













# Options and Feasibility of a European Refund System for Metal Beverage Cans

**Final Report** 

Appendix 5: Stakeholder Workshops and Consultation

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# 1.0 Stakeholder Workshop Summaries

# 1.1 Summary of Copenhagen Workshop on Deposit Refund Systems

#### 1.1.1 Introduction

The workshop was held at the Danish Environmental Protection Agency in Copenhagen on 30th March 2011. The final list of attendees was as follows:

Name	Organisation	
Allan Andersen	Danish Society for Nature Conservation	
Anders Linde	Beverage Can Makers Europe	
Anne Jensen MEP	European Parliament	
Bob Schmitz	Beverage Can Makers Europe	
Erik Holm Jensen	IGG - Interessengemeinschaft der Grenzhändler	
Fine Holten	Danish Environmental Protection Agency	
Fritz von Hammerstein	IGG - Interessengemeinschaft der Grenzhändler	
Hans Friis Lausuz	Anker-Andersen	
Heidi Schütt Larsen	Dansk Retursystem A/S	
Ingrid Bjurnell	Returpack Svenska	
Jan Rehnberg	Independent	
Jim Hansen	Aluminium Denmark	
Johan Lindblad	Nordic Council	
Karsten Schøn	Political adviser of Anne E. Jensen MEP	
Knud Loftlund	Danish Brewers' Association (Bryggeriforeningen)	
Maria Elander	Deutsche Umwelthilfe (DUH) / European Environmental Bureau	
Per Hemmingsen	Danish Environmental Protection Agency	



Name	Organisation
Randi H. Varberg	Norsk Resirk AS
Thorbjørn Christensen	The Danish Ministry of Taxation ("Skatteministeriet")
Tomas Westergren	Rexam
Tor Guttelsrud	Norsk Resirk AS
Wolfgang Ringel	TOMRA

A document outlining summary information on the following areas was provided to all participants prior to the workshop:

- the background to the study;
- the national collection systems for metal beverage cans in the countries considered:
- factors affecting price differentials of beverages sold in metal cans;
- the impacts of border-shopping; and
- current solutions.

The workshop was introduced by Anne E. Jensen MEP, and then participants were split into three groups covering three main topic areas:

- 1) Nature and Scale of Problems
- 2) Existing or Proposed Initiatives
- 3) Future Solutions to Wider Interoperability Issues

The workshop was conducted under 'Chatham House Rules' which means that no individual comments are ascribed to individual participants. Hence the summary of the workshop is not a complete set of meeting 'minutes', rather a general summary of the issues raised and discussed.

There were some initial discussions around the objectives for the workshop in relation to the aims of the tender specifications of the project. It was noted that there was a requirement to model an EU-wide system, but that the workshops were focusing on specific Member States issues. The response was to indicate that the workshops were specifically seeking to address current issues through measured interventions, and that the modelling of an EU-wide system came later in the project.

#### 1.1.2 Nature and Scale of Problem

The first session was to firm up assumptions with regards to the flow of metal beverage cans across the countries concerned (Germany, Denmark and Sweden), so as to understand the magnitude of the issue. In seeking to do this, firstly, the drivers for border shopping were considered, followed by any limitations to this activity, then

the scale of the trade, and finally, the fate of used metal beverage containers and associated impacts.

#### **Drivers**

The most significant driver to border-shopping was considered, by all participants, to be the differential in sales price. A number of reasons why there is a difference in price were given. With regard to Denmark, prices of consumer goods have, historically, been expensive for a number of reasons; lack of tough competition in shops, high costs of production and taxation were all indicated. Differences in excise duties on alcohol (and a lesser extent VAT), stem from varying national perspectives and requirements – including being used as a tool for protecting public health. The deposit itself was mentioned as an element of the price differential, but not a key driver. In addition, the Germany-Denmark soft drink flow is driven by the sugar tax in Denmark which creates a price differential for sugar containing products. In addition, price wars for some products were remarked as causing a change in relative pricing between countries at some points in the past.

The relative pricing of other products, such as cigarettes, was also considered a key driver to border-shopping. Driven mainly by the stimulus to purchase cheaper cigarettes, consumers undertake in border-shopping for these products, but also buy cheaper alcohol on the same journey. Some comments describing other social drivers were also made, such as border-shopping specifically not to buy beverages with a deposit, to make it easier for the consumer when the beverages have been consumed i.e. they don't have to make the effort to redeem the deposits and they don't lose money. It was also noted that the Swedish-Danish trade has reduced because of lower price differentials, and that Swedes now go to Germany instead (the bridges between Sweden / Denmark and Denmark / Germany will also have made journeys easier for Swedes).

As an example of the price differential, it was noted that for the price one pays for a can in a Danish supermarket one can purchase 2.5 to 3 cans in a German border shop. In fact, the drivers are strong enough for neighbourhoods in Denmark to cooperate to pay for the petrol to make a journey to the border shopping areas. It was also pointed out the highest price differentials may be found between Norway and Sweden resulting in some cross border trade of beverages, but shoppers also travel for meat and other products.

Finally, it was suggested that harmonisation of national deposit systems would not eliminate border-shopping, and that this practice will continue, owing to variation in national excise and VAT rates.

#### **Limitations**

There are limits in place on personal beer imports to Sweden and Denmark. These are 110 litres per person per trip. The limit between Norway and Sweden is less, at 4 litres per visit.

One small issue was indicated with regards to some small businesses placing internet orders with German retailers, and then going with a van to collect the goods – this is illegal because the border quota is for personal consumption only, but does nonetheless happen. These limits are being enforced where possible. Instances of



Danish officials following heavily laden vehicles from the border to commercial premises in Denmark were reported.

#### **Scale**

Some participants remarked that it was difficult to estimate the destination of the border-shopping export trade from Germany, as the consumers go to a number of countries. However, some surveys are carried out on consumers returning to specific countries such as Denmark. The Danish Treasury report uses a survey carried out by consultants who interview several thousand border-shoppers as they return to Denmark. The findings are then grossed up to estimate the total quantities of beverage containers crossing the border every year. A number of participants suggested that this was the best data and analysis available of the quantities moving from Germany to Denmark. No data from German border-shops is available as authorities cannot require businesses to report commercially sensitive sales figures.

The figures reported in the background document for border-shopping between Germany and Denmark were considered too high as they included beer in all container types (i.e. not just cans), but additional data supplied to Eunomia showed that the majority of the sales were indeed beverages in cans. Revised estimates for cross-border shopping by Danes for 2010 are 230 million and 260 million for beer and soft drinks cans respectively (a total of 490 million). Other participants suggested that alternative analyses estimated the cross-border flow at higher levels, perhaps around 700 million per annum.

Some concern was also raised about the number of cans placed on the market in Denmark, as indicated in the background document. The data from Canadean (~830 million units) was noted with respect to the sales figures from Dansk Retursystem (~380 million). Additional data could be supplied to Eunomia in this respect, and it was also suggested that sales data could be obtained from AC Nielsen – a global marketing research firm. Difficulties with obtaining sales data directly from breweries and retail organisations in Denmark were also noted, but it was suggested to contact Dansk Erhverv – the Danish Chamber of Commerce.

In terms of the flows of containers from Denmark to Sweden, the volumes were thought to be much less than between Denmark and Germany, but no figures were quoted. The Swedish flow was said to be nearly all beer, and it was estimated that the imports consist of more glass than cans.

A key message that appeared from these discussions was that data quality is not perceived as a core problem in the resolution of any issues between Germany and Denmark – it is generally accepted that the volumes are significant. A firmer conclusion on the scale of border-shopping with other countries, Sweden and Norway, was not reached.

#### Fate of Cans and Reported Issues

A number of participants suggested that only around 1 to 3% of foreign cans are returned via the DRS in Denmark. This could amount to several hundred of million cans being managed through alternative routes. The extent to which cans are collected in the existing bring-bank (igloo) systems for mixed dry recyclables, through specific return points for cans, through the refuse collections or the final destination being littering in the environment, is not known. However, it was reported that the

collection of 200,000 cans in 2010 by Keep Denmark Tidy was the result of one day of school children collecting plus one week of other members of the public collecting cans across Denmark.

RVMs in Denmark (which are owned by retailers) can be set up so that they do not accept non-deposit containers – it was discussed that Danish retailers are concerned the volume of foreign cans would fill the machines. In addition the Danish system does not give handling fees to retailers for one-way metal packaging that is not registered by Dansk Retursystem i.e. foreign cans imported through the border-trade.

In terms of the return of beverage containers in Sweden, the system accepts foreign containers, so there was no major issue raised. The return of cans in the Norwegian border regions of Sweden was reported as being higher than the Swedish average. The higher return rate was assessed as resulting from Norwegian border-shopping and the high propensity of shoppers to return cans to the shops in Sweden.

In Sweden, the same handling fee (set at  $1.5 \in \text{cents}$ ) is given for non-deposit as for deposit containers (to incentivise retailers and recognise the value of the metal collected). In Norway, handling fees  $(2.5 \in \text{cents})$  are given for deposit bearing containers but not for non-deposit bearing ones. This was not considered an issue as the amount of foreign cans returned in Norway is small.

The key messages from the sessions were that the main problem is between Germany and Denmark. The constraint placed upon the consumer's ability to recycle foreign cans in Denmark (because some retailers don't accept the cans), was noted as the main issue, especially when aluminium – with a high associated environmental impact of production – is not recycled. The lack of deposit on cans purchased in the border-trade was also considered a factor in relation to unrecycled aluminium cans in Denmark. It was noted that the problem is recognised and acknowledged by all parties. No other significant problems with border-shopping in other countries were highlighted.

Some final comments were also made with regards to other potential issues resulting from un-harmonised DRSs. The difference in national labelling requirements was not thought to place much additional burden on businesses as there are requirements for labels to be translated anyway and for country-specific information requirements. However, it was noted that different labelling requirements were more likely to impact on smaller businesses. In contrast to this, the rationale for different labelling requirements was also considered to be strong – i.e. for security of the system and prevention of fraud.

#### 1.1.3 Existing or Proposed Initiatives

A number of key existing and proposed initiatives were considered and discussed by the participants. Each group started with one of the three topics and discussed for a certain length of time. The facilitator, along with the notes from the discussion, then moved to another group, who spent more time (although less than the first group) adding to the notes. The facilitators then moved to the final group and, again, spent less time adding to the notes. Thus each group had the chance to comment on each of the three topics. These discussions are described in the following three sections.



#### 1.1.3.1 Danish and German Solution

The discussions related to the problems caused by significant volumes of beverages in metal cans, which bear no deposits, ending up in Denmark. This was considered one of the greatest issues. The reason why there are cans with no deposits is due to the exemption for border-shoppers granted by the Schleswig-Holstein regional government in Germany.

Without national changes to the current deposit systems one solution would be for Danish retailers to accept all foreign cans. This may increase the return rate of these cans from the current level of 1% to 3%. There did appear to be some contradictory evidence with regards to how many stores are taking back foreign cans, and also whether they should be taking them back in the first instance.

Some participants suggested that one solution to the problems in Denmark would simply be to have the German national deposit cover all beverages sold in Germany i.e. with no regional exemptions. For some, the fact that the consumer would be paying a deposit would not matter as long as they had it refunded in Denmark in a reasonable, convenient way. But for others, there was a greater emphasis on the responsibility of the consumer to take the containers back to Germany to redeem the deposit, as they are choosing to make the trip in the first instance.

One clear solution, which is currently being discussed by a number of organisations, is the application of a deposit in the border trade, so that the deposit can be paid back to consumers in Denmark through Dansk Retursystem. Since March 2009 there have been negotiations between 5 main parties:

- German MoE:
- Danish MoE;
- Schleswig-Holstein Regional Government;
- Dansk Retursystem; and
- > IGG Interessengemeinschaft der Grenzhändler.

A number of participants suggested that the negotiations were in-progress, and much effort was being expended in relation to them, but no detailed information was presented by any parties, owing to the delicate stage which discussions have reached, so very little can be reported on with respect to this intervention.

Some perceived barriers to the application of a deposit to be applied in border trade were:

- The cost structure how relative costs of deposits, producer and handling fees should be determined.
- Management fee how to set and fund the costs of the system that would manage the transfer of deposits and the like.
- Financial transfer how money would be paid back to consumers taking the different currencies into consideration.

Other notes on the setup of the system were; it should work in other Scandinavian countries as well; and that it should be non discriminatory and practical.

It was suggested that with the small number of brands (probably less than 100) being exported, that labelling would not be a prohibitive cost. One solution, therefore, could be to mark on the label of cans purchased in the border shops in Germany, and destined for Denmark, where they have been sold. Consequently, on redemption at Dansk Retursystem, an amount somewhat less than the whole deposit would be paid when this label was identified. The difference would be compensation to the retailers for the wear and tear on the machines and the extra effort of sorting. Whilst this was recognised by the group as one possible solution, it did not command a consensus.

#### 1.1.3.2 Nordic Council Recommendations

The Nordic Council is comprised of parliamentarians from the Nordic countries. The background to the recommendations to find a mechanism for returning deposits between the Nordic countries, came from a taskforce requested to setup initiatives on how to remove trade barriers and ensure consumers had the freedom to return empty beverage cans to the main national collection systems (mostly DRSs) wherever they shopped across the region.

The requirement to find a solution in 3 years resulted from recommendations following a report that was commissioned to look at removing cross-border distortion and allowing for unconstrained trade. The aim is to enable cans to be returned across borders in all Nordic countries, and should include border shopping and tax free cans. The deposit from the country of purchase should then be paid back to the consumer irrespective of the country where it becomes a waste. It was noted that the recommendations should be made in partnership with systems, producers and industry, and that a simple solution would be preferred. However, some participants indicated that they believed the steering group of the study came to less conclusive recommendations.

In April / May 2011 the Nordic countries are to provide responses to the recommendations of the Council. This is currently being coordinated by the Finnish Government.

Some participants suggested that, technically, this recommendation could be achieved, but there were potentially significant costs involved (15,000 Danish Krone / ~ €2,000 to upgrade each RVM). The additional Danish safety mark would also add further costs for machines not setup to recognise it outside of Denmark. Who would be paying for these upgrades was a key issue.

Some participants suggested that the main issue was between Germany and Denmark, so significant expense for other countries would not be proportionate to the much smaller border flows between Nordic countries. The suggestion was that the consumer would end up paying more. Similarly, others said that there was no need for a Nordic solution as there is not a Nordic problem, just a German-Danish one. Additional concerns were raised about the impact of additional costs and procedures on relatively well performing existing national systems. Other participants suggested that specific solutions to specific problems should be developed, rather than wideranging ones.

There was some discussion about how the deposit could be paid back across countries with different currencies. The currency exchange would be easier for RVMs, but how would this be achieved for manual take-back customers?



Finally, the short time period between a) the letter of intent from the German and Danish Governments to come to a cross-border arrangement and b) the Nordic Council recommendations, was noted. The discussions resulting following from the letter of intent were suggested to be made public by some participants.

#### 1.1.3.3 Smaller-Scale Interventions

It was also noted that, in 2006, the Danish EPA decided that there needed to be a minimum system for all metals (i.e. including food cans). As a result half of municipalities now have specific systems for cans.

However, in Sønderborg a third 'igloo' for cans was included in the town's bring sites from 2009, with a high density throughout the town and alongside a campaign to inform local residents of the issues with imported cans. This was in a direct response to cans left in the environment, and the existing requirements being too 'light', in terms of the density of collection points provided. With a 72,000 population the 'igloos' collected 11 million cans in the first year. This system is partially funded through the revenue resulting from the sale of the cans.

It was also suggested that North Denmark has almost as many non-deposit cans in the environment as South Denmark.

There were some concerns raised about the dangers of interim solutions. Importantly it could be confusing for customers, but it may also act as an excuse of the lack of a full solution. One view was that there is no better solution for capture rate than a deposit system – without the deposit, producer responsibility is weakened. A green dot approach would increase capture also, but still be subject to the dangers given above if it was an interim solution.

#### 1.1.4 Future Solutions to Wider Interoperability Issues

Wider interoperability was taken to mean that all DRSs accept all metal cans, and that any deposit paid at the point of purchase is returned to the consumer. A number of participants noted that, at the current time, one complete EU system would not be agreed upon by all Member States. The focus of this discussion was not whether DRSs should be implemented in the first instance, but rather the key principles for interoperability should they exist. In essence, existing systems should be allowed to work as they do, but in such a way that imported cans are properly accommodated by the receiving system.

The description of 'coordinated' EU DRSs was considered appropriate by a number of participants. It was suggested that improving interoperability arrangements would be good for the consumers. It was also noted that any future objectives, or possible solutions, emerging from this study should be clear and should be fair.

It was noted that it is difficult to compare DRSs as they are not the same – each has its national identity.

Three key principles that were noted are:

- 1) The national system must be well functioning and efficiently operating;
- 2) Registration to the system should be simple, flexible and not costly; and

- 3) Some common rules between systems should be formulated and agreed. These could include (for example):
  - A) Common barcode formats, perhaps using the 2D style, giving information regarding the filler, the material, where it was sold, the deposit value etc; and
  - B) The mechanism used to convert deposit values paid in different currencies, and the mechanism used to address differences in handling fees etc, if required.

These arrangements were considered to be technically possible.

In terms of who should be part of any interoperability solutions, national deposit system operators, Ministries of Environment, beverage producers and the retail trade, were mentioned. It was noted that there is some agreement on how interoperability functioning might work and on its desirability, but that there is no single body designated to manage or organise the arrangements.

Some participants raised concerns around feasibility of transferring deposits between countries. 'How could the system be sure that a deposit was paid in the country of purchase, for foreign cans?' was one of the questions posed. In addition, it was observed that there are different levels of deposit and different cost structures relating to national circumstances. However, it was discussed by a number of participants that a common, or average, level of deposit could be set for cans from the border-trade. The key point would be that something was paid, and would be paid back to the consumer, and that the deposit should be of a sufficient magnitude to give consumers the incentive to bring it to a collection point.

There was also some discussion about the clearing system, who should operate it, and how often clearing would occur - daily/weekly/annual etc. Some participants suggested that handling and administrating different currencies could be difficult. One participant suggested that it may require an additional 2 administrative staff to manage these processes.

A number of participants raised the question of how much these interventions would cost, and who would pay. It was noted that the costs are relatively unknown, although some basic estimates have been made, and that uncertainties about the costs are a potential barrier to moving the arrangements forward. It was suggested that the benefits of an extra layer of administration over and above the national organisations were questionable, but that it would certainly add costs. However, it was suggested that a small amount of the deposit paid by consumers in other countries could be held back and used to fund the administration of the system. It was also noted that there could be other possibilities for funding the transfer of deposits and fees between Member States.

There were also some discussions about how the structure of retailer fees and producer fees would be developed, and how these would be affected. Again, it was suggested that a common, or average amount, could be paid between systems. Some concern was raised that the consumers would be penalised financially to setup any joint system. Others suggested that the beverage producers should be liable for the costs.



With regards to the existing German / Danish arrangements, of working towards interoperability, it was suggested that this could be a trial, or pilot arrangement, for the rest of the EU. However, the current negotiations do not appear to suggest this is an easy process. Technical solutions have been identified, but not agreed as there are different attitudes to how it should work in practice.

Other points of interest that were raised included the need for PET to be included also, though others accepted that the project's focus was on cans because cans give rise to the greatest problems of interoperability. It was also suggested that the technical solutions would be very similar and it was better to start a project with a limited scope than not at all.

This led, in turn, to a concern around beverages switching from materials with deposits applied to those without raised deposit applied, although other participants noted that there is limited scope of material choice when considering carbonated beverages. Other participants raised the point that higher volumes of containers coming from other countries would mean more investment by retailers.

In general, the views of the participants with regards to wider coordination of DRSs were mixed. Some were against any wide-scale harmonisation, emphasising bilateral negotiations to resolve an individual issue (Germany-Denmark). Concerns around the costs of wider interoperability and who pays were also clear. In contrast, other participants noted the social and environmental benefits that could be achieved from wider interoperability, and that it would be ensuring the full application producer responsibility (i.e. for waste beverage containers purchased in the border-trade also).

#### 1.2 Summary of Helsinki Workshop on Deposit Refund Systems

#### 1.2.1 Introduction

The workshop was held at the Finnish Ministry of Environment in Helsinki on 6<sup>th</sup> April 2011. The final list of attendees was as follows:

Name	Organisation
Adrian Lupu	Coca-cola Hellenic
Annukka Leppänen- Turkula	The Environmental Register of Packaging PYR Ltd
Elina Ussa	Brewers of Finland
Jarmo Muurman	Finnish Ministry of the Environment
Joachim Quoden	PRO-EUROPE
Karsten Schøn	Political adviser of MEP Anne E. Jensen
Kaupo Karba	OÜ Eesti Pandipakend - Deposit system in Estonia

Name	Organisation	
Knud Støvring	Anker-Andersen	
Marika Siht	Estonian Ministry of Environment	
Pasi Nurminen	Palpa	
Peeter Eek	Estonian Ministry of Environment	
Neringa Paskauskaite	Lithuanian Ministry of Environment	
Rauno P. Raal	OÜ Eesti Pandipakend - Deposit system in Estonia	
Rudite Vesere	Latvian Ministry of the Environmental Protection and regional Development	
Sirje Sten	Centre of Economic Development, Transport and Environment of Pirkanmaa	
Tarja-Riitta Blauberg	Finnish Ministry of Environment	
Tomas Westergren	Rexam	
Tryggvi Felixson	Nordic Council	
Wolfgang Ringel	TOMRA	

The workshop was introduced by Tim Elliott from Eunomia Research & Consulting. Following this introduction, two presentations on the deposit systems in Finland and Estonia were given (Pasi Nurminen – Palpa / Rauno Raal - OÜ Eesti Pandipakend).

The discussions were divided into three main topic areas:

- 1) Nature and Scale of Problems
- 2) Existing or Proposed Initiatives
- 3) Future Solutions to Wider Interoperability Issues

The workshop was conducted under 'Chatham House Rules' which means that no individual comments are ascribed to individual participants. Hence the summary of the workshop is not a complete set of meeting 'minutes', rather a general summary of the issues raised and discussed.

#### 1.2.2 Nature and Scale of Problem

The first session was used to firm up assumptions with regards to the flow of metal beverage cans across the countries concerned (Finland, Estonia and to a lesser



extent Latvia and Lithuania), so as to understand the magnitude of the issue. In seeking to do this, the drivers for border shopping were firstly considered, followed by any limitations to this activity, then the scale of the trade, and finally, the fate of used metal beverage containers and associated impacts.

#### **Drivers**

Firstly it was noted that the significant differences in the size of deposit between Finland and Estonia result in different return rates - the €0.20 deposit in Finland (<0.5I PET) results in higher return rates than the €0.03 deposit in Estonia (<0.5I PET). Additionally the difference in purchasing power between the two countries is significant. This results in consumers travelling from Finland to Estonia to take advantage of the cheaper beer - it was observed that there is lots of advertising, for Finns, of 'cheap beer' in Estonia, and stronger beers are available in Estonia for half the price of Finnish beer. Moreover, the alcohol excise duty is around five times higher in Finland than in Estonia. It was also said that the Finnish taxes are not likely to decrease, and in fact have actually been increasing. Free-trade between Member States was also considered to facilitate this border-shopping for beer and other beverages. Flows of beverage containers between Sweden and Finland were said to be relatively small due to the more sparse Northern populations in both these countries and the much smaller price and purchasing power differential between them. Nonetheless, slightly lower prices in Sweden than in Finland result in some cross-border movement from Sweden to Finland (scale discussed below).

#### **Limitations**

With regards to cross border movement, there is a limit on the volume of beverages one person can buy on a trip to Estonia. Consumers mainly travel in cars, but there are some minivans and more organised methods. It was said that 'organised' movements of beer between Finland and Estonia are becoming more frequent. People that are caught are fined, and the beer is confiscated.

#### **Scale**

Private trade research is conducted every year. This research suggests that the majority of imports into Finland come from Estonia, but there are also some from Russia and Latvia. Official figures suggest 60m litres are imported per annum (all materials) and 850m litres are consumed in Finland per annum.

The accuracy of the data was, however, questioned in the workshop. It was reported that approximately 40m litres (all materials) entered into Finland from Estonia last year due to private trade, but only 130m units (~40m litres) were put on the Estonian market last year. It was suggested that there must be other sources contributing to the Finnish import figures, such as sales on ferries, on which approximately 16m litres were sold in 2009 (cans account for 55%- 60% of market so approximately 25-30m units imported in total). One other source of beer for Finland is from Sweden; approximately 100m cans (~30-40m litres) of Swedish beer were imported into Finland last year.

#### Fate of Cans and Reported Issues

This issue of cans not ending up being recycled due to differing systems was not considered to be big problem in Finland, where RVMs accept non-deposit cans. It was

suggested that there are around 35m units of non-deposit cans from Estonia ending up in the Palpa system. This is a small proportion, ~7% of the total in the system. Retailers do not receive a handling fee for non-deposit cans in Finland. Retailers are only asked to ensure they accept non-deposit cans on a voluntary basis (most do). The recycling rate for cans in Finland was stated as 93%, but it was not clear whether this figure included the imported cans or not.

There are 25m units sold in Estonia which are not recycled in either Estonia or Finnish deposit systems. There are some non-deposit collections in both countries which may also facilitate the collection of some of this material (bring banks), but some cans are still expected to be landfilled. It was suggested that metal recyclers may have some figures of the number of cans extracted from bring banks.

It was noted that, due to high environmental awareness, there is a low level of littering in Finland. Littering was not considered to be driven by cross-border issues, and other packaging types such as 'fast-food' wrappers are considered more of a problem (though again not a cross-border issue). It was noted that the deposit encourages people to gather littered cans to make money. In addition, the introduction of the deposit scheme in Estonia was described as having had a big impact on reducing beverage cans present in litter; vodka and wine bottles (outside the scheme) are now key components of litter. But others suggested that large fines for littering should be used instead of relying on deposit refunds to incentivise behaviour.

In terms of fraudulent activities, Finland has had some incidences of 'fake labels' but these are marginal as it is not economic to place hundreds if not thousands of containers manually in the RVMs. However, there is a bigger issue with larger beverage containers which attract the €0.40 deposit. Estonia still uses some standard EAN codes which relate to the pan-Baltic region; thus Estonia currently pays out deposits on non-deposit bearing containers from neighbouring Latvia. However, the majority of this cross-border flow relates to PET bottles from Latvia rather than to cans. There have been some incidences of organised criminal activities. This has reduced in recent years but still occurs. In order to try to mitigate against this issue, Estonia removed the amount of deposits from the labels and replaced these with letter codes A,B,C,D.

It was observed that if Latvia implements a deposit scheme they will likely have similar problems with Lithuania. There are issues around implementation with the breweries, (which can accept some refillables) relating to cost and effectiveness of the system, and it is likely that there would be a possible gradual introduction of the scheme, if it is introduced at all. Implementing new systems in the current economic environment was considered a barrier. However, a proposal is due to be submitted to the Ministry of Environment in April/May outlining the potential for a deposit refund system for one-way beverage containers.

#### 1.2.3 Existing or Proposed Initiatives

#### 1.2.3.1 Finland

The deposit system in Finland started in the 1940s with the need to return refillables When it came to cans, the industry chose to implement a deposit system to avoid the



government legislation of a packaging tax. The Finnish system has accepted cans since 1996, and from the start has accepted non-deposit bearing cans. The general environmental awareness in the country was noted as one factor generating good return rates. In fact, some studies have indicated that 50% of consumers would return cans without any deposit.

It was observed that there are small quantities of non-deposit bearing cans so there are no major problems with accepting them. Moreover, the more or less stable aluminium prices, balance the incremental costs of collecting the non-deposit cans, thus the costs are not an issue either. Retailers have mostly not been concerned with the fact that they receive no handling fee for taking back non-deposit bearing cans; mainly because the volumes are small. It was noted that there are a few isolated cases, but it is, in general, an automated process, which requires little extra effort.

Fraud issues have never been a significant problem and are much less of an issue with cans. There have been some instances of fraud but the system operators do not want to communicate this widely, in-case it stimulates the activity further by publicising the possibilities. It was noted that guidance on fraud prevention is made clear to the retail trade, in any case. Moreover, it was stated that when instances of fraud are discovered the perpetrators are always prosecuted. It was discussed that the additional cost for label security, in order to reduce fraud in Finland, may not be worth the benefits. Holograms were mentioned as a possibility. The combination of markings and enforcement, as seen in the Danish/German contexts, was considered expensive and not needed for Finland.

#### 1.2.3.2 Estonia

In Estonia, the deposit system was initially set up without requiring producers to label beverages with country specific EAN codes. Without the introduction of deposit systems in other Baltic States some fraudulent activity started to take place, where individuals and larger organisations brought empty containers to Estonia to claim the deposit on beverages sold in other countries without the Estonian deposit. The issue was reported to the European Commission Environmental Inspectorate, who undertook border surveillance to tackle the problem. Changes to the deposit system in Estonia were introduced in 2008. Producer fees were split depending on whether the products used a country specific or universal EAN code. Higher fees are charged when producers put a product on the market without a country specific EAN, thus incentivising them to introduce country specific EAN codes. Currently the EAN codes on products are divided 50:50 between national and universal codes.

In addition, under EU regulations, there is a 20kg waste transfer limit between Member States. Estonia requested a limit of 4kg to further reduce the transfer of empty containers between Latvia and Estonia, and provide powers for prosecuting individuals and organisations partaking in fraudulent activities (it was suggested that 4kg is more than enough for tourists to bring back small quantities of empty containers). Estonia was successful in this appeal, and is now working to establish this limit. However, it was noted that this applies more to PET bottles than cans in terms of cross border movements.

It was also discussed that there was a change in labelling from displaying the value of the deposit (which people perceive as 'money') to the A,B,C,D format; this format was

copied from Denmark. In essence, the letters relate to deposit values which are displayed clearly in retail outlets where the beverages are purchased. Removing the deposit value makes it easier to mark (and change the deposit level if required). In addition the deposit system also needed to make changes prior to the introduction of the € in 2009 regardless.

#### 1.2.3.3 Other Initiatives / Issues

The following points highlight some of the other issues that were raised in this session:

- The situation in Germany, where beer made in Denmark is shipped to Germany, purchased by Danish border shoppers, returned to and consumed in Denmark, was noted as exceptional.
- It was also suggested that Sweden is working on a proposal to pay back the scrap value of non-deposit bearing cans to consumers. The Nordic Council (with 87 members) has a key focus on the consumer, and losing deposits is an issue of the Nordic council of ministers (with 84 parliamentarians). Solutions were proposed in a recent study by Jan Rehnberg, but it was explained that these include the understanding that national systems are efficient and there is no intention to intervene in the operation of these systems. Moreover, the recommendations come from a wider Nordic or EU perspective, rather than a national perspective, and it was suggested that some action is required to solve cross border issues.
- It was noted that the difference in alcohol excise duties applied to beverages in different countries is a significant consumer issue, as there is a considerable driver to go elsewhere to buy alcohol. The level of deposit was not considered a big issues by consumers, indeed it was mentioned that Finnish consumers want the deposit. In addition, it was highlighted that delegates at an EU meeting in Thailand described research indicating that consumers did not believe the return of containers between countries with deposit systems to be a significant issue, if an issues at all. Although there was some objection by other participants to the notion that consumers do not perceive the deposit as no issue at all.
- Some participants noted that they felt that there were more costs to producers associated with producing and commercialising products in deposit systems than under PRO green-dot schemes. It was also observed that packaging is a very political issue.

#### 1.2.4 Future Solutions to Wider Interoperability Issues

Wider interoperability was taken to mean that all DRSs accept all metal cans, and that any deposit paid at the point of purchase is returned to the consumer, not necessarily that all European systems would be harmonised into one system. It was noted that one of the objectives of wider interoperability is to make life easier for the consumer.

In this session key principles of interoperability arrangements were discussed, followed by issues relating to the introduction of new deposit refund systems. These



discussions are summarised first, followed by any other issues that were raised in the session.

#### 1.2.4.1 Key Principles / Requirements for Interoperability

EAN codes would need to be country specific, and all codes (from all countries) stored in RVMs. There is theoretically no limit to storing barcodes, though there is some cost of the software. There is also a cost in distributing the EAN library. As an indicator of the cost it was described that the price for each new EAN code is €400.

The packaging profile, which includes weight and shape parameters, is also important. This profile is needed to prevent fraud in the system. If only the barcode was required then any object placed in the RVM with a copy of the EAN code would pay the deposit to the operator. However, detailed shape recognition is more relevant to reusable glass packaging. For one-way packaging, of metal and plastic construction, if the shape recognition is too accurate this results in a high proportion of rejects or unrecognisable containers as the shape can distort. Thus 'fuzzy', or less accurate, shape recognition can be used for non-refillables to prevent fraud, and not significantly inconvenience the consumer. It was noted that this might be the most acceptable solution.

Each country would also have to send 6 samples of each product to each of the other deposit refund systems where the packaging would be accepted. IT systems would have to include the shape, specifications and all other required information for each product to ensure the country of origin and product type is recognised.

One small observation was that country specific deposits could not be paid back exactly in Estonia if they were not in multiples of €0.05, as there are no smaller Euro denominations that are used in this country.

Some participants noted that a) peer-to-peer clearing of deposits and b) the different producer administration fees in each country, would be some of the most difficult issues to overcome. It was suggested that cross-border clearing issues could be overcome technically, but the question of how much it would cost and whether it would be worthwhile was raised.

The possibility of administering a flat rate deposit was suggested. In this case the consumers would get some deposit back (a *de-minimus* amount) but not necessarily the full amount. It was described as easier to administer, but if the rate was too low this may not incentivise some consumers to return the empty containers to collection points. However, one of the key barriers to this approach would be purchasing power parity (PPP). It is difficult to have sufficient incentive in wealthier countries with a lower rate, and if a higher rate was set the deposit would comprise a significant proportion of the unit sales cost in less wealthy countries.

One final key principle is that any system for interoperability should be kept simple.

#### 1.2.4.2 Principles of New Deposit Refund Systems

A short discussion about some of the key principles of any new deposit refund systems was undertaken:

- Some participants noted that for any new countries looking to implement deposit schemes, the key aspect was not to introduce any trade barriers.
- Any systems should have to take back non-deposit bearing containers to prevent negative environmental issues; for cans there is a limited financial impact due to the value of aluminium collected.
- The system for return has to be easy for the consumer.
- Regardless of the system used to collect cans, there needs to be sufficient collection points.
- There is a need for educational campaigns alongside both, deposit systems, and other types of collection system.

#### 1.2.4.3 Issues Relevant to Wider Interoperability

The following areas were discussed.

#### Feasibility of One EU System

At the current time a single EU system was not seen as feasible. There were concerns about the impact on national systems and the costs, as well as how to deal with producer fees/retailer compensation and also how to address the influence of PPP. It was noted that current systems are working well, and that the environmental impact is minimal. Thus the concerns mainly related to the proportionality of any interventions. There were also some concerns about the impact on retailers who may purchase in one country, but sell products in multiple countries.

#### **Ferries**

Alcohol can be purchased on the ferries between multiple countries around the Baltic Sea. At the current time these purchases are not subject to alcohol excise duty, or any deposits, as they are designated as 'tax free zones'. Some participants did not think it was possible to charge a deposit on beverages because the ferries can port in any number of countries to purchase wholesale beverages, including countries outside of the EU. There were concerns about what deposit would be paid and how the consumer would claim it back. It was also noted if a deposit was applied to beverages on ferries then presumably other taxes should be applied also, which brings into question the continuation of the tax free zones. In addition, it was also noted that EU packaging legislation does not appear to be applied in tax free zones such as ferries i.e. EU laws which cover requirements to implement packaging collection systems do not cover ferries.

#### Responsibility of the Consumer

Some participants noted the responsibility of the consumer in ensuring the sustainable management of waste products. It is a consumer's choice to travel across borders to buy beverages, so they should be prepared to lose the deposit if they subsequently take the beverages to another country, or take the empties back to the country of purchase to redeem the deposit.

#### Aligning National Taxation

One of the issues raised related to the harmonisation of national taxes, especially alcohol excise duty. It was noted that harmonisation is a political issue and is unlikely



to happen in the short term. It was also said that the EU is looking to fix a minimum tax rate, but Estonia is already at this rate and Finland is much above this level, so this would not help the current situation.

#### **Labelling Requirements**

A short discussion was held concerning the labelling requirements of packaging. It was noted that labels need to be in a local language anyway, some country specific information is required for national guideline daily allowances (GDA) and also any national green-dot systems require country specific labelling. As such there is little additional cost for providing deposit markings and country specific EAN codes. It was described that the process to include and validate products into the deposit systems is where the cost lies.

#### Other Materials

It was questioned why the study was focusing only on cans, when glass and PET also occur in significant quantities. It was noted that the study had to start 'somewhere', and also that, perhaps, focusing on cans may be more acceptable to the producers, as low or zero fees can be set because of the material revenues. Other participants claimed that when considering other materials (such as glass) the cross-border solutions may be different because of the lower material revenues. In fact, it was noted that glass is currently being sent for open-loop recycling as aggregate because the value is so low.

#### 1.2.5 Other Comments

Some final comments on other issues were also raised.

#### Harmonising Green-Dot Systems

It was noted that PRO schemes are present in 26 Member States, and cover a significant proportion of the population, whereas deposit refund system cover, perhaps, 30% of the population of the EU. A question was raised about whether one of the options that should be modelled in the study should focus around the harmonisation of PRO schemes. It was also noted that much work has gone into seeking to harmonise green dot systems in the past, but the legislation is very different, and it was made clear that this has not been an easy task. It was also noted that there are large differences in the advancement of collection systems across the EU, thus harmonisation would be difficult, and potentially unfair. Some participants went on to suggest that harmonisation is relevant at the regional level only i.e. countries with systems at a similar level of advancement.

#### Data Issues

A short discussion was also held about the quality of waste data coming from several Member States. Quantities of packaging placed on the market, and recycling rates, were noted as varying significantly from year to year, thus rendering comparative analyses difficult and uncertain.

### 2.0 Consultation Document

This Section merely presents the Document which accompanied the questions which were asked in the Consultation undertaken as part of this study. It is presented below in the form in which it was initially presented.

#### 2.1 Introduction

This consultation forms part of an ongoing project for the European Commission to investigate the magnitude of, and possible solutions to, problems associated with interoperability of deposit refund systems in Europe (see <a href="http://ec.europa.eu/environment/waste/packaging/cans/intro.htm">http://ec.europa.eu/environment/waste/packaging/cans/intro.htm</a>). The focus on metal beverage cans in part reflects the fact that many of the beverages sold in the border-shopping trade (beer, soft drinks etc) are produced in cans. The desire to increase levels of aluminium recycling is also an important factor. The border-shopping trade is, in turn, a source of interoperability issues, because non-national beverage cans are not compatible with the national waste collection system in the country where the beverage is consumed. The result can be lower levels of recycling and higher levels of littering arising from cans purchased in the border shopping trade.

The underlying rationale for the border-shopping trade in beverages stems from price differentials across EU Member States, the principal cause of which is variation in excise duties and VAT rates. The border-shopping trade occurs in countries with and without deposit refund systems (DRSs) in place. For example, there is a significant movement of beer and wine from France to the UK. Neither of the two countries uses a deposit system. In such cases, it can reasonably be expected that, irrespective of the country of origin, the management of the beverage packaging waste in the country where the beverage is consumed will be the same as it would be for cans purchased domestically.

The situation can be different where cross-border trade occurs between countries where one or other country, or both countries, have a DRS in place. The magnitude of any potential problem can be expected to be greatest where:

- 1. The price differentials between neighbouring countries are high (so the volume of trade is high); and
- 2. The system for the management of beverage packaging in the country where the beverage is ultimately consumed has been established in such a way that there is a lower likelihood of packaging being well-managed where it has been purchased abroad (because, for example, no deposit is redeemed at the relevant point of return).

The implications of the border-shopping trade are summarised in Table 2-1. As far as we are aware, no country has a DRS that accepts cans which bear a deposit that has been paid in another country <u>and</u> redeems the amount of that deposit when it is correctly returned under the DRS in the country of consumption.



Table 2-1: Cross-Border Trade Scenarios

Scenario	Country of Purchase		Country of Consumption		Impact
Scenario	DRS?	Deposit Paid?	DRS?	Deposit Redeemed?	Шрасс
1	×	X	X	X	Management of cans is as for domestic consumption
2	×	X	V	×	<ul> <li>Management of cans depends on:</li> <li>a) whether deposit system accepts non-deposit bearing cans and</li> <li>b) whether there is a system run in parallel to the deposit scheme for convenient return of beverage cans</li> </ul>
3	V	V	X	×	Management of cans is as for domestic consumption  Consumer sacrifices deposit
4	V	X	V	X	<ul> <li>Management of cans depends on:</li> <li>a) whether deposit system accepts non-deposit bearing cans and</li> <li>b) whether there is a system run in parallel to the deposit scheme for convenient return of beverage cans</li> </ul>

#### 2.2 The Size and Location of the Problem

The first stage of this project included work to clarify the scope and scale of the interoperability issues between Member States with regards to metal beverage cans. This section is a summary of that work, and offers a reference point for consultees in assessing how appropriate potential policy options are in relation to the problems identified.

#### 2.2.1 Underlying Causes

Consumers cross borders to other Member States to purchase beverages, amongst other goods (the 'border-shopping' trade), Where cans are purchased in a country that does not have a Deposit Refund System (DRS) but consumed in on that does, the empty cans may not be compatible with national collection systems.

One of the most important influences on consumer behaviour is the price of goods and services. If there are price differentials in valued consumer goods between different locations, consumers may find it cost-effective to travel further than necessary to buy them. Some of the causes of price differentials in canned beverages include:

- Alcohol excise duty;
- Value Added Tax:
- Other taxes (e.g. sugar tax);
- Product price (including production costs, transport, distribution and retailing);
- The existence (and magnitude of) deposits;
- Demand and supply for the products (market influences); and
- Exchange rates.

Clearly some of these price factors are decided at the national level, by Government, and some are a consequence of the free market. The intention of this discussion is not to weigh up the rationale for these fiscal measures, but to ascertain the magnitude of the price differentials between Member States. Some of the above mentioned factors will affect the price differentials of some types of beverages more than others. Alcohol excise duty and VAT are two of the largest contributors.

Alcohol excise duties are in place in all EU Member States. In fact, minimum rates on alcohol excise duty are set by the Commission. In 2010 London Economics conducted a study on possible changes in the minimum rates and structures of excise duties on



alcoholic beverages to address concerns raised by Member States. The report states:

'There is a very wide dispersion of before-duty (pre-tax) prices of the alcohol beverages consumed within the EU and the current duties accentuate such differences further. In particular, for all beverages there is a wide disparity between the high rates charged by four member states (FI, SE, IE, UK) and the rates charged by the rest of EU member states. At present, because of their low level relative to the high rates charged by the four, the minimum duty rates contribute little to reducing such disparities.'

Interestingly the authors also go on to discuss the issue of whether the differences between pre- and post-tax prices of products are likely to change the relative prices of alcoholic beverages (and hence potentially influence consumer behaviour). The outcome of the analysis did illustrate that:

'taxation changes the relationship between products, so that consumers see significant differences when comparing the relative prices of pre- and post-tax products.'

The relative pricing between Member States resulting from differences in alcohol excise duty is thus considered first, and followed by a discussion around VAT, exfactory, and deposit prices. Note that the alcohol price index includes all taxes, but not deposits. Figure 2-1 shows the range of prices across the EU.

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<sup>&</sup>lt;sup>1</sup> London Economics (2010) Study Analysing Possible Changes in the Minimum Rates and Structures of Excise Duties on Alcoholic Beverages, Executive Summary to EC DG Taxation and Customs Union, May 2010.

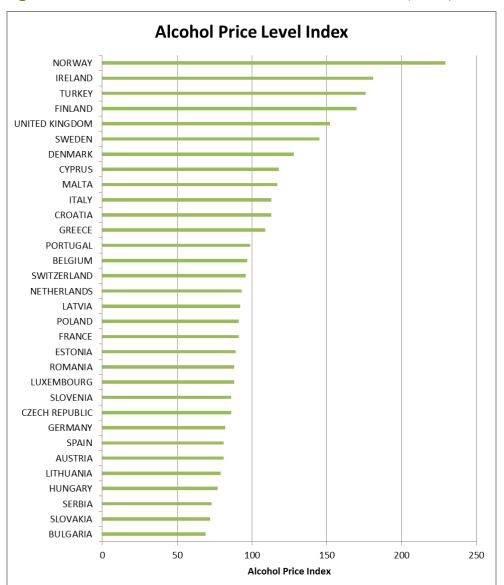


Figure 2-1: Alcohol Price Level Index for EU Member States (2010) EU27 = 100

Sources: Borchert, E. and Reinecke, S. (2007) Eating, drinking, smoking - comparative price levels in 37 European countries for 2006, Report for Eurostat, 12 July 2007, http://epp.eurostat.ec.europa.eu/cache/ITY\_OFFPUB/KS-SF-07-090/EN/KS-SF-07-090-EN.PDF; Karlson T. and Osterberg E. (2009) ibid.; Brewers of Europe (2011) ibid.



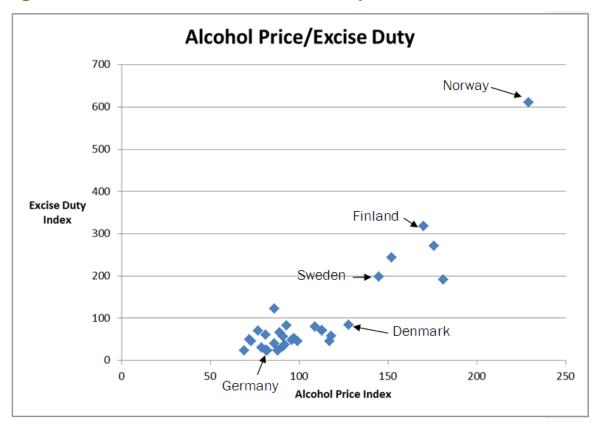


Figure 2-2: Alcohol Price Index vs Alcohol Excise Duty Index across the EU

Sources: Borchert, E. and Reinecke, S. (2007) Eating, drinking, smoking - comparative price levels in 37 European countries for 2006, Report for Eurostat, 12 July 2007, http://epp.eurostat.ec.europa.eu/cache/ITY\_OFFPUB/KS-SF-07-090/EN/KS-SF-07-090-EN.PDF; Karlson T. and Osterberg E. (2009) ibid.; Brewers of Europe (2011) ibid.

Figure 2-2 shows that there is a strong correlation between alcohol excise duty and the price level index (which includes excise duty and all other elements of the price) for alcoholic beverages. This appears to validate the London Economics findings that the alcohol excise duty contributes significantly to the price differentials of alcoholic beverages. Countries with higher duties, such as Norway, Finland, Sweden and others, have high prices for alcohol. Where alcohol excise duties are lower, then for perhaps obvious reasons, the influence of other factors becomes more important in determining the alcohol price.

Some further detail is reported in the Danish Treasury's border report. Both VAT and alcohol tax is higher in Denmark than in Germany. However, ex-factory prices are expected to vary between countries (contrary to the assumption in the table below), although the magnitude of the differentials in ex-factory prices is not known.

Table 2-2: Example of Danish/German price difference (Kr per case)

	Denmark	Germany
Retail Price	124.00	97.40
- of which VAT	24.80	15.55
- of which tax	23.41	6.16
- packaging tax	0.10	
Price excluding tax and VAT	75.69	75.69

Source: Treasury (2010) Status over grænsehandel , Report for Danish Treasury, 1 May 2010, www.skm.dk/public/dokumenter/samlet\_graens\_2010.pdf

Price differentials on soft drinks are smaller, but in Denmark, for example, the higher than average prices are a consequence of the tax on carbonated soft drinks that contain sugar. Currently the tax is around 108 øre per litre (around €0.14).² This creates a price differential that results in a flow of carbonated soft drinks from Germany to Denmark.

Of course the price differentials on alcoholic beverages are not the only driver of border shopping. Differentials for other non-alcoholic beverages and other products, such as cigarettes, also drive consumers across borders. Indeed this may be the more significant driver for some, with alcohol simply being purchased on the same trip.

#### 2.2.1.1 Summary

In summary, this discussion has established the following argument for the underlying causes of the problem. This, in turn, provides a basis for assessing the location and scale of the problem (discussed in the next section):

- The fragmentation of the market in terms of the return of cans is driven by nonnational containers coming into the system. This is a result of the private trade in border-shopping;
- 2) The key driver on consumer behaviour which stimulates cross-border shopping is the price of beverages;
- 3) The national price of beverages is influenced by a number of factors, including alcohol excise duty, VAT, the cost of production etc;
- 4) There are significant variations in the price of consumer goods between EU-27 Member States which lead to shoppers crossing borders to purchase non-national canned beverages.

<sup>&</sup>lt;sup>2</sup> SKAT (2009) Danish Taxes and Customs, http://www.skat.dk/SKAT.aspx?old=1812920&vld=0&search=sukker%A4sodavand



#### 2.2.2 Size of the Problem

In this section any known or estimated data of the scale of the cross-border flows of beverages is presented, followed by some analyses to estimate the total EU-27 flow of canned beverages. Full details of this methodology will be provided in the published Final Report.

The scale of the border-flows can best be understood in the context of the national consumption of canned beverages (both alcoholic and soft drinks). Figure 2-3 shows the number of units placed on the market - effectively national consumer sales. Note that data for some countries is currently missing. The total annual sales of beverage cans within EU-27 countries range from hundreds of millions to several billion.

Cans Placed on the Market United Kingdom Spain Poland France Italy Netherlands Belgium Germany Sweden Greece Austria Finland Hungary ■ Soft Drinks Romania Beer Republic of Ireland Portugal Denmark Czech Republic Slovenia Slovak Republic Bulgaria Estonia Lithuania Latvia 1,000 1,500 2,000 2,500 3,000 3,500 4,000 4,500 0 500 Millions of Cans

Figure 2-3: Beverage Cans Placed on the Market (2010) EU-27, millions

Source: Canadean, <a href="http://www.canadean.com/">http://www.canadean.com/</a>

Table 2-3: Estimated Key European Beer Flows

Direction of Flow	Number of Cans of Beer
Germany - Denmark	230,000,000
Denmark - Sweden	88,560,000
Germany - Sweden	206,640,000
Sweden - Norway	11,000,000
Sweden - Finland	100,000,000
Estonia - Finland	78,000,000

Source: Rehnberg, J.(2010), *Nordic Deposit Analysis*, Report for Ministers for Nordic Cooperation, 26 March 2010; Oxford Economic Forecasting (2007) *The Consequences of the Proposed Increase in the Minimum Excise Duty Rates for Beer*, Report for Brewers of Europe, 1 February 2007, <a href="http://www.brewersofeurope.org/docs/publications/Oxford\_all.pdf">http://www.brewersofeurope.org/docs/publications/Oxford\_all.pdf</a>; Rabinovich, L., Brutscher, P., de Vries, H., Tiessen, J., Clift, J. and Reding, A. (2009) *The affordability of alcoholic beverages in the European Union*, Report for European Commission DG SANCO, 8 April 2009, <a href="http://ec.europa.eu/health/archive/ph\_determinants/life\_style/alcohol/documents/alcohol\_rand\_en.pdf">http://ec.europa.eu/health/archive/ph\_determinants/life\_style/alcohol/documents/alcohol\_rand\_en.pdf</a>; and workshops held by Eunomia in Copenhagen and Helsinki.

Table 2-3 shows the main European cross-border flows of beer cans. The Danish Treasury's border trade report from 2010 provides significant detail on the quantities of different products imported into Denmark. It estimates that Swedes buy 15% of their border trade alcohol in Denmark, with Germany as their preferred border country for beer trade.<sup>3</sup> Data for flows into Sweden was estimated from the volume of beer indicated in a report by Oxford Economics for Brewers of Europe. Assumptions were included to estimate the source of the flow (i.e. Germany or Denmark). The flow from Sweden to Norway was estimated in Jan Rehnberg's report, and from Sweden to Finland at a stakeholder workshop in Helsinki; the flow from Estonia to Finland was also estimated at this workshop. No information about the private exports from Luxembourg was ascertained.

In addition to the 230 million cans of beer in the trade from Germany to Denmark, there are also estimated to be 260 million cans of soft drinks. A study from the Danish Ministry for the Environment calculated that over 40% of soft drinks cans placed on the market in Germany end up in Denmark each year due to border shopping.<sup>4</sup>

The border-flows indicated above were compared with the alcohol price differentials given in Figure 2-1, in order to derive a mathematical relationship. This relationship was then applied to all the European border price differentials to estimate a total cross-border flow of beer cans resulting from EU border-shopping. Whilst at individual

<sup>&</sup>lt;sup>4</sup> Soft Drinks International (2010) *Danes plan cross-border return system*, December 2010, <a href="http://www.softdrinksinternational.com/userfiles/file/SDIDEC10">http://www.softdrinksinternational.com/userfiles/file/SDIDEC10</a> web.pdf



<sup>&</sup>lt;sup>3</sup> Danish Treasury (2010) *Status over grænsehandel*, Report for Danish Treasury, 1 May 2010, www.skm.dk/public/dokumenter/samlet\_graens\_2010.pdf

country level this may not be representative, as it does not take into account population and beer drinking habits etc, at an overall European level it gives an initial indicative figure for contextualising the key border flows. Using this methodology, we estimate the following total private cross-border trade within the EU-27:

Table 2-4: Estimated Total EU-27 Flow of Beer in Cans.

	Total Flow, millions	% Beer Cans Placed on Market
High	3,409	19%
Medium	1,666	9%
Low	568	3%

Note: There are around 18,000 million beer cans placed on market in the EU.

If considering the *low* flow of cans (perhaps around 3% of all beverages placed on the market) the problem could not be viewed as minor, since several hundreds of millions of cans are moving across borders, but it is perhaps not very significant. If the *high* estimates are taken, maybe up to 20%, then the scale becomes more significant. It should be noted, however, that around 75% of the flow of beverages occurs between a small number of Nordic countries, and between France and the UK. Due to insufficient data it has not been possible to repeat this analysis for soft drink cans.

#### 2.2.2.1 Summary

The premise of this research is that some of the most significant drivers – for example, excise duties – are, currently, unlikely to be harmonised at the EU level. Goods and services are able to move freely, so the scale of the border flow (and therefore the 'problem') will persist. The estimates show that there is a relatively significant flow of canned beverages across the EU-27 but that the majority is concentrated across the borders of a handful of countries, with the German-Denmark border being one of the highest in magnitude. However, there are uncertainties in the data, and some figures have been estimated, so the numbers presented should be treated with some caution.

#### 2.2.3 Environmental Consequences

The environmental consequences of the border flow have been assessed in relation to the fate of the empty containers. There are other environmental impacts from the transportation used to make trips stimulated by differences in prices, but these impacts should be internalised in fuel duty.

#### 2.2.3.1 Reduction in Recycling

To understand the significance of the final destination of beverage cans, one should consider the counterfactual, or in other words, what the destination of the cans would have been in the country of origin. If the cans' final destination was in countries which had higher recycling rates than the source, and were able to be processed by the local recycling system, there would not be a significant environmental problem.

However, if the final destination is a country where the recycling rate for cans is much lower, a problem arises.

The flows of beer cans are considered first. If the fate of the cans is the key concern then the problem areas are where the recycling rate in the destination country is lower than in the country of origin. For example, the German beverage can recycling rate is higher than in Denmark, thus reducing in the likelihood of German-bought cans being recycled in Denmark, regardless of other influences. However, there are often other barriers to recycling the cans in the destination country's primary collection system for metal cans. In Denmark, the potential obstacles to recycling foreign cans are that:

- Danish cans carry a deposit which is absent from German cans, eliminating the economic incentive for consumers to recycle rather than dispose of, or litter, German cans; and
- some retailers have asked the DRS to block foreign cans from their reverse vending machines (although the Danish EPA suggest the number of retailers who request this is small).

There are secondary bring systems in place, but the capture of cans through these systems is expected to be less than through the DRS. Therefore, across this border and in other areas, border-shopping is likely to result in reduced recycling of empty containers, even though a collection route is available.

#### 2.2.3.2 Littering

The specification of the project states that Task 2 should include "assessing of the contribution of metal beverage cans to littering". Experience suggests that this is difficult to quantify. Some studies attempt to 'count' litter in certain areas at a particular time, but none indicate how much is deposited on an annual basis. Furthermore, few studies really seek to understand the relevance of 'count' based assessments as compared with other approaches. It could be argued that the disamenity effect of litter might be a function more of its volume, and possibly, its potential to persist, than the number of items (i.e. the counts).

The Danish Society for Nature Conservation is the largest nature conservation and environmental organisation in Denmark. With the support of 140,000 members, they work to protect nature and the environment, in part through their "Clean Up Denmark" campaigns, with volunteers offering one Sunday to collect litter, plus a contribution of a week from schools. The campaigns collect data, and a short summary of the main results concerning cans since 2006, is given below:

- 2006: 70,000 cans;
- 2007: 170,500 cans;
- 2008: 154,400 cans, of this 7,800 with paid Danish deposit;
- 2009: 153,000 cans, of this 10,000 with paid Danish deposit; and
- 2010: 197,000 cans, of this 7,800 with paid Danish deposit.

The town of Sønderborg Kommune, in Southern Denmark, has started to collect cans in bring sites at shopping centres and campsites in response to the littering problem



which is perceived to be worsened by the influx of non-deposit bearing cans from Germany. In 2010 the Sønderborg arrangement collected 11.2 million cans.<sup>5</sup> An advantage of this is the revenue that accrues from sale of the recyclate (said to be worth 200,000 kr - around €27,000 - per annum).

#### 2.2.3.3 Summary

The initial analysis of environmental consequences shows that there may be environmental impacts associated with the reduction in recycling resulting from border-shopping in key areas. Littering may also be a significant problem across the EU, but there is limited data available when considering all Member States. However, the reporting of the issue in Denmark suggests that littering is a significant problem in some areas. Valuing the social cost of littering is not an easy task, and few studies have attempted to do this.

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<sup>&</sup>lt;sup>5</sup> DR Forside (2010) *The EU will learn from the tin-collecting in Sønderborg*, Accessed March 2011, http://www.dr.dk/Regioner/Syd/Nyheder/Soenderborg/2011/01/28/173049.htm&regional

#### 2.3 Possible Interventions / Options to Model

This document identifies possible solutions to address the problems arising from the lack of compatibility of national schemes for collection and recycling of metal beverage cans.

Proposed solutions should relate directly to the problems they seek to address. The key problems are:

- 1. the extent of price differentials between different countries within the Internal Market;
- 2. the 'openness' of systems in one country to accept the cans purchased in another; and
- 3. the absence of common arrangements for 'compensation', linked to the flow of containers from one country to another. Producer responsibility fees may be paid in one Member State, but management of the material may fall to another Member State to carry out.

Environmental consequences may flow from this, such as lower recycling rates for cans purchased in other countries, or increased littering.

It is not within the scope of this study to consider the harmonisation of excise duty (which would tend to eliminate the main rationale for cross-border trade), so the price differentials are regarded as a given. Therefore, proposed solutions have to relate to the problems numbered 2 and 3 above. Solutions could apply to all Member States, to those that have DRSs, or just those that experience the problems most severely. Therefore some of the solutions outlined here are presented as bilateral agreements between Germany and Denmark, as those are the countries that are currently experiencing the problems most acutely.

Taking the findings of the research thus far into consideration, we believe that there are a number of policy options which could be considered as potential solutions to the problems identified in the research. These are described in the following section.



#### 2.4 Options Assessment

Each of the above options is described here in more detail. At this stage, we make no comment on likely costs and benefits. To comment on these at this stage would amount to pre-judging the subsequent analysis.

# 2.4.1 Single EU Deposit Refund System (DRS) for Metal Beverage Cans to cover all Member States

This option would require that any beverage can sold within the EU would have a deposit, and that the deposit would be redeemable in any other EU country. The system would be centrally organised and operated, with representatives from all Member States included in its management. New infrastructure in addition to, or replacing, existing collection systems for metal cans would be required, although national conditions would dictate the type and amount introduced. The common elements of the design across Member States might be expected to include:

- The scope of the system (which containers are included / excluded from the DRS);
- The level of the deposit paid / to be redeemed;
- The means of labelling of beverage containers; and
- The ability to accept the same range of containers in different countries and refund deposits to consumers.

The role of the central organisation could be one of the following:

- a. Control over all elements of the DRS design and operation in all Member States; or
- b. Central EU co-ordination for producer's fees, deposit transfer and material management, and the setting of best practice guidelines for collection, but with Member States developing national infrastructure.

#### Pros

Labelling, as far as deposits are concerned, would be uniform across the EU; A single system should be easy to understand;

Any consumer who has purchased deposit-bearing cans in one country and consumed them in another would be able to have their deposit easily redeemed (most likely raising return rates in those areas where cross-border trade is significant);

The overall EU recycling rate for cans might increase (although this would depend on the level of the deposit; part of the rationale would probably be to achieve this).

#### Cons

Many countries have previously chosen not to use DRS, and would be reluctant to do so. Politically, the solution would be difficult to implement;

Both countries with and without DRSs in place would have to alter their systems which will entail additional costs;

The level of deposits in countries with DRSs in place may have been chosen with specific objectives in mind. These objectives may be compromised by use of a uniform deposit rate;

A DRS for cans <u>only</u> would potentially distort trade in respect of other beverage packaging materials;

Not all countries use the same currency so that deposit / redemption rates would need to be periodically revised in line with exchange rate movements;

Borders with countries outside the EU would still be potentially affected by the cross-border problem unless specific measures were developed.

# 2.4.2 Requirement for all Existing and Future Deposit Refund Systems (DRSs) for Metal Beverage Cans to Form a Single System

In this option, existing DRSs would be reconfigured so that they follow a common design and are centrally operated. The system would be centrally organised and operated, with representatives from all DRSs included in its management. Any future DRSs would also be required to conform to this design specification. Common features of the design could include some or all of the following:

- Level of deposit;
- Retailers' handling fee;
- Producer levy; and
- Beverage container marking.

### Pros

Any consumers who have purchased deposit-bearing cans in one country with a DRS and consumed them in another country with a DRS would be able to have their deposit redeemed (most likely raising return rates in those areas where cross-border trade is significant);

One organisation will cover all countries;

There would be a marginal improvement in the EU recycling rate for cans (associated with cross-border shopping);

The need for exemptions from deposits (for example, in the border shopping area of Germany) is essentially removed.

### Cons

All DRSs would need to be revised so as to resolve problems which arise, primarily, at the border between Germany and Denmark;

The level of deposits in countries with DRSs in place may have been chosen with specific objectives in mind. These objectives may be compromised by use of a uniform deposit rate:



Not all DRS countries use the same currency so that redemption rates would need to be periodically revised in line with exchange rate movements;

Where deposit-bearing cans are purchased in one Member State, the consumer still foregoes the deposit if the can is consumed in another Member State with no DRS.

# 2.4.3 Requirement for all Existing and Future Deposit Refund Systems (DRSs) for Metal Beverage Cans to be Interoperable

In this option, current systems would be amended so that they accept beverage cans from any other DRS, and pay back deposits to consumers. DRS operators would be required to make arrangements for the purpose of transferring deposits between systems and Member States, and arranging an appropriate administration fee. The essential element is that there is some basis for redeeming deposits from other DRSs through all existing systems at an agreed level.

There are a number of possible variants of this option, including:

- a. A central organisation / clearing house is set up to co-ordinate cross-border deposit payments and administration of national deposits.
- b. A single value 'border' or 'common' deposit value is redeemed for any nonnational containers.
- c. The arrangement is made applicable only for 'neighbouring' countries' DRSs.
- d. Containers sold in tax free areas in the Baltic Sea area (such as ferries) are included in the DRS.

### **Pros**

The solution is targeted at the problems related to border trade;

Any consumers who have purchased deposit-bearing cans in one country with a DRS and consumed them in a another country with a DRS would be able to have their deposit redeemed (most likely raising return rates in those areas where cross-border trade is significant);

There would be a marginal improvement in the EU recycling rate for cans (associated with cross-border shopping).

### Cons

All DRSs need to be changed (to varying degrees) to resolve problems which mainly arise at the border between Germany and Denmark;

Not all DRS countries use the same currency so that redemption rates would need to be periodically adjusted in line with exchange rate movements.

# 2.4.4 Requirement for the German Deposit to be Applied to all Metal Beverage Cans Sold in Germany

The German deposit could be applied to all cans sold in Germany, including bordercans. The deposit would be redeemable only in Germany. This would require rolling back the agreement that is currently in place which allows border shoppers to avoid paying the German deposit.

The pros and cons of this system clearly depend upon one's view as to how strongly this would affect the cross-border trade. Two extreme perspectives would be:

- There is no impact, with consumers prepared to return cans to Germany each time they visit the border shops;
- There is a significant impact on cross-border trade with consumers unwilling to pay the additional 'first up' cost of the deposit.

The impact therefore depends upon how close to one of these extremes the actual situation would be. Over and above this, however, the following might be said:

### Pros

The incentive for consumers to return cans remains (albeit the system is not so convenient);

The need for exemptions from deposits is removed.

### Cons

Requires border shoppers to transport empty containers back to Germany to redeem deposits (though this could be associated with repeat trips);

Does not resolve other (albeit less significant) border trade problems (e.g. with Sweden and Finland/Estonia), or issues which may arise in any future implementation of DRSs.

# 2.4.5 Bi-lateral Agreement between Germany and Denmark to Ensure the National Systems for Metal Beverage Cans are Interoperable

Under this option, an agreement between Germany and Denmark would enable the take-back of cans purchased in Germany via the Danish DRS (i.e. by Dansk Retursystem) and a deposit would be redeemable in one of following ways:

- a. The German deposit is applied to border-cans sold in Germany and arrangements are made to pay the German deposit back to Danish consumers in Denmark; or
- b. The Danish deposit is applied specifically to border-cans in north German bordershops. The Danish consumers would claim the deposit when taken back to Dansk Retursystem.

In both cases, it would be expected that where necessary, some form of fee would be paid by the German system to the Danish system to compensate for additional costs.

As with the previous option, the pros and cons of this system clearly depend upon one's view as to how strongly this would affect the cross-border trade. However, it might be expected that, other things being equal, any effect would be less than in the previous example as a result of the greater convenience of the take-back system.



### **Pros**

The incentive for consumers to return cans remains;

Exemptions from deposits are no longer required for border shopping areas;

The system for returns is convenient;

Levels of littering of cans currently purchased without deposits from border shops may be expected to fall (as cans are accepted into the Danish system);

Recycling of cans currently purchased without deposits from border shops may be expected to increase (as cans are accepted into the Danish system);

May provide the basis for a model for other bilateral agreements as necessary.

### Cons

Arrangement required to handle the different VAT levied in Germany and Denmark (on the value of the deposit).

The two countries do not use the same currency so that if the German deposit was used, redemption rates in Denmark would need to be periodically revised in line with exchange rate movements;

Does not resolve other (albeit less significant) border trade problems (e.g. with Sweden and Finland/Estonia), or issues which may arise in any future implementation of DRSs.

# 2.4.6 Bi-lateral agreement between Germany and Denmark to Compensate for Cost of Managing Cross-border Metal Beverage Cans

This option assumes no specific adaptation of the respective DRSs. It acknowledges, however, that if cans that bear no deposit are to be managed better in Denmark, there are likely to be additional costs incurred by the Danish DRS and the wider system of packaging recycling in Denmark. This option could be achieved in various ways, and could be based around varying levels of action taken on the part of the Danish packaging recycling system. For example, the funds might support an increased density of cans banks, or a more dense system of 'on-the-go' recycling banks (intended to reduce littering). One way of achieving this would be a straightforward agreement between the two countries for a formula-based reimbursement in the form of a lump sum. Another mechanism for re-imbursement could be via a small 'border shop levy', used to generate funds to support the management of cans in Denmark.

The basis for support could relate to one or more of (for example):

- 1. the costs which are avoided by the German DRS not having to deal with cans sold in Germany;
- 2. the costs of managing German cans in Denmark (including elements of litter clean-up).

### **Pros**

Denmark compensated for additional costs of managing the non-deposit cans;

May provide a model for other bilateral agreements (and, arguably, not just where DRSs are in place).

### Cons

May not directly change consumers' behaviour;

Does not directly address the underlying interoperability issue;

Issues of transparency in the mechanism may arise;

Does not resolve other (albeit less significant) border trade problems (e.g. with Sweden and Finland/Estonia), or issues which may arise in any future implementation of DRSs.

# 2.4.7 Summary of Options

The following list is a summary of the policy options which form the basis of the consultation:

- 1. Single EU Deposit Refund System (DRS) for metal beverage cans to cover all Member States;
- 2. Requirement for all existing and future Deposit Refund Systems (DRSs) for metal beverage cans to form a single system;
- 3. Requirement for all existing and future Deposit Refund Systems (DRSs) for metal beverage cans to be interoperable;
- 4. Requirement for the German deposit to be applied to all metal beverage cans sold in Germany;
- 5. Bi-lateral agreement between Germany and Denmark to ensure the national systems for metal beverage cans are interoperable;
- 6. Bi-lateral agreement between Germany and Denmark to compensate for cost of managing cross-border metal beverage cans.



# 3.0 Consultation Responses

### 3.1 Introduction

This section of the Appendix gives a summary of the consultation responses that were received during the consultation on the interoperability options, which ran from July to October 2011. The consultation was run on a stand-alone website linked to the main DG-Environment project website. Consultation responses were submitted via on-line 'webforms' and stored in a secure database.

Respondents were first advised to read the consultation document (see Section 2.0 above). The questions posed to respondents were then contextualised by the following statement:

As discussed in the consultation document, the problems resulting from a lack of interoperability mainly relate to the movement of cans between a few Member States with Deposit Refund Systems already in place. Considering the nature, magnitude and location of the problems assessed in the first stages of this study, please answer the questions at the end of each option's description.

The main questions that were posed were:

- 1) Do you think that, in relation to the problems identified, an appropriate solution would be a single EU Deposit Refund System?
- 2) Do you think that, in relation to the problems identified, an appropriate solution would be to require all existing, and future, DRSs to form and operate as a single system?
- 3) Do you think that, in relation to the problems identified, an appropriate solution would be to require all existing, and future, DRSs to be interoperable (e.g. deposits can be paid back to consumers by DRSs outside the country of purchase)?
- 4) Do you think that, in relation to the problems identified, an appropriate solution would be that the German deposit should be applied to all cans sold in Germany, including the border cans?
- 5) Do you think that, in relation to the problems identified, an appropriate solution would be a bi-lateral agreement to ensure the Danish and German national systems are interoperable?
- 6) Do you think that, in relation to the problems identified, an appropriate solution would be a bi-lateral agreement to compensate for the cost of management of used beverage cans in Denmark?

Responses via the webform were received from 15 organisations. Other organisations responded via other means and their responses were also taken into consideration during the course of the study.

The full responses and all comments provided by these organisations are available by visiting the consultation website (<a href="www.eunomia.co.uk/depositresponses/">www.eunomia.co.uk/depositresponses/</a>). In Section 3.2 below we analyze the key themes and common views of the various stakeholders who responded to the six questions presented in the consultation. Each question proposes a different solution and some key quotes are included to support statements and provide additional details on the prevailing attitudes.

# 3.2 Analysis of Responses

# 3.2.1 Question 1

Q: Do you think that, in relation to the problems identified, an appropriate solution would be a single EU Deposit Refund System?

From Figure 3-1 it is evident that the overwhelming consensus was that an EU-wide refund system was not an option which should be considered at present. The majority of responses expressed some reservations, for example:

"A common EU system is completely and totally unrealistic ...."

"There is no real need for this."

"...setting up of a one single collection system in Europe will be extremely costly and with no guarantee that the environmental benefits will be better than what is already achieved by existing systems."

"Imposing in all Member States a deposit system by a binding EU measure will not be justifiable under EU law. If at all, the collection of cans via a EU imposed DRS would require that the existing national recovery systems do not reach the EU recycling targets. These targets refer to packaging materials, not to individual packaging formats. Drinks cans constitute only a limited fraction of total metal packaging placed on the market but the high can recycling rates help most Member States to exceed considerably the EU metal recycling targets."

The reasons for these reservations are highlighted in Table 3-1, which summarises some of the core themes that emerged from the responses to the consultation. The Table also provides a means whereby repeated concerns/thoughts/themes can be identified to identify common sentiments.

It is evident from Table 3-1 that the respondents provided a wide selection of explanations for why they responded with a 'no' to Question 1. The most commonly cited reasons against the implementation of an EU-wide DRS were that it placed an unrealistic and unfair burden on a very small section of the overall packaging industry, and that it was not feasible at present (for political, logistical, or economic reasons).



Table 3-1: Key Themes in Stakeholder Comments to Question 1

	Organisation <sup>1</sup>															
Comment Themes	4	2.	<del>с</del>	4.	5.	6.	7.	œ̈́	6	10.	11.	12.	13.	14.	15.	TOTAL
Response	Ν	Ν	Ν	Ν	Ν	Ν	Ν	Ν		Ν	Ν	Ν	Ν	Ν	Ν	-
Too difficult/not currently feasible/unreasonable burden		✓		✓			✓	✓		✓			✓			6
Producer responsibility/other waste collection schemes are sufficient/better	✓			✓		✓						✓	✓	✓		6
A single DRS would infringe the principles of subsidiarity, proportionality, and discrimination	<b>✓</b>			✓		✓							✓	✓		5
Too costly				✓		✓	✓						✓	✓		5
Reported environmental benefits are not guaranteed					✓	✓							✓			3
Create perverse incentives/Skews competition/Unfairly discriminates				✓	✓											2
Need for consultation/bilateral agreements			✓							✓						2
EU-wide DRS would be desirable in the long term								✓	✓		ent				ent	2
Germany's use of mandatory deposit has not led to increased use of refillables					✓						No comment				No comment	1
Differences in drinking culture										✓	9				9	1
Different return systems for different items reduces transparency and comprehensibility					✓											1
Increased logistic and administration effort will result in low public acceptance					✓											1
DRS will not solve the cross border movement of beverages					✓											1
DRS should not be used to combat litter					✓											1
Insufficient data							✓									1
Some Member States do not work with mortgages										✓						1
Will need harmonised VAT and excised duties													✓			1
A single system will compromise existing systems					✓											1

It was also felt by six respondents that the current producer responsibility legislation which covered packaging waste in most EU countries was sufficient to ensure the recovery of beverage cans.

"As of now, 22 of the 27 EU states operate shared producer responsibility schemes of one form or another.... This is both an efficient and cost effective method of recovering beverage cans for recycling in line with EU targets that in the main, works well. Implementing an EU wide

compulsory deposit system would require the costly dismantling of these long established schemes without any real or perceived benefits and would merely add a layer of bureaucracy that is simply unimaginable."

"DRS is more burdensome than general household collection systems, its necessity, appropriateness, proportionality must be strictly justified on a case-by-case basis."

It was also felt by five respondents – all of whom cited a single source – that the implementation of a European wide deposit system would compromise the principles of subsidiarity, proportionality, and non-discrimination. For example, it was stated that:

"Imposing an EU wide Deposit Refund System (DRS) would be an infringement of the subsidiarity and proportionality principles, and if restricted to beverage cans only – the non-discrimination principle."

Imposing an EU Deposit Refund System (DRS) would infringe the subsidiarity and proportionality principles, and the non-discrimination principle if restricted to drinks cans.

"In several Member States the conclusion of extensive researches about introducing DRS is that is not a valid option. Therefore an EU Deposit Refund System (DRS) would infringe the subsidiarity and proportionality principles, and also the non-discrimination principle if restricted to drinks cans."

"The Member States must continue to be free to decide how they want to collect packaging waste for recycling. Imposing an EU wide Deposit Refund System (DRS) would be an infringement of the subsidiarity and proportionality principles, and if restricted to beverage cans only – the non-discrimination principle. It should continue to be a flexible approach at European level, i.e. agree on the common goals while leaving the Member States the choice of the most appropriate instruments and measures."

Some respondents also felt that an EU deposit system would be too costly to implement and would only provide very limited, if any, environmental benefits. Numerous other reasons were cited for why a unified system was undesirable. These included:

the creation of perverse incentives through targeting only limited packaging materials –

"The introduction of a mandatory deposit on environmentally disadvantageous one-way drink packaging has not led to a rise of the market share or refillable bottles in Germany. The separate return system in contrast might rather have led to an adverse effect, the increase of PET-bottles and metal cans, since retailers and bottlers are interested in operating the mandatory system at full capacity. Economically, a multinational deposit refund system for metal cans implicates a separate return system and reduces the cost-efficiency of already existing return systems."

reduced effectiveness if multiple return schemes are developed in any one country –



"For consumers as well as bottlers, retailers and member states, different return systems for packaging (e.g. for one-way drink packaging, refillable drink packaging, metal cans) decrease transparency and comprehensibility."

the lack of information/data would prevent effective implementation –

"As a means of solving the German - Danish problem, a single EU Deposit Refund System is considered as a disproportionate solution."

 countries such as France and the United Kingdom have already rejected moves to implement national DRSs –

"Several Member States (i.e. France, UK) have undertaken extensive research and stakeholder consultations to assess the merits of introducing DRS alongside their current collection systems. They have concluded that there is presently no valid case for DRS."

Despite all respondents answering No to the question, some did believe that, in the long-term, a European wide deposit system would be desirable:

"Of course mandatory national deposit systems for metal cans as well as for other beverage packaging such as PET bottles, glass bottles and beverage cartons would be highly appreciated from an environmental point of view - resulting in increasing collection rates, increasing recycling rates, increasing quality, reducing littering etc. We hope that more EU Member States introduce DRS and that a single EU DRS is going to be reality one day."

"This solution is not an appropriate solution in relation to the problems identified. Of course mandatory national deposit systems for cans would highly be appreciated from an environmental point of view, and we hope that it is going to be reality one day."

Given the responses to the consultation it would appear that the overarching sentiment of the organisations which responded – mostly industry representatives – was that there are too many uncertainties and barriers to warrant the creation of a European wide DRS. It was suggested that before such an option could be implemented many issues would have to be addressed, and even then some of the respondents felt that such a proposal would fail to achieve support from consumers, politicians and businesses, although others disagreed.

## 3.2.2 Question 2

Q: Do you think that, in relation to the problems identified, an appropriate solution would be to require all existing, and future, DRSs to form and operate as a single system?

Responses were slightly more mixed on this question; but again, the vast majority of respondents (13) expressed strong opinions against the idea of a unified deposit refund scheme. For example:

"This option has been subject to a thorough scrutiny within the NORDIC context, where governments issued a statement that they would not take steps to establish a common DRS as the costs of a fully-fledged Nordic DRS would be disproportionally high, given its environmental benefits."

"Such a prescriptive move would require the buy-in and systems harmonisation of the individual [member] states currently operating a myriad of different DRSs – hardly a practical proposition."

There is no justification for such an obligation that would increase costs for consumers in the respective countries.

Only two organisations thought that increased unification was desirable, but both failed to provide extensive comments. Some respondents believed that greater harmonisation among all Member States was desirable, and therefore supported the idea of an incremental development of a harmonised DRS in the EU.

The key themes which emerged from the comments to Question 2 have been summarised in Table 3-2. Five stakeholders either did not comment, or chose to repeat the same answer as that provided for Question 1. In order to minimise repetition these have been identified in Table 3-2 and the reader is referred instead to Table 3-1 for a breakdown of these organisation's responses.

It is evident from Table 3-2, that the most commonly cited reason for responding with a 'no', was that it was believed that the issues which were identified were insufficient to warrant the unification of DRSs across Europe.

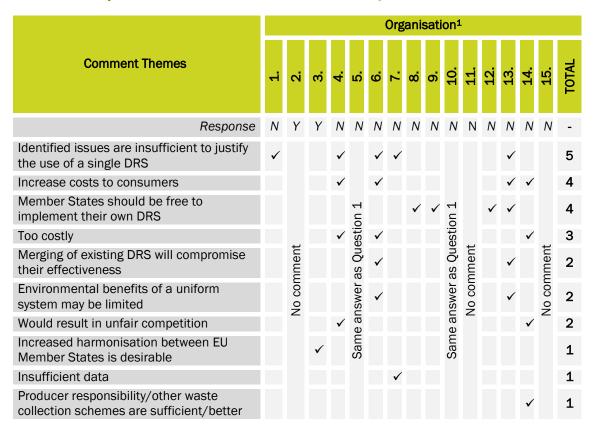
"In relation to the problems identified, there is no justification for requiring all existing and any future national DRS to form a single superstructure."

"Interfering with existing DRS systems, without sufficient information about whether a problem really does exist within the EU, would be blowing the situation out of all proportion."

"It is confirmed that the massive cross-border trade in beverage cans (private imports) occurs predominantly between Germany and Denmark, therefore there is no justification for requiring all existing and any future national DRS to form a single superstructure."



Table 3-2: Key Themes in Stakeholder Comments to Question 2



Other concerns which were highlighted included those relating to the cost of running a harmonised system, and the possible cost increases that may result for consumers if the system is not developed independently within individual Member States. A few organisations also expressed concern that the merging of existing deposit refund systems would compromise their effectiveness:

"This is ... not justified, and the result may very well be that the existing high collection and recycling rates of each of the existing deposit systems will be compromised because at present they have been carefully designed to meet the specific situation in each of the Member States where they have been set up."

"Why should existing deposit systems which already achieve very high recycling rates be changed when they have been specifically designed and adapted to the specific situation in each of the Member States where they are set up."

As a result it was also expressed that more freedom should be given to individual Member States to set up and develop their own DRSs, which can be specifically adapted to meet the needs of the country:

"Member States should still have the possibility to organize their national deposit systems individually, depending on many specific circumstances like logistics, geographical situation population density etc."

### One respondent went on to say that:

"These circumstances determine the administrative fees of each system... The Communication 2009/C 107/01 from the European Commission gives guidance on how to design DRS in compliance with EU regulations. These should be taken into account by all Member States by the introduction of new and improvement of existing DRS."

Some stakeholders have also stated that they thought that the environmental benefits of a uniform system may be limited and not worth the investment that would be required to develop a harmonised system:

"The environmental 'added value' is by no means guaranteed by setting up a uniform and single system perhaps even on the contrary and the result will be a lower return rate for existing beverage packaging."

"The environmental 'added value' is not guaranteed and the result is more likely to be a lower return rate for existing beverage packaging and thus the overall recycling rate will be compromised."

In addition, concerns about breaches of EU competition law were raised by two stakeholders who felt that a centralised/unified DRS would be in breach of this:

"The proposed cross-border superstructure would become even more questionable under EU and national competition law, especially if a centrally operated DRS were envisaged."

"Several antitrust law bodies have expressed their concerns about setting-up national deposit systems. The management of the system with a centrally operated DRS could be questionable under EU and national competition law."

In summary, it can be concluded that there was general resistance to the idea of all existing and future DRSs coming together over time to form a single unified system. Reasons for this, which largely echo those presented in Question 1, included concerns about cost/performance, questionable environmental benefits, issues over unfair competition/discrimination, and a belief that Member States should have the freedom to develop their own independent DRS.

## 3.2.3 Question 3

Q: Do you think that, in relation to the problems identified, an appropriate solution would be to require all existing, and future, DRSs to be interoperable (e.g. deposits can be paid back to consumers by DRSs outside the country of purchase)?

A number of respondents reiterated their comments from the previous two questions, feeling that many of the same issues applied to the solution suggested under Question 3. Again, comments were polarised, with 11 of the 15 stakeholders responding 'no' and only three stating that they believed that existing and all future DRSs should become interoperable. General comments against such a solution included:

"There is not sufficient knowledge about the issue to justify introducing interoperable DRSs."



"Not really a feasible option... Harmonisation of deposit schemes on beverage cans is unlikely to feature highly on any list of priorities that comes before the Commission."

The most environmentally friendly and economic efficiency, especially having in mind the current economic circumstances, would be to ban the DRS in those countries already having one, instead of trying to promote compatible system in those countries which does have an alternative which does work out.

On the other side of the argument were some respondents who felt that, "This is clearly the way forward." In order to achieve an interoperable system they both suggested that:

"From an economic point of view Option 3 [i.e. Question 3] is feasible. A peer-to-peer clearing among all existing and future deposit system would require bilateral agreements among all of them (including agreement on conversion rates of different currencies). Technically all barcodes of all existing European deposit systems have to be integrated in all existing RVMs [reverse vending machines] (there is no influence on machine performance to be expected)."

The key themes contained in the comments to Question 3 have been summaries in Table 3-3. From this Table it can be seen that three stakeholders felt that an interoperable system would be too complex to implement and that this, among other difficulties, would render this solution unfeasible. One respondent felt that the transfer of deposits and administration fees would be difficult to coordinate, while the another stated that:

"DRS are complex enough systems to add the complexity of making them interoperable."



Table 3-3: Key Themes in Stakeholder Comments to Question 3

As in Questions 1 and 2, the issue of competition was again raised as a key issue. It was stated by three organisations that:

"The Dutch and the Danish governments have recognised, during EU notification scrutiny of their draft legislation, that higher deposits on single-use containers would distort competition and be detrimental particularly to imported drinks. In its infringement procedure against the German deposit system, the Commission Reasoned Opinion also stressed this point."

It was also felt that having different deposit rates for reusable vs. one-way beverage containers was unfair:

"A discrimination of deposit amounts between refillable bottles and cans should be prohibited as causing an unjustified distortion of competition."

It was felt by some, that if an interoperable system were to work it would require the deposit charges to be harmonised across all participating systems. There was concern about the high deposit fees required in Germany relative to the rest of Europe:

"Fact-finding has shown that private imports of beer and soft drinks are motivated by lower prices in other Member States due i.e. to excise duties, not by differences in deposit systems. The reimbursement of deposits becomes a genuine issue only if the deposit amount is very (too) high. This is the case for the GERMAN DRS because the deposit amount for single-use containers was imposed by law at a punitive level  $(25 \in \text{Cent})$  to discourage consumers from buying cans and prefer refillable bottles  $(8-15 \in \text{Cent})$  freely set by economic operators). An alignment of deposit amounts in Europe should be a main focus. Amounts should be set freely by the DRS at a level sufficient to induce high return rates (cf. SWEDEN with the equivalent of  $5 \in \text{Cent}$  per can for many years,  $10 \in \text{Cent}$  now)."

"An alignment of deposit amounts in Europe would be necessary."

### General Comments on Options

In the consultation stakeholders were asked to comment on the options presented in Questions 1 to 3, particularly highlighting any environmental, economic and social impacts. Only four organisations responded to this, each providing limited feedback. One respondent merely stated that none of the options were desirable, while others responded with the following:

"A central organisation / clearing house might be an option between two 'agreeable' states where controls could be imposed and probably enforced in a meaningful way. There are huge cost/admin considerations in any such setup and bearing in mind the difficulties experienced by individual states in attempting to enforce domestic packaging regulations, this is a big ask."

"NO option is correct, since the DRS should not be allowed for being environmentally and economically inefficient. Clearly the deposit system are not either environmentally positive nor economic when accounting the real life cycle (4-6 times) of the refillable packaging, the refurbishment and reconditioning needed, administrative cost, transport from house-holds to plants and to the beverage plant and back to the selves, obstacles to free movement of goods, annoyance for consumers, etc.... This measure can only be understood under the protection of local factories, or control of specific market once introduced."



One respondent felt that the option presented in Question 3 should be implemented in neighbouring countries, such as Denmark and Germany, where the identified problems "pose an expense which is beyond that which can reasonably be borne by the EU." 6

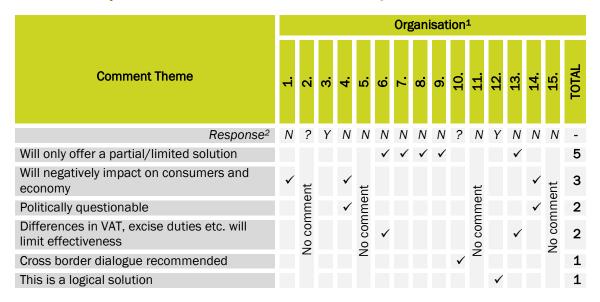
## 3.2.4 Question 4

Q: Do you think that, in relation to the problems identified, an appropriate solution would be that the German deposit should be applied to all cans sold in Germany, including the border cans?

The majority of respondents (11) answered 'no' to Question 4, while two were unsure and only two answered 'yes'. For a variety of reasons, a number of stakeholders felt that the solution suggested in Question 4 would only offer limited benefits. For example, some commented that:

"Article 9 (1) of the German Packaging Ordinance exempt distributors and shops from charging a deposit for packaging sold to final consumers outside the territorial scope of the German Packaging Ordinance. We are not however in a position to evaluate whether such an exemption is justifiable, but even if the German deposit was charged it will only reduce the cross border trade (estimated between 15 – 20%) whereas the remaining cross border trade with beer and soft drinks in cans will continue (and therefore continue to be a waste problem), as this option does not remove the big price differentials caused by differences in VAT rates and excise duties... This option will only reduce but not solve the (waste) problem and should not be opted for as long as other and in our view better options exist (Option [Question] 5 below)."

Table 3-4: Key Themes in Stakeholder Comments to Question 4



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<sup>&</sup>lt;sup>6</sup> Translated from the Spanish using Google translate.

One respondent felt that the consultation document failed to highlight the nature of trade between Germany and Denmark in sufficient detail. They explain that the nature of this trade – where most cans being imported into Denmark from Germany are actually of Danish origin – means that the proposed solution suggested in Question 4 is unlikely to work:

"In order to answer the question whether, or how far, Germany is responsible for solving the problems in the German – Danish border trade, we need to look at this trade more closely. What the consultation document doesn't show is that the beer bought in Germany and brought over to Denmark is mainly Danish beer, brewed and bottled in Denmark and put on the market by Danish firms. (Danish Treasury (2010) Status Over Graenshandel, Report for Danish Treasury, 1 May 2010). This means that the cans brought over to Denmark from Germany are Danish cans not German. Since these problems not being caused by German citizens but rather Danish citizens, there is no point in changing German law to solve them. In fact, Denmark is obliged according to Directive 94/62 (EG) to make sure that all beer cans produced in Denmark for Danish consumption be compatible with the Danish DRS."

## Some respondents answered no to the question, but state that:

"In principle yes, provided option [Question] 3 comes alive. Then this would be part of a bigger European clearing network. It is important, that a deposit is applied to all metal cans sold in Germany and Denmark since both countries have introduced deposit systems with the objectives (among others) to increase collection and recycling rates as well as to reduce littering of metal cans... For all metal cans sold in Germany (including imports) and consumed in Germany the German deposit must be applied. But for beverage cans that are sold in Germany and (verifiably) exported to Denmark it doesn't necessarily have to be the German deposit. For technical reasons it might be more practical to apply the Danish deposit for these metal cans. As a standalone version without any clearing agreement with DRS the option 4 is not beneficial."

Other issues which were raised in the comments were concerns about the impact of the suggested solution on political, economic, and consumer structures. A select few felt that applying the German deposit to all cans would undermine consumer choice and be economically/politically unfavourable:

"In case the German deposit amount (25 € Cent ) were imposed on the cans privately imported by Danish (and to a lesser extent Swedish) consumers, it would act as a purchase deterrent and the border trade which is profitable not only for consumer choice but for the regional economy, would decline dramatically. Instead of helping consumers, such action would seriously affect the functioning of the Single Market."

"If [the solution proposed in Question 4] were imposed on the private German / Danish border trade, it would destroy the only private cross-border trade in cans which has developed significantly. It would be a further illustration for consumers that the Single Market has little to offer in concrete terms for citizens. It would increase popular opposition to the EU."

The border trade, which is profitable not only for consumer choice but for the regional economy, would decline dramatically. Instead of helping consumers, such action would seriously affect the functioning of the Single Market, increasing the consumer's negative perception of the EU.

As indicated above, some believe that in principle the solution presented here could work if it took place in a wider EU context (i.e. in conjunction with the solution posed



in Question 3). However, only two organisations to respond with a 'yes' to question five, with one former stating:

"Yes, it would certainly seem an obvious answer for the German government to extend their deposit scheme to all so-called border cans."

It can be seen from the above quotes that, like with previous questions, there are mixed feelings; however, of the organisations who responded the majority are very cautious of the idea of applying the German deposit to all cans which are sold in the country.

## 3.2.5 Question 5

Q: Do you think that, in relation to the problems identified, an appropriate solution would be a bi-lateral agreement to ensure the Danish and German national systems are interoperable?

This is the only proposed solution which received widespread support. Of the 15 organisations who responded 11 felt that setting up and interoperable system between Germany and Denmark was a good idea. Comments in support of this option included:

"This option is also recognised as being the most suitable way forward in the Nordic Council report."

"This is a first step towards the implementation of option 3 [Question 3]. But we should not stop here. We should make all (existing and future) deposit systems in the EU interoperable."

As in previous questions the key themes emerging from the stakeholder comments have been summarised in Table 3-5. As comments were less extensive for this question fewer themes emerged. Although there was fairly widespread support for the question, this was accompanied with some cautionary notes and suggestions in the comments. The overriding sentiments and concerns are summarised briefly below.

Five respondents commented that there was a need for bilateral agreement. Two organisations stated that this has not led to success thus far, while two others felt that this process should be respected and effectively allowed to run its course. The following, comments were received:

"The Danish and German authorities and stakeholders have been discussing such a bilateral arrangement for a long time, but without success so far. Given the magnitude of this trade and the precedent for the Single Market, draft arrangements should be duly notified under Directive 98/34/EC on technical regulations and standards to allow proper scrutiny and transparency."

"The Danish and German authorities and stakeholders are at present negotiating a bilateral solution, and this should be respected. This option is also recognised as being the most suitable way forward in the Nordic Council report."

"The Danish and German authorities and stakeholders have been discussing such a bilateral arrangement for a long time, and this should be respected. We believe that there is not a "one

size fits all" and that it should be left to the Member States concerned to choose whatever system they think is best, as long as they follow the ECJ practice."

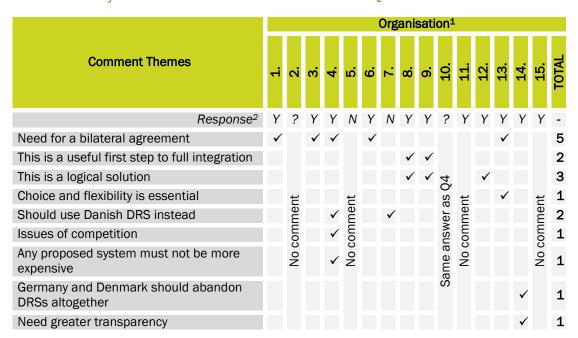


Table 3-5: Key Themes in Stakeholder Comments to Question 5

Some respondents felt that applying the Danish deposit system would be more effective, because most canned beer sold in Germany comes from Danish breweries. However, they had contrasting feelings about the interoperability of the German and Danish systems:

"Since this is concerning beer cans that are filled in Denmark and consumed and disposed of there, these cans need to be compatible solely with the Danish DRS and there is no need for the systems in Germany and Denmark to be interoperable."

"We consider option b) (applying the Danish deposit) as the most promising since most of the canned beer originates from Danish breweries. Therefore its practical implementation should not cause major problems as it raises no interoperability issues between different DRS."

It was also highlighted by one respondent that an interoperable system would only be acceptable if it did not result in a more costly collection system than that already introduced under Dansk Retursystem.

Another felt that it was important that bilateral agreements were taking place and emphasised their belief in the freedom of Member States to choose the best system for their specific conditions. This organisation felt that Germany and Denmark should be left to decide the best solution, free of coercion:

"It is inherent in this Option that the parties concerned should then be free to negotiate a solution, and therefore the parties concerned must also be free to negotiate what is the most appropriate solution in this particular case whether it be either option A (German deposit rate) or Option B (Danish deposit) without the interference from other parties, including this report."



The above quotes and the key themes summarised in Table 3-5 highlight some of the core issues and concerns raised in response to Question 5, which for the main part received positive support. In summary, it is clear that there is a general feeling that the solution suggested in Question 5 would be desirable. However, a very small minority felt that this was not a realistic solution as the primary issue of cross border trade in Danish beers should be solved within Denmark.

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Q: Do you think that, in relation to the problems identified, an appropriate solution would be a bi-lateral agreement to compensate for the cost of management of used beverage cans in Denmark?

There were mixed responses to Question 6, with five organisations supporting the solution and eight stating that it was not a desirable solution (two were unsure; Figure 3-1 and Table 3-6). Those in opposition to the proposed solution provided a number of reasons for this. For example, it was felt that negotiations should be left up to Germany and Denmark and should not be pre-empted in any way.

As with Option [Question] 5 – which is recommended – it will definitely be an important part of the final agreement between Germany and Denmark who will undertake what tasks and how these are financed, but again this will be a part of the bilateral agreement and not for this report to intervene in.

Some felt that there were numerous reasons why this approach should not be sought and highlighted the following concerns:

"Impossible to calculate these costs, impossible to seriously collect a significant number of cans in Denmark based on this, no reduction of littering as can banks or recycling on the go containers cannot be effective, no acceptance by the Border shop association, this would lead the way to many countries asking for compensation for any foreign littered items on their territory etc."

Some felt that Denmark should solve the problem internally, as the trade in Danish beer between Germany and Denmark was the root of the problem:

"...we are talking about cans which are filled in Denmark with Danish beer and which are then emptied and disposed of by Danish consumers. The fact that these cans have made a trip to Germany in between is irrelevant. It is up to Denmark to ensure that the Danish cans are compatible with the Danish DRS. There is, therefore, no reason for Germany to pay for what is, in effect, a purely Danish situation."

Table 3-6: Key Themes in Stakeholder Comments to Question 6



Those in support of the solution stated that the Danish DRS should accept all cans and receive compensation for handling and management costs; this is captured in the following quote:

"The Danish DRS and its partners (i.e. Danish retailers) should be obliged to accept imported non-deposit cans against receiving a cost-covering handling compensation (see SWEDISH system as a good practice model)."

### One respondent went on to say that:

"In practice, the Danish brewers should pay this reasonable handling amount to Dansk Retursystem on all canned beer which is exported to Northern Germany and is likely to be reimported by Danish consumers after its purchase in German border shops. The volumes concerned can be identified easily as these cans do not carry the German or the Danish deposit markings."

Again, some stated that this option would support the intention of existing EU law:

"This obligation on DRS to accept non-deposit cans would comply with article 7 of the Packaging and Packaging Waste Directive: "return, collection and recovery systems shall also apply to imported products under non-discriminatory conditions and shall be designed so as to avoid barriers to trade or distortions of competition." This obligation should apply not only to products imported for sale but privately imported goods if it does not lead to unreasonable costs for the national DRS."

One respondent also supported a bi-lateral agreement and provided the following comment:

As in [Question] 5 above, this is something that the German and Danish authorities should discuss and resolve bilaterally between themselves. In the absence of such an agreement,



there is surely a business opportunity for entrepreneurs in Denmark to provide a collection and return (repatriation!) service for German beverage cans that are "imported" and discarded in Denmark.

From the above it is evident that there were relatively consistent responses from both supporters and opponents of the solution proposed under Question 5. There was a general feeling that both Germany and Denmark should be allowed to independently determine their own path forward, without outside interference. The issue of Danish/German trade in beer was also cited on both sides of the debate; leading some to feel that this could easily be solved through a bi-lateral agreement to compensate Denmark for the collection of non-deposit cans, while one respondent felt that the issue was clearly Denmark's responsibility to resolve.

# 3.3 Summary

In total, the consultation received 15 responses, predominantly from organisations that represented different industry sectors. The key findings and themes emerging from these responses are summarised below, with each of the six questions being dealt with individually. To all questions respondents were asked to provide an initial 'yes'/ 'no' / 'unsure' response to indicate their overall attitude to the question. The results of these responses are summarised in Figure 3-1. This is followed by a summary of the additional comments that were submitted for each question.

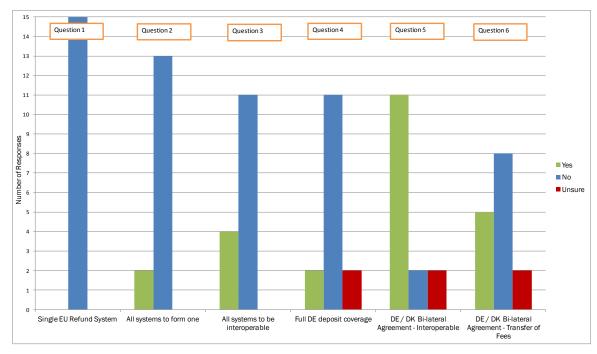


Figure 3-1: Summary of Responses

Source: Consultation

From Figure 3-1 it is evident that all respondents were unanimously opposed to the idea of an EU-wide DRS and that only two felt that it would be possible/desirable for all of the current systems to be harmonised. Other than for Question 5, which had support form 9 organisations, no other interoperability option was supported by the

majority. A brief summary of the responses received for each question is presented below:

- Question 1 proposed an EU-wide DRS, which was unanimously rejected as being unfeasible. A number of reasons were cited for this, with respondents feeling that there are too many uncertainties and barriers to warrant the creation of European wide system, particularly in response to the problem identified. It was suggested that before such a system could be implemented many issues would have to be addressed, and even then some of the respondents argued that such a proposal would fail to achieve support from consumers, politicians and businesses.
- Similar concerns were raised under <u>Question 2</u>, which suggested that all existing and future DRSs should be harmonised to form a single system. Only two positive responses were received in support of this solution, but these failed to provide detailed comments. The remaining 13 organisations cited concerns about increased costs and reduced performance; questionable environmental benefits; issues over unfair competition and discrimination; and a belief that Member States should have the freedom to develop their own independent DRS which were suited to local conditions.
- Question 3 sought to understand responses to an option requiring all existing and future DRSs to be interoperable. This solution received strong support from four respondents, particularly the environmental organisations. A number of the other respondents stated that such a solution would be far too complex, or that it would infringe on EU competition law, and that improved EU guidance on DRSs would be a better solution to improving compatibility.
- Again, there was very little support for the idea proposed in <u>Question 4</u>, which suggested that a possible solution could be to apply the German deposit to all cans sold in Germany (including border cans). There was fairly widespread concern that this option would only provide a partial solution; that it would impact negatively on consumers and the economy; and that differences in VAT and excise duties would limit the effectiveness of this proposal. There was only one of two organisations which supported the idea and felt that it was a logical solution.
- As stated above, <u>Question 5</u> received the most support, with one respondent stating that this would be an important first step to achieving interoperability across all existing and future schemes. In Question 5 it was felt by most (i.e. 11 respondents) that a bi-lateral agreement between Germany and Denmark was important; however, in response to the solution presented in <u>Question 6</u> there were mixed feelings as to whether this should involve compensating Denmark for the management of imported beverage cans. Eight felt that Denmark should be compensated and five that it should not (two were unsure).

