

# Preventing Fraud in Deposit Return Systems

A deposit return system (DRS) is like a chain; it is only as strong as its weakest link, and if that link is exploited, the entire chain breaks. Like other systems that deal with large sums of money, deposit return systems are open to the possibility of fraud, and proper accountability mechanisms must be put in place to minimize opportunities for fraudulent behavior—actions that will not only remove funds from the DRS, but that will result in a shortfall of funds raised, and inaccurate environmental performance monitoring.

This factsheet provides an overview of how fraud can occur in a DRS along with methods to help detect and mitigate it. These solutions are drawn from international experiences in both North America and Europe, where system operators and/or regulators improved the integrity of their systems and as a result, directly impacted their bottom lines.

## Types of Deposit Fraud

Fraud can occur at numerous points in the system, but is most common at the consumer end of the DRS chain, for example, when deposit containers (or receipts) are returned more than once. Known as “double redemption”, this type of fraud happens when the deposit that was only paid once is refunded to the consumer multiple times, which results in a surplus of funds leaving the system.<sup>1</sup> Another type of fraud that can occur at the consumer end is when a refund is paid out on a container for which no deposit was ever paid. In this case, a beverage container purchased in one jurisdiction is returned in a neighboring jurisdiction for a refund. The likelihood of this type of fraud occurring is higher if the jurisdiction in which the container was purchased does not have a DRS in place, or if the deposit level in that jurisdiction is lower, or if the scope of containers covered is narrower.

At the other end of the DRS chain, there is the potential for redemption centers and/or processors that buy commodities from them for resale to base their payment claims on whole or partly false information or falsified documents. For example, a recent investigation into fraud under the state of California’s DRS found that some recycling centers are doctoring weight tickets by claiming additional weight that does not exist on their reports to CalRecycle (the system operator) in order to increase the amount of money they are reimbursed.<sup>2</sup>



The same report states that recycling centers can purchase non-deposit glass containers, break them up, and mix them in with deposit bottles; they then write a weight ticket for all deposit-bearing glass containers.<sup>3</sup>

Although it may not be considered fraud per se, but rather a violation of the law, there is also the possibility for producers or distributors to falsify their sales or returns data. This occurs when sales into a jurisdiction are not reported, and thus no deposit is paid on the container. This type of fraud results in less money coming into the system and increases levels of free-ridership. The impact of under-reporting, or free-riding is that for those producers (first importers, distributors, or retailers) that report their sales accurately, they will likely experience an increase in the fees to help make-up for the shortfall in funds. For this reason, beverage producers should be amenable to any procedures established to ensure accuracy and a level playing field for all sellers of deposit-bearing containers.

## Examples of Deposit Fraud

### CASE STUDY: OREGON (US)

In November 2020, state auditors released a report which confirmed that cross-border fraud was happening in Oregon: “auditors observed two Portland BottleDepot redemption centers near the Washington border. During those hours, numerous people driving cars with Washington license plates redeemed containers, as well as cars with front or rear plates removed.”<sup>4</sup> Staff at the Oregon Beverage Recycling Cooperative (OBRC) told auditors that it believes the cost of such fraud is about \$10 million/year—about 5% of Oregon’s total redemptions.

### CASE STUDY: HAWAII (US)

A recent audit<sup>6</sup> of Hawaii’s beverage container program found two instances in which an Oahu redemption center falsified returns data in order to get significantly larger reimbursement payments than what should have been received.<sup>7</sup> The audit also highlighted problems at the distributor level. Hawaii’s program does not have procedures in place to verify or inspect data that is reported on the Monthly Distribution Report Form submitted by distributors (which include beverage companies and grocery stores). Because distributors pass on beverage container costs to retailers or consumers, they have an inherent interest to under report sales/distribution data. As the audit states, “distributors have the opportunity to fraudulently or erroneously collect deposits and container fees from retailers and not remit the amounts to the program.” The audit found several instances of underpayments by distributors, that is, distributors were collecting more in beverage container fees than they were paying to the state fund that reimburses them.<sup>8</sup>

### CASE STUDY: CALIFORNIA (US)

According to a January 2022 report released by Consumer Watchdog,<sup>5</sup> California’s DRS loses at least USD\$200 million a year to fraudulent activity. Previous investigations by the State Auditor and others show a range of USD\$40 million up to USD\$200 million/annually in deposit refunds stolen from the program. The Consumer Watchdog report identifies the many methods that individuals and organizations are using to defraud the system, including:

- Bringing in containers from non-deposit jurisdictions like Nevada, Arizona, or Mexico
- Weighing the same truck of redeemable containers twice (or more) at processing centers
- Falsely stating where containers came from in order to increase the amount they are reimbursed
- Recycling the same containers multiple times, which is possible due to a transaction log loophole
- False documentation of non-existent containers
- Adding non-deposit containers in large loads
- Falsifying weight tickets

## Fraud Risk Management and Countermeasures

High-performing deposit return systems utilize a range of best practice methods for detecting, preventing, and mitigating fraud. This includes simple methods like increased consumer education to high-tech solutions that involve modern reverse vending machines (RVMs) and high specifications labels. These measures, which can be taken by retailers, governments, and/or system operators, are examined in brief below:

1

**Establish limits on how many containers one individual or organization can redeem each week or during a single visit:** Setting return limits on consumer-based redemption makes it more difficult (and less profitable) to redeem large volumes of fraudulent containers, which makes the activity less likely to occur. In order to accommodate large-volume generators like fundraising groups, hospitality businesses (cafes, restaurants, and hotels), and others that do not have back-haul arrangements with distributors, the law can include a requirement that such entities register with the system operator beforehand to have counting centers refund containers directly.

2

**Implement retailer standards for reverse vending machines (RVMs) and manual take-back requirements.** Mandatory requirements can include: using a compacting RVM that ensures that the barcode and/or label are no longer readable after redemption to reduce the chance for theft and double redemption; requiring that RVMs have online connectivity to provide system operators with real-time data; and reporting with mass balance.

3

**Inform consumers about eligible beverage containers:** All sellers of eligible beverages must post signage at their stores to let customers know which containers are subject to the deposit and thus eligible for a refund.

4

**Establish a random sample audit program for collectors to verify manual and automated redemption:** Manual spot audits, which attempt to verify the reported count of returns with the actual amounts returned, offers real-time information on the level of fraudulent activity. They also identify which collectors may be inaccurately reporting.

5

**Establish counting centers for container processing, audit, and verification:** Counting centers offer the final stage before containers are sent to recyclers. They process all containers, which arrive from collectors; distributors; and large volume generators. These facilities must be certified by the state or regional government and perform regular audits to verify the numbers of containers redeemed by material type. Counting centers should also be required to provide a mass-balance reconciliation, where the number of redeemed units is equal to the total weight of the material shipped to recyclers (i.e. the number of cans \* the weight = the actual weight of material shipped to market).

6

**Set an appropriate deposit level:** The deposit level must be set high enough to motivate consumers to return their empty containers, but low enough so as to not encourage fraudulent behavior. While high deposit values will result in high return rates, they also require the establishment of more sophisticated accountability systems.

7

**Mandate reporting of all sales into a centralized State or Regional registry:** There are many deposit return laws that are written by regional governments within a federation. For example, US states (10) and Canadian provinces (11) individually regulate their DRS. Most of these laws target the first importer, which is the first contact to bring the beverage into the region for sale in that region. These may include: producers, distributors, wholesalers, and retailers that act as the distributor.

8

**Publicly posting all registered containers in the system:** The posting can list: the first importer name; product name; unit size; type; and UPC code. This up-to-date listing further improves system integrity by publicly offering the registration list and provides an opportunity for unlisted (free-rider) containers to be identified.

9

**Auditing the system after one year:** This is a verification check to see if there are issues specifically relating to no unique marking requirements. The DRS can be designed so that a series of audits are undertaken to measure the level of free-riders (those containers which are not registered).

10

**Government must introduce strict penalties on false reporting of sales by first-sellers and illegal redemption:** Penalties for misreporting by first importers should have their rights to distribute beverages in the region revoked.

11

**The law must include program amendments if targets are not met:** The backdrop law must include a provision that calls for an automatic increase in the deposit level unless an 80% redemption figure is attained by a specific date, and mandatory unique markings on containers sold in the state or region if third-party audits show higher levels of free-riders and/or illegal redemption.

12

**Establish labelling requirements for deposit-bearing containers:** The backdrop law can require standard text or a logo to be printed on each beverage container that is part of the DRS. Such markings make it easier for manual return points to identify containers that are eligible for a refund. In a similar way, barcodes (universal or jurisdiction-specific) allow automated return points to identify and count each container, which not only prevents fraudulent redemption of non-deposit containers but also enables accurate payments to consumers.

## Conclusion

International experience from high-performing systems shows that the most effective DRSs are those that have adopted a more comprehensive and technology-based approach to fraud prevention. In other words, the best way to strengthen the chain of accountability is by implementing two or more fraud prevention measures in combination. This is especially true for those countries, states, or provinces who are more susceptible to deposit fraud (because of higher deposit values or wider program scope relative to a neighboring state, for example).

FRAUDULENT PARTY	PRODUCERS	CONSUMERS	RETAILERS	REDEMPTION CENTERS/COUNTING CENTERS
<b>What is the fraudulent activity?</b>	Under reporting sales which results in deposits not collected by the central agency.	Redemption of non-deposit bearing containers	Over-reporting redemption - false claims	Redemption of non-deposit bearing containers
<b>What is the impact?</b>	A percentage of unreported beverages will not have deposits paid.  This will result in additional unforeseen costs of the deposit plus the handling fee.  The collection rate will also be artificially high, because some sales are not factored into the denominator.	Refunds will be paid-out on containers where deposits were not paid.  There will also be additional handling fees paid outside of the program budget.	This is a cost to the system of (the deposit plus the handling fee). It will also result in an inflated collection rate.	Refunds will be paid-out on containers where deposits were not paid.  There will also be additional handling fees paid outside of the program budget.
<b>System conditions which support fraud</b>	Lack of a centralized clearinghouse to receive reported deposits. Lack of legislation, which mandates reporting.	Nearby city-centers in non-deposit jurisdictions that can easily bring large volumes of containers into deposit state. Higher deposit levels motivate out-of-state importation; municipal MRFs claiming refunds on curbside deposit beverages.	Minimal system security measures at retail. No redemption standard requirements (RVM or manual).	This is a problem where large volume returns are part of the program and payment is generally based on the total weight of the load, versus the individual unit counts.
<b>What are some measures to mitigate the fraud?</b>	Indicate in law the reporting requirements of the beverage first-importers into Region to centralized agency.	<ul style="list-style-type: none"> <li>• Define “consumers” in the law, and identify that only consumers can redeem containers.</li> <li>• Set daily return limits (by number of containers or maximum redemption value)</li> <li>• Ensure regional-specific labeling of some kind so that retailers and/or RVMs can differentiate easily.</li> <li>• Inform the consumer at the point-of- purchase about the charging of a deposit; and clearly state that all containers in the ‘state’ can be redeemed for a deposit – but controls are in place to ensure that they are participating containers only.</li> </ul>	<ol style="list-style-type: none"> <li>1 Strong accounting/ monitoring from retailers, which include: <ul style="list-style-type: none"> <li>• Watching for large fluctuations in redemptions; changes in material ratios, especially aluminum;</li> <li>• Watch counts of containers compared to outgoing weights; Secure storage of redeemed containers to prevent theft and re-redemption;</li> <li>• Report suspicious redemptions; Operate “Mystery Shopper” program to monitor how stores and depots respond to out-of-state containers;</li> <li>• Prepare timely reporting that allows fast response by law enforcement;</li> <li>• Reward stores that report fraud that results in convictions or penalties;</li> </ul> </li> <li>2 Track loads tracking from point of pick-up to final processing/counting center.</li> <li>3 Run regular random audits of load – count over and under reporting. Monitor bad behaviors. Penalize chronic over-reporting.</li> </ol>	Register large volume returners. Watch for fluctuations. Run random sample audits
<b>Case Studies</b>	<ol style="list-style-type: none"> <li>1 New York: Distributors must put deposits in a designated bank account – then each fiscal quarter – after deposits are redeemed – send the excess money to the State.</li> <li>2 California: All deposits sent to the State, which is responsible for dispersing all deposits, handling fees, grants, etc.</li> <li>3 Canadian provinces: all sales must be reported and deposits paid in order to be legally sold in the Province.</li> </ol>	<ol style="list-style-type: none"> <li>1 In California, the law defines a “Consumer” to mean every person, for his or her use or consumption, purchases a beverage container from a dealer. “Consumer” includes, but is not limited to, a lodging, eating, or drinking establishment, and soft drink vending machines.</li> <li>2 Coke and Pepsi use unique UPCs on cans and bottles voluntarily to manage border fraud in NYC and the North Eastern US.</li> <li>3 Coke and Pepsi use unique UPCs on cans in Michigan as well on PET bottles.</li> <li>4 Miller/Coors and Anheuser Busch use the ink jet mark on the bottom of their cans.</li> <li>5 Michigan offers retailer provisions such as limiting the number of containers that any one consumer can redeem per day to 250. Michigan has also made it a felony offence to deliberately return a container purchased outside the state, with the potential for up to 5 years in prison.<sup>9</sup></li> <li>6 In Vermont, consumers who purposefully attempt to redeem a container that was purchased outside the state can be fined up to \$1,000 for each violation.</li> <li>7 In New York, consumers who knowingly return non-deposit containers to redemption centers can be fined \$100 per container (up to a maximum of \$25,000).<sup>10</sup></li> </ol>	<ol style="list-style-type: none"> <li>1 The province of Ontario (Canada) uses mystery shoppers to carry out compliance checks and assess retailer standards.<sup>11</sup></li> <li>2 The province of New Brunswick (Canada) uses a system of random audits, with increased inspections for retailers who have previously provided inaccurate data.<sup>12</sup></li> <li>3 In New York, processing centers weigh the returned containers to compare them with the RVM data or redemption center reports.<sup>13</sup></li> </ol>	<ol style="list-style-type: none"> <li>1 Newfoundland and Labrador: redemption centers that misreport the number or type of containers returned are subject to fines, set at double the amount they attempted to fraudulently claim.<sup>14</sup></li> </ol>

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2. Tucker, L. January 2022. “Cash for Trash: Recycling Fraud in California.” Accessed 7 March 2022 from <https://www.consumerwatchdog.org/sites/default/files/2022-01/CASHforTRASH-%202022.pdf>

3. Ibid.

4. Secretary of State Oregon Audits Division. November 2020. “Report 2020-36: Oregon Has an Opportunity to Modernize Groundbreaking Bottle Bill on its 50th Anniversary.” Accessed 7 March 2022 from <https://sos.oregon.gov/audits/Documents/2020-36.pdf>

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10. Ibid.

11. Ibid.

12. Ibid.

13. Ibid.

14. Ibid.