price list) today, $V^{lib/attr}_{left}$ = non-reserved attractive volume left; P_{comp} = price in the liberalised competitive situation, Revenue Impact_{abs} = absolute revenue impact (in ECU, later to be transformed into a difference in profitability), Cost reduction_{vol} = volume driven cost reduction.

CTcon uses those market growth rates that were estimated by the national operators during the data collection and verification phase. In most cases these growth assumptions are equally used in the operators' business plans.[53]

The CTcon calculations are based on differentiated market growth expectations for letter on the one hand and direct mail on the other hand. Market growth expectations on letters integrated to the analysis range between -2% per annum in one Member State to +6% per annum in another. Market growth for direct mail is supposed to be positive in all 15 countries. The highest expectation amounts even up to 10% growth in volume.

Price Impact on revenues

The price effect is calculated by applying the price reduction assumed in each scenario to the remaining liberalised and attractive volume. This calculation implies future price differentiation between attractive mail flows (urban and business) on the one hand and unattractive mail flows (rural, private) on the other. Prices for unattractive items are assumed to stay at the 1997/1998 level.

Volume driven cost impact

In order to reduce model and research complexity, CTcon assumes that between 1997 and 2003 only volume driven cost effects occur. Rationalisation effects are ignored completely.

Based upon the information generated per country in the study on „upstream liberalisation" CTcon estimates a cost coefficient which describes the percentage of change in total processing costs for every percent of change in processed volume.

The cost coefficient includes several basic assumptions. For each stage in the postal value chain, CTcon has estimated the percentage of variable cost (costs driven by volume changes):

- For **clearance**, variable costs are limited to the cost for volume directly cleared at business customers. All other clearance costs are basically fixed.
- In case of manual **sorting** costs may vary proportionally with volume processed; for automated sorting, sorting costs change 0,5% if volume changes 1%.
- At a generally high level of total volume transported, costs for **transportation** can be reduced proportionally according to volume losses, if volume losses are not marginal. Thus, at the relevant volume levels between sorting plants, the potential cost-impact is next to 100%.
- 80% of the **delivery** costs for the universal service provider are estimated to be fixed.

[53] These market growth expectations are very close to the growth expectations published by UPU (see: Universal Postal Union: Post 2005, Core Business Scenarios, Berne, April 1998).

The cost coefficient further applies these assumptions to the country specific cost distribution in the postal value chain[54]. The **average cost coefficient** applied is about 0,25% change of letter costs for each 1% change in letter volume and 0,22% change of direct mail costs for each 1% change in direct mail volume.

In the relevant range of volume changes, the resulting cost coefficient is applied for decreasing volume (volume driven cost reduction) and increasing volume (volume driven increase of costs) respectively.

Other assumptions

Besides the price impact on revenues and the volume driven cost impact further possible impacts are assumed to be stable. These effects comprise possible effects from inflation either on prices of postal services or on production factors (e.g. wages) and from changes in efficiency.

These assumptions mean that the calculated profit impact relies on the postal operators' ability to compensate increasing factor costs by rationalisation or by increases in prices of postal services (despite the possible effects on prices assumed within the scenarios).

[54] See: The European Commission DG XIII / CTcon „Studies on the impact of Liberalisation in the Postal Sector: On the Liberalisation of Clearance, Sorting and Transport", page 47. EU-average: clearance costs 12%, sorting costs 24%, transport costs 9%, delivery cost 55% of the total operational cost of letter processing.

Application of the general model by weight band

Based upon the detailed quantitative research on mail streams in all 15 Member States, the above general profit impact model is applied weight band by weight band.

CTcon has calculated volume effects, revenue effects and cost effects per national operator, per weight band and per competitive scenario individually. Based upon this detailed analysis, CTcon is able to specify the expected profit impact results indicated below.

6.2 Quantitative results

The quantitative results on the estimated financial impact of lower weight and price limits can be calculated for each national postal operator. Detailed calculations per country are part of the secret annexes to this report. Since many of the figures used in the calculations are of confidential character, these individual numbers cannot be integrated in the published report.

Nevertheless, the European picture in total can be discussed in some detail. The following results are average figures for all 15 Member States. Each Member State (or national postal operator respectively) is weighted equally in this average.

The basic finding is, that potential negative effects of reducing today's reservable area on the national operator are in many cases over-compensated by the expected growth in market volume. Comparing estimated profit on turnover after further liberalisation to profit on turnover 1997, in most cases CTcon identifies positive development.

New weight limit	estimated average probability	150 g	100 g	50 g	20 g	0 g
Scenario A Volume -5%, price -25%	30%	14,9%	14,3%	12,4%	8,6%	-9,3%
Scenario B Volume -10%, price -15%	30%	15,2%	14,7%	13,2%	10,0%	-3,8%
Scenario C Volume -25%, price -10%	30%	14,9%	14,4%	12,5%	8,9%	-7,9%
Scenario D Volume -50%, price -5%	10%	14,1%	13,3%	10,7%	5,3%	not relevant
Weighted average over all scenarios according to estimated probability		14,9%	14,4%	12,5%	8,8%	-7,0%

Table 9: Profit impact of the new weight limit in percentage points of profit on turnover from items of correspondence[55]

This positive net development until 2003 can be explained by two basic effects:

1. Market growth touches the total volume while competition does only touch parts of the business

Market growth is basically expected to occur in all segments of the letter market or the direct mail market respectively. A 1% market growth form 1998 to 2002 (5 years) increases total volume by more than 5% of the former total. If parts of the market are still reserved, the number of these reserved items also grows. Several mail flows (e.g. rural to rural items) will not be attacked by competitors and will therefore remain to be carried by the universal service provider. Market growth in these segments directly improves the revenue situation of the incumbent operator.

At the same time, loss of market share or price reduction is modelled to touch only those mail segments that are non-reserved and attractive. In the 50g situation, a 25% loss of non-reserved and attractive volume represents 2,7% of the total volume from items of correspondence up to 350g lost. A price reduction of 10% on the remaining non-reserved attractive volume takes effect for only 8% of all items of correspondence below 350 g. The latter effect is about 1,3% of total revenues below 350 grams.

2. Given large economies of scale, additional volumes trigger substantially increased profit rates

Based upon the cost analysis in the „upstream liberalisation study“ CTcon estimates the volume driven (variable) costs of a national universal service provider to be about 25% of total costs (see chapter 6.1). Additional volumes based upon market growth therefore generate substantial profit contributions as can be observed in the above table.

In the case of full liberalisation (zero gram weight limit) the effect described in section 1. is almost neutralised. Reduced

55 Example: At a 50 g weight limit and with scenario A market reaction, the average European incumbent operator will still have a dramatically higher profit on turnover. If he had 10% profitability in 1997 CTcon estimates a 22,4% profitability (+12,4%-points) in the liberalised situation after 2003.

volumes and prices refer to the overwhelming part of the volume (73,4% of the total volume). The effects of competitive attacks cannot be completely compensated by external market growth. But, as illustrated in Table 9, the average decrease in profitability on turnover is limited to 7 percentage points (weighted average over all relevant scenarios)[56]. A reduction of seven percentage points in profitability on items of correspondence leaves most of the national postal providers with a still profitable core business, since the profit rates in the current monopoly area are generally above 7% - in some cases without covering the burdens of the universal service obligation.

Analysing the 50g case in more detail - as a quantitative example - it may be useful to present individual highest and lowest impact-scenarios in the 15 Member States.

The least impact to be expected in a Member State is that profitability will increase by over 30%-points after reduction of the reservable area to a fifty gram limit. The profitability for this operator is basically driven by substantial market growth. The „worst case“ observable for the 50g situation is a reduction of profitability by 6,7%-points in a scenario where this provider loses 50% of the liberalised and attractive market. Given the probability of the outlined scenarios, the highest individual impact that can be expected is a 2,8%-points decrease in profitability on sales of items of correspondence.

New weight limit	estimated average probability	50 g
Scenario A Volume -5%, Price -25% impact low / impact high	30%	12,4% 33,3% -2,9%
Scenario B Volume -10%, Price -15% impact low / impact high	30%	13,2% 33,6% -1,5%
Scenario C Volume -25%, Price -10% impact low / impact high	30%	12,5% 33,2% -2,9%
Scenario D Volume -50%, Price -5% impact low / impact high	10%	10,7% 32,2% -6,7%

Weighted average over all scenarios according to estimated probability impact low / impact high	12,5% 33,2% -2,8%

Table 10: Average, lowest and highest profit impact of a 50 gram weight limit on the national postal operators

56 For strategic analysis, each operator will have to specifically weigh the suggested scenarios according to his starting position and further national aspects (e.g. degree of preparation of potential competitors, customer satisfaction with the incumbent operators service quality). For the general analysis on a European level, scenarios A, B and C can be assumed equally probable, while scenario D is a rather extreme and therefore much less probable situation for the average national provider.

6.3 Relevant aspects on profit impact that are not explicitly included in the quantitative analysis

The above quantitative analysis on the financial impact of liberalisation includes numerous factors (e.g. detailed mail stream analysis, cost structure analysis, market expectations). Nevertheless, the model is limited. There are several substantial aspects excluded from the analysis that will have measurable positive impact on the operators' observable profitability after liberalisation.

Some of these aspects should be named briefly:

- Development of service-quality before the date of further liberalisation would make it much harder or even impossible for new competitors to win quickly large market shares as outlined in the above scenarios.
- Product- and price-differentiation efforts could further limit the price reduction and volume loss effects. Acting strategically in the market before liberalisation could put the national provider in a position to clearly avoid e.g. scenario C or D.
- Process rationalisation efforts can and will widen the general profit margin in the postal sector. For many postal operators there is still sufficient potential in rationalisation, so that the competitive effects indicated in the scenarios can be compensated (e.g. automated sorting for the postman's walk).
- Marketing and publicity efforts can and will help to strengthen the incumbent operator's participation in the expected market growth. Those efforts may increase the market growth by activating additional demand for innovative postal products.
- Last but not least, profitability might be increased by actively participating in the European market rather than just defending one national market. Liberalisation, which may induce specific risks in the one national home market, does naturally open business and profit chances in the other 14 markets. International activities in all possible forms (own start-up postal operations or (partial) acquisition of local or national postal players) can and will be used as the European postal market develops.

The named aspects show that - even if a reduction of the reservable area or a not compensated increase of factor costs (e.g. increasing wages) would have net negative impact on the incumbent postal provider - there are still several means to compensate by positively using market conditions. Moreover, the fact of liberalisation may lead to increasing volume (lower prices may induce growth in volume) which will be partly also to the benefit of the incumbent operator.

7. PRACTICAL ASPECTS OF LIBERALISATION BY WEIGHT AND PRICE LIMITS

7.1 Weight limits versus price limits to the reservable area

Looking for a practically useful prime dimension to describe the limits of a reservable area in the postal sector, **weight limits** offer important advantages as opposed to **price limits**.

Weight limits use a criterion that is easily measurable for large numbers of items as well as for a single piece. Weight of an item is not directly influenced by the postal operator, but defined by the postal customer (sender). It generally does not change in the course of the postal processing.

The monitoring of a price limit poses more complex problems to the regulator. A price limit offers more potential for influencing the size of the reservable area to both: to (new) competitors and to the incumbent operator.

First of all, the price paid for a postal item cannot be measured easily: Postal prices paid are not necessarily printed on the item and cannot be measured externally. Prices charged for the processing of items in the first place (e.g. franking print) can later be modified. Large senders or other important customers of postal services may benefit from company-specific discounts or rebates, which may be refunded at the end of the year. Undermining the reserved area in this way would become the easier, the lower the price limit (for example in case of a price limit fixed at 1,5 to 2 times the basic tariff or an absolute price limit slightly above the national basic tariff). Price limits would therefore require complex monitoring in order to prevent systematic undercutting of the regulatory intention to reserve a certain number or type of items.

Price limits in terms of multiples of the standard letter tariff would at the same time encourage the postal monopolist to maximise the area that is practically reserved by increasing the basic tariff.

A general price limit is nevertheless compulsory in order to open the market for „value added services" such as courier or express services independent of the weight of the carried item. This price limit should not interfere with the primary weight limit.

7.2 Reliable regulatory framework

According to the postal Directive, a reservable area, e.g. defined by weight limits, is fixed with the aim to guarantee and to therefore finance universal service.[57] Therefore, regulation

[57] Generally, the institution that is granted to exclusively process the items in the reserved area has an „universal service obligation". The additional costs from universal service are to be covered by additional „monopoly-

must provide a reliable framework to assure that the monopoly area can be defended effectively. Only a clear cut and defendable monopoly can provide the intended funding.

Clear definition of reservable area: products, weight, price

The clearer and easier the definition of the reservable area, the easier and the more effective the regulated market can be monitored.

From a regulatory point of view, different weight limits for distinct products (e.g. 100g for letters and 50g for direct mail) interfere with the target of easy control of the reservable area. Different weight limits for items of different content induce a permanent discussion on the content-definition that often cannot easily be decided „on the spot“. However, this aspect should not prevent from liberalisation by product whenever this may be economically useful and justifiable.

Information about and sanctions for misbehaviour of market participants

Monitoring the regulated market, especially the stability of the granted monopoly, the regulator needs adequate information on the postal items processed by the different competitors. Since the universal service provider is allowed to transport any item, this refers especially to competitors other than the universal service provider. The depth of insight into the mail flows must correspond to the complexity of the definition of the reservable area.

In case of violation of the monopoly area, the regulatory body needs a set of effective sanction mechanisms (e.g. withdrawal or expiration of the (all the) postal licence(s)). On the one hand, these sanctions should be strong enough as to induce fair behaviour according to the regulatory framework (e.g. if a company undercutting the monopoly risks to lose one or all postal licence(s), this company has an incentive to make sure that the monopoly is not touched by their activities, not even accidentally or occasionally). On the other hand the rules must not allow or enforce unfairly drastic measures taken against new competitors, who might accidentally have carried items from within the reserved area. Only clear and balanced rules will be accepted and operational in the future regulated markets.

Practical workarounds to undermine reservation

As further practical issue of reduced weight limits it may be argued that low weight limits offer „workarounds“ that could undermine a reserved area from the customers side. Such workaround is attractive, if the price per item just above the weight limit is lower than the price per item below a weight limit. In this case, customers would try to enjoy the lower prices

profits“ realised in the reserved area. Nevertheless, there are several other possibilities to finance a universal service obligation, which may even be external to the postal system (e.g. tax funding). Another reason for a monopoly could be the need for financing the restructuring process of former state-owned providers to efficient market players. This means e.g. funding investments (modernisation) or compensating pensions for former civil servants.

for slightly heavier items in a legally correct way. This could be managed either by using heavier envelopes or by adding additional printed information to the original content, so that in both cases the items to be sent exceed the fixed weight limit for the reserved area.

According to information gathered by CTcon from larger envelope manufacturers, it is generally possible to produce heavier envelopes. But, the price per empty envelope will increase significantly due to increased paper use and lower production speed. The price of about 0,01 ECU per regular C5/C6 envelope today (80g per square meter of paper) would probably double, if heavier paper (160g per sqm) was used. Heavier paper would most probably cause extreme extra costs, since machines for mass production of envelopes are designed to minimise paper costs and therefore cannot process thick paper efficiently. Consequently, at a 20 gram weight limit a letter slightly under 20 grams could possibly be sent in a heavier envelope in order to enjoy lower competitive prices beyond the monopoly. Nevertheless, at a 50 gram weight limit, the general use of very heavy envelopes for bulk items (e.g. invoices) is very unlikely.

A potential weight step could also be circumvented by adding additional content in printed form to increase total weight of the item. But, this strategy will definitely be balanced with the loss of focus of transmitted message/content. Too much or unfocused information in a mailing just to save on postal fees would potentially risk the original aim of the mailing. Moreover, the creation of (qualified) additional information, that corresponds with the original message may be quite costly. Therefore CTcon assume that this strategy will not be attractive to a large number of senders.

Potential interference from different liberalisation strategies analysed in parallel studies

CTcon has exclusively analysed the situation in the domestic mail market. Given a substantial reduction of weight and price limits in the domestic markets, some „grey“ or even illegal effects might occur mixing incoming cross-border mail and domestic mail. Given an ineffective day to day control of the granted monopoly, incoming cross-border mail risks to be practically liberalised with domestic mail (de facto liberalisation). For Member States with extreme percentages of cross-border mail the effect might also happen vice versa. Quantification of these effects should be subject to the general modelling study.

8. CONCLUSIONS

At a very general basis, it can be stated that liberalisation along reduced weight and price limits is compatible with the historic regulatory development in Europe. Two of the actual Member States of the European Union, Sweden and Finland, have already reduced their weight limits to zero gram for all items of correspondence, other countries have fixed lower weight limits than indicated in the postal Directive or are about to do so (e.g. Germany, The Netherlands).

One of the principle aspects with regard to the development of competition in the postal sector is certainly the volume accessible to competitors. The more volume open to competition the more likely competitors will enter the market or enlarge their already existing postal business. The findings within the historical analysis of the effects of reduced weight and price limits do stress this aspect. Experiences in Sweden and Germany, for example, show that only in case of substantial reduction of the weight and price limits, significant volumes are served by (new) competitors.

However, the impact of liberalisation by reduced weight and price limits varies per country. Depending on the competitive strength in terms of quality of service and degree of efficiency, liberalisation will effect the incumbent operators differently. Efficiently operating high quality service providers will most probably lose less volume to competitors than low quality providers might do. Nevertheless, competition on price may even effect high quality providers. It is most likely that price reduction will be focused on business senders and urban areas (today's most attractive segments).

Not all mail flows will be attacked by competitors. Only

- urban to urban flows,
- rural to urban flows sent by business customers and
- urban to rural flows that are sent and received by business clients (only in case of letters)

are identified as attractive mail flows and will therefore primarily be subject to competition. It is likely that the (for competitors) unattractive volumes will still be served by the incumbent operator independent of the fact whether they are reserved or not (subject to universal service obligation).

In case of a 100 gram limit, for example, only 4,8% in terms of volume and 9,8% in terms of revenues of all items of correspondence below 350 grams are identified as attractive and non-reserved and therefore subject to competition. At present, it is uncertain whether this quantity may induce significant competition or not.

At a general weight limit of 50 grams for letters and direct mail, for example, 10,7% of the volume (16,9% in terms of revenues) of items of correspondence below 350 grams are non-reserved and attractive at the same time. Consequently, in the 50g situation, a 25% loss of non-reserved and attractive volume represents 2,7% of the total volume from items of correspondence up to 350g lost (4,2% loss in terms of revenues). A price reduction of 10% on the remaining non-reserved attractive volume takes effect for only 8% of all items of correspondence below 350 g. The effect is about 1,3% of total revenues below 350 grams.

Assuming that customers may go round the reserved area by using heavier envelops or heavier paper than today, further decreases of weight limits below 50 grams may lead to a „de facto" full liberalisation.

Within the scenarios analysed in this study, the decrease in profitability of the universal service providers in case of a total liberalisation has been estimated to be quite moderate (-7%-points in return on sales[58] after liberalisation compared to the actual profitability). This result reflects the importance of the expected market growth until the year 2003 in terms of postal volumes due to expected general economic growth as well as the assumption that postal providers will be able to compensate possibly increasing factor costs by the potential of rationalisation. The limited profit impact in case of full liberalisation for domestic items of correspondence underlines that the reliability and service within the European postal system will not systematically be at stake in case of reduced weight limits.

Liberalisation by weight and price limits offers speed and/or scheduling options for opening the postal market, also with regard to the development of the internal market of Community postal services (further harmonisation of the reservable area). The market can be gradually opened by stepwise reduction of weight and price limits. The stepwise procedure would provide national operators with an additional time frame to manage transformation into efficient and market oriented institutions (where necessary) possibly accompanied with (newly defined) adequate commercial freedom.

From a practical and regulatory point of view, effective sanction mechanisms should protect a remaining smaller monopoly. The smaller the remaining reserved area the more important is the effectiveness of the protection mechanism in place.

Common weight limits for distinct products may be useful with regard to easy monitoring and control of the reserved area by weight. However, this aspect should not prevent from liberalisation by product whenever this may be economically useful and justifiable.

The current function of a price limit is to open the market for „value added services" such as courier or express services. According to several postal experts' statements, possible

58 Return on sales from letters and direct mail below 350g; weighted average over all relevant scenarios for the average European national postal provider; see chapter 6.2)

surcharges for special products other than express or courier services, e.g. early delivery before 8 o'clock in the morning, can be estimated to be at maximum 10 to 20% of the actual prices for standard products. Consequently, only a significantly reduced price limit would allow competitors to offer those special products.

Assuming, however, that a price limit of the reserved area should generally cover the reserved area defined by the weight limit, a 3 fold price limit would correspond to a 100g weight limit. A 2,5 fold price limit would (given 1998 prices) cover all items included in a 50g weight limit in all Member States.

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