

Designing Deposit Return Schemes: an outlook

Event write-up

On 30th March 2021, Policy Connect hosted an event, entitled 'Deposit Return Schemes: an outlook'. Participants included parliamentarians, industry leaders, as well as representatives from academia and third sector organisations. The aim of the session was to explore learnings from international Deposit Return Schemes (DRS), reflect on the approaches to the DRS across the UK nations, and provide an opportunity for attendees to share their first insights related to the recently launched DRS consultation.

The discussion was used to inform this write-up, but this was formulated solely by, and is only attributable to, Policy Connect.

For background information on the DRS and the current consultation, please see p. 6-9.

Topics discussed at the session included:

Principles for the DRS

The DRS should be designed for the specificities of the UK market (e.g. higher percentage of on-to-go consumption, more multipacks of cans/PET bought). Simply importing a DRS from elsewhere will not work. Yet, it is important to learn from the international best practices and past mistakes to ensure a smooth roll-out.

It is important to ensure that any DRS system introduced is fair and equitable to avoid perverse outcomes. Poorly worded and designed regulations when the German DRS was introduced in 2003 meant, that retailers were only obligated to take back containers they sold. Many avoided taking back products competitors sold and they could do this by using bottles of particular shapes that would fit their own reverse vending machines. However, it was not possible to do this with cans, as they have a common shape. As a result, some retailers stopped selling drinks in cans, while the unit of drinks sold in PET bottles grew¹.

Ensuring a successful DRS system needs a strong regulatory framework:

- Labelling is key to the success of the DRS: it is very important to mandate strong and effective labelling for in-scope containers.
- Mandating producers and retailers to participate.
- Strict penalties need to be established for misconduct.
- Setting material-specific targets for collection and recycling.

¹ Markus Groth. 2009. A review of the German mandatory deposit for oneway drinks packaging and drinks packaging taxes in Europe. Accessed at <https://core.ac.uk/download/pdf/6781128.pdf> on 14 April 2021

Before introducing the DRS, it is important to allow sufficient time to implement infrastructure (e.g. sorting out the right labelling, allow testing of schemes and anti-fraud measures) and educate consumers.

Transparent management via the Deposit Management organisation is crucial for the success of the DRS.

It is important to ensure that DRS boosts existing recycling performance and it does not undermine it.

The DRS and currently ongoing consultations

The importance of seeing the DRS in an integrated view with other proposals was highlighted, including the awaited consultation on the consistency of collections, the new waste prevention programme that was published recently by Defra for England, and the extended producer responsibility (EPR) for packaging consultation published together with the DRS consultation. These proposals have not been finalised yet and it is important that the operation of the DRS will have to be optimised to work together with all of these systems.

According to recent announcements, the EPR for packaging will be introduced in the four nations in 2023 and the DRS in England, Wales and Northern Ireland will be introduced in 2024; and Scotland is now reviewing its EPR introduction date (previously scheduled for 2022). It was highlighted that the different introduction dates might bring difficulties due to the varied transitions happening at the same time.

The compatibility of DRS systems across the UK:

Introducing different DRS systems in the UK, or ones that are not joined up, would create different markets across UK nations, requiring industry to come up with different models to operate across the UK nations.

It is really important to have the same or compatible DRS systems across the UK. If it is not the same system, it would be important that they:

- have the same efficiency by having the same scope and synchronised deposit levels;
- begin at the same time: Currently, it seems that there will be a two year gap between Scotland and the rest of the UK which would be really costly for industry. If they began at the same time, and they had the same scope that would give us a much more consumer-friendly scheme industry build on.

This would also make the system less susceptible to fraud. Launching the scheme at different times would provide a huge incentive to serious fraud. (E.g. taking a truckload of drinks containers to Scotland that were not bought there can result in a large deposit sum being redeemed.)

The DRS in Ireland and Northern Ireland

Questions were raised about how the scheme would work on the Ireland – Northern Ireland border, as Ireland has recently consulted on introducing a DRS system as well². The importance of reviewing

² Department of the Environment, Climate and Communications (Ireland). 2020. Accessed at <https://www.gov.ie/en/consultation/cf94c-deposit-return-scheme-consultation-on-potential-models-for-ireland/> on 15 April 2021

how the two systems can co-exist was highlighted, including how to avoid potential 'leakage'. Special labelling was suggested as one of the potential solutions on how to overcome it.

The operating cost of the DRS scheme

There is a big variation in the operating cost of DRS schemes across European countries. (The variation in operating cost difference for EPR is much lower across countries.) While in Finland the operating cost of the DRS is around £333/tonne, in Germany it is £229/tonne, whereas it is £165/tonne in Lithuania and £124/tonne in Estonia³. Finland has many and highly automated collection points, but low levels of per capita packaging, increasing the cost. In Germany extended producer responsibility (EPR) and the DRS is used together to account for packaging. In Lithuania, rather than investing in buying reverse vending machines they operate a leasing scheme which has an impact on costs. Estonia has lots of manual collection which drives down the cost.

Based on the impact assessment published by Defra in March 2021⁴, the annual operating cost of the DRS to retailers is estimated to be £444 million. In contrast, based on a study of the British Retail Consortium, the annual operating costs to retailers is estimated to be £1,280 million⁵. This is £836 million higher than the Defra estimate, signaling significant difference in the estimates. Based on which estimates are used, it differs greatly what the operating cost/tonne of the DRS will be and how that will compare to international schemes.

Disamenity value

Disamenity value is estimated to represent a significant proportion of the benefits brought by the DRS in the UK. As it was highlighted at the roundtable, based on the current consultation the projected reduction in the disamenity value of litter in 2025 would be £1.452 billion for an all in DRS, representing 91% of the total benefits.

On-the-go system

If an on-to-go scheme was introduced (in England and Northern Ireland), it would be difficult to distinguish between the different consumption occasions. (E.g. If a consumer buys a bottled/canned drink in a park and drinks it there 'on-the-go', how is that different to when someone buys a multipack of cans/bottles of the same drink in a supermarket and takes one of it to the park to consume it there?) Being obligated in a narrow section of retail would make some local improvements to littering, but it would not change recycling. However, it would require huge costs regardless, because it would require to create different arrangements for that section of the market.

The DRS and VAT

HMRC and the Treasury have not yet confirmed whether the cash deposit part of the DRS would be exempt from VAT (yet many think that shoppers should not be taxed for doing the right thing for the environment).

³ Figures cited at the event.

⁴ Defra. 2021. Impact Assessment. Introducing a Deposit Return Scheme on beverage containers. Accessed at: https://consult.defra.gov.uk/environment/consultation-on-introducing-a-drs/supporting_documents/Impact%20Assessment.pdf on 15 April 2021

⁵ British Retail Consortium. 2018. Deposit return schemes (DRS) in the UK: Implications for retailers Accessed at <https://brc.org.uk/media/597230/brc-drs-research-2018-final-report.pdf> on 15 April 2021

Deposit levels

It is important to ensure that the deposit level is high enough to motivate consumers that they return their containers. International research has shown that return rates tend to be lower when deposits (adjusted in purchasing power parity) are lower⁶. Research also found that the minimum deposit return value should be about 20p to achieve at least 85% return rate⁷.

Variable vs flat deposits

Concerns were also raised about whether the DRS system introduced will be set at a flat or a variable rate. (A flat rate means that the rate of deposit is equal regardless of container size and/or packaging material; whereas a variable rate varies based on drink container size and/or material.)

As a particular piece of consumer research cited at the roundtable highlighted, 60% of consumers would switch from multipacks of cans to large plastic bottles if a flat rate deposit is introduced⁸. (E.g. a 20p flat deposit fee would add £4.80 to a 24 pack of 330mL cans (7.92L), whereas the deposit for the same volume in 4 plastic bottles of 2L (together 8L) would be only 80p despite the bottles carrying almost the same volume of liquid.)

Internationally, there are schemes with both variable and flat rates. Denmark, Sweden, Norway and Finland operate variable rate schemes, whereas Estonia, Germany, Iceland, Lithuania, Croatia, and Australian states (New South Wales, Northern Territory, Queensland, South Australia and Australian Capital Territory) operate flat rate schemes⁹.

Based on international examples, a recent report found that variable DRS schemes are seen to achieve higher return rates in the first two years of operation¹⁰.

Easy deposit redemption

Easy deposit redemption for consumers is key for the success of the DRS. (E.g. in Germany, the initial design of the scheme meant that consumers in many cases could only return containers to the retailer from where they purchased them, limiting convenience to consumers.) It is important to get universal (or close to universal return in the UK).

Return points should be in easily accessible locations. The 'return-to-retail' model is tried and tested in many countries, but there should be provision of collection points close to the point of consumption 'away-from-home' as well.

The DRS and online shopping

Responding to questions about the increased prevalence of online shopping and deliveries, it was highlighted as a general principle that if people are able to get drink containers delivered to their doors, they should also be able to redeem the deposits for their empty containers and have those taken back at their doors. Work is needed to ensure the logistics behind this, especially on potential occasions when consumers save up larger quantities of empty drinks containers, ensuring that vehicles have the capacity to take them back.

⁶ London Economics. 2020. Assessing impact of a flat and variable deposit fee for UK Deposit Return Scheme

⁷ Ibid.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

Digital DRS

While innovation is supported, there are concerns that digital DRS schemes are not yet ready for roll-out. As it was highlighted at the roundtable, one of the reasons for that is that the printing infrastructure needed to make the markings on drink containers fit for digital DRS does not exist yet at the scale needed.

Moreover, a general concern with digital DRS is that it might not fix the issue of littering, which is one of the key reasons behind implementing it. (If someone scans a drink container in scope for the scheme, they redeem the deposit, but it is not guaranteed that that pack will be locked up in a safe place and prevented from being littered.)

Communicating the DRS to consumers

The DRS will require behavioural change from consumers. Providing information to consumers about the new scheme and encouraging them to participate will be key to the success of the DRS.

It was highlighted that communicating the DRS to consumers should be a clear responsibility of the scheme administrator. Related to this, it will be important to raise consumers' awareness of the scheme administrator, making the general public recognise that it is the deposit management organisation who administers the scheme. This is important for people to know who they need to turn to regarding questions about the DRS, avoiding that they turn to local authorities or other organisations that they are familiar with, but who are not responsible for administering the scheme.

Recycling rates

It is important to highlight that a DRS in itself does not guarantee high recycling rates overall for all materials. Based on international examples from countries operating both a DRS and an EPR scheme, the recycling rates of a DRS were found to be consistently above 80%, but it is important to also invest in the recycling of out-of-scope material, which can vary from 31.8% in Croatia to 94% in Finland¹¹.

The DRS and reuse

The DRS is currently primarily designed to reduce littering and increase recycling – it does not encourage refill and reuse. It is also important to consider how the DRS could work with reusable, refillable models. However, there are examples where the DRS works together with refillable models: as it was highlighted at the event, in Latvia refillable bottles are separated from other glass and given back to manufacturers for refill.

¹¹ Figures cited at the roundtable

Background information¹²

Deposit return schemes have been implemented in several countries across Europe and in other parts of the world, such as Australia. These schemes vary regarding their objectives, success rates and design, including the types of materials, volume and drink types included, the deposit rate charges (their level, as well as whether they are flat or variable). Some of these schemes have been operating for decades, whereas others were introduced more recently.

In Northern Ireland, a Departmental paper was commissioned in 2015 on options on the desirability and feasibility of a deposit return scheme. While it highlighted that the scheme was desirable, it outlined that it was not feasible to introduce a scheme on a Northern Ireland only basis. In Wales, the Welsh Government commissioned a study on Extended Producer Responsibility options in 2017, with a deposit return scheme being one of the options considered. In the Waste and Resources Strategy (for England) in 2018, HM Government indicated the intention to introduce a deposit return scheme, subject to consultation. The Strategy set out that HM Government has a preference 'to adopt a UK-wide approach to DRS if it is introduced', highlighting that '[w]aste and recycling policy is a devolved matter but we will continue to work closely with the Devolved Administrations on this policy area'.

Following the Resources and Waste Strategy, Defra launched a consultation in February 2019, entitled 'introducing a Deposit Return Scheme for drinks containers (DRS) in England, Wales and Northern Ireland'. This was launched together with the devolved administration in Wales and the Department of Agriculture, Environment and Rural Affairs (DAERA) in Northern Ireland.

HM Government seeks to introduce primary powers for introducing the DRS via the Environment Bill. Clause 53 and Schedule 8 of the Environment Bill aims to confer 'power on the relevant national authority to make regulations establishing deposit schemes', with the Bill mentioning relevant national authorities in England, Wales and Northern Ireland. The Bill defines the purpose of the deposit schemes as 'sustaining, promoting or securing an increase in the recycling or reuse of materials' and/or 'reducing the incidence of littering or fly-tipping'.

¹² Sources cited in this section include (accessed on 16 April 2021):

HM Government: Consultation outcome. Introducing a Deposit Return Scheme (DRS) in England, Wales and Northern Ireland: Executive summary and next steps:

<https://www.gov.uk/government/consultations/introducing-a-deposit-return-scheme-drs-for-drinks-containers-bottles-and-cans/outcome/introducing-a-deposit-return-scheme-drs-in-england-wales-and-northern-ireland-executive-summary-and-next-steps>

Scottish Government: Deposit Return Scheme: <https://www.gov.scot/policies/managing-waste/deposit-return-scheme/>

Robin Whyte (Letsrecycle) Scotland to review DRS implementation <https://www.letsrecycle.com/news/latest-news/scotland-to-review-drs-implementation-date/>

Welsh Government. Press Release New digital deposit return scheme for plastic bottles to be trialled at households in Conwy county <https://gov.wales/new-digital-deposit-return-scheme-plastic-bottles-be-trialled-households-conwy-county>

Oakdene Hollins. 2018 Raise the Glass. <https://feve.org/wp-content/uploads/2018/11/Raise-the-Glass-Study-Executive-Summary-FINAL.pdf>

<https://alupro.org.uk/sustainability/>

Defra, DAERA and Welsh Government. 2021. Consultation on Introducing a Deposit Return Scheme in England, Wales and Northern Ireland Second Consultation. https://consult.defra.gov.uk/environment/consultation-on-introducing-a-drs/supporting_documents/DRS%20Consultation%20FINAL%20.pdf

In Scotland, the Scottish Parliament passed the legal framework for a deposit return scheme for single-use drinks containers in May 2020, with the aim to operationalise the scheme by 2022. (However, it was recently reported that the go-live date of the scheme will be reviewed in Scotland.) Regarding materials, the Scottish scheme includes PET plastic, glass, steel and aluminium. It will charge consumers a flat deposit fee of 20p when they buy a drink in a single-use container sized from 50 millilitres to 3 litres.

In Wales, there have been trials for the introduction of a digital deposit return scheme. The Welsh Government's recent (2021) strategy, *Beyond Recycling – A strategy to make the circular economy in Wales a reality*, highlighted the DRS as a key lever to achieve the Welsh Government's circular economy objectives. Northern Ireland's *The Waste Management Plan for Northern Ireland 2019* and *The Waste Prevention Programme 2019* also included the introduction of the DRS.

In the response to the 2019 consultation, it was also put forward that government will launch a further consultation (originally planned for 2020) on the regulatory framework for introducing a DRS through secondary legislation. This second DRS consultation, as a collaboration of Defra, DEARA and the Welsh Government was launched on 24 March 2021. While the first consultation indicated 2023 as the likely introduction date for the DRS, on account of the Covid-19 pandemic, the current consultation anticipates that the 'introduction of a deposit return scheme in England, Wales and Northern Ireland would be in late 2024 at the earliest'.

The proposals in the ongoing DRS consultation include (but are not exclusive to) the following topics¹³:

- 'the scope of a deposit return scheme should be determined based on material rather than product', and propose[s that] the scheme captures PET plastic bottles, glass bottles, and steel and aluminium cans'
- '[T]he Welsh Government's preferred option for Wales is an all-in scheme (capturing drinks containers up to 3L in size) but remain committed to working in partnership with the UK Government and the Department of Agriculture, Environment and Rural Affairs in Northern Ireland so that the scheme is as consistent as possible across Wales, England and Northern Ireland.'
- The UK Government for England and DEARA 'have remained open on scope with regards to introducing a deposit return scheme in England and Northern Ireland and would like to use this consultation to gain further views on whether the deposit return scheme should be an all-in scheme (including drinks containers up to 3L in size) or an on-the-go (drinks containers under 750ml in size and excluding those containers sold in multipacks) scheme'.
- A Deposit Management Organisation (DMO) is proposed 'to manage the operation of the deposit return scheme'. The DMO 'will be appointed via a competitive tender process' and will operate across England, Wales and Northern Ireland'. '[F]unctions will be conferred on it via a combination of regulations and a contract'.
- The consultation proposes 'that there should be an obligation placed on the Deposit Management Organisation to achieve a 90% collection rate after three years from introduction of the scheme in order to ensure high performance of the deposit return scheme, with a phasing in approach for the targets over this three-year period'. However, it does 'not propose that recycling targets should be imposed on the Deposit Management Organisation in addition to collection targets, due to difficulties arising with how the Deposit

¹³ Source: https://consult.defra.gov.uk/environment/consultation-on-introducing-a-drs/supporting_documents/DRS%20Consultation%20FINAL%20.pdf Accessed on 16 April 2021

Management Organisation ensures this material has been recycled once sold to a reprocessor'. Instead, it proposes 'that there should be a legal obligation on the Deposit Management Organisation to ensure that the material that is collected via a deposit return scheme is passed on to a reprocessor and evidence is provided of this'. The UK Government for England, the Welsh Government and DAERA 'will be obligated to report the overall packaging recycling rates' by England, Wales and Northern Ireland in 2025 and 2030, 'reflecting both the packaging recycling through Extended Producer Responsibility and a deposit return scheme'.

- The consultation sets out plans for the DMO 'to be funded via three revenue streams: material revenue, producer registration fees, and unredeemed deposits'. It also proposes that the DMO will 'have the ability to set a fixed or variable rate deposit'. The consultation also indicated the position that the 'deposit level will not be fixed in legislation'. In contrast, it proposes 'to set out a minimum and, possibly, maximum deposit within secondary legislation, which will describe the methodology to be used for altering the deposit level'. The consultation also indicated to give the DMO the ability to set and alter the deposit level 'to ensure it is able to meet its statutory collection targets'.
- It is also proposed 'that all retailers who sell in-scope drinks containers will be obligated to accept returns of in-scope material by hosting a return point. This will likely be via reverse vending machine or manual return points'. The consultations also sets plans for 'a number of conditions which can be enforced when containers are returned' and 'a selection of approaches for online retailers selling in-scope containers to offer a take-back service'. It also sets an 'option for voluntary return points to be established by non-retail actors'.
- The consultation proposes mandatory labelling will be legislated as part of the DRS 'to ensure the smooth functioning of the scheme'. It considers 'labelling as a necessary measure to significantly minimise the risk of fraud, ensuring that once containers are scanned and returned, they lose their deposit value and cannot be returned again. Labelling will also provide clarity for consumers in understanding what drinks containers are captured' by the DRS.
- The consultation proposes three options 'on how local authorities should be financially reimbursed for the costs involved in treating scheme material':
 - Option 1: 'do nothing' approach, 'allowing local authorities to redeem the deposits of deposit return scheme containers collected in their waste streams'.
 - Option 2: 'allow the Deposit Management Organisation to make payments to local authorities for these materials via the Extended Producer Responsibility Scheme Administrator. Under the proposed packaging Extended Producer Responsibility funding formula approach, packaging producers will be required to meet the net costs of managing household packaging waste in local authority waste streams. The funding formula developed for these payments under Extended Producer Responsibility would include the costs of deposit return scheme containers.
 - Option 3: 'a hybrid option, whereby the Deposit Management Organisation pays a deposit value on containers that are returned and any additional scheme material in local authority waste streams is covered by a funding formula in Option 2'.
 - The consultation outlines a 'preference for Option 2 being taken forwards for the final scheme design'.
- The consultation 'consider[s that] the environmental regulators in England, Wales and Northern Ireland are best placed to be Scheme Regulators for a deposit return scheme for drinks containers and to monitor and enforce the actors that are obligated under the

scheme'. In addition, it considers that 'there is a role for local authorities / Trading Standards to regulate the consumer-facing obligations that are placed on retailers'.

- The consultation flagged that a 'decision on the scope of the deposit return scheme will be made in the summer of 2021'.