
STUDY ON THE VERTICAL INTEGRATION OF PRODUCER RESPONSIBILITY ORGANISATIONS AND THEIR EFFECT ON THE MARKET

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This report was prepared for EXPRA aisbl/ivzw. All results and any errors are the responsibility of the authors Oliver Bretz and Daniele Pinto, and do not represent the opinion of Euclid Law, EXPRA or any other client.

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I. EXECUTIVE SUMMARY

- **Extended Producer Responsibility** is a resource management system whereby packaging producers take over the responsibility for the end of life management of their packaging, including collection, sorting and treating, and recovery.
- Extended Producer Responsibility creates an obligation on packaging producers and importers, which is often taken care of collectively through the setting up of a **Producer Responsibility Organisations** to which this responsibility is outsourced.
- Producer Responsibility Organisations are charged with ensuring the recovery of the used packaging by co-financing, organising and/or coordinating the collection, sorting and recycling of packaging waste.
- Depending on the laws and regulations of a particular EU Member State, Producer Responsibility Organisations may be non-profit or for-profit companies. The latter type is generally owned by investors, which can be industry players at different levels of supply such as **Waste Management Companies** and/or **recyclers** (also, more recently, **retailers**)—thereby sometimes becoming **vertically-integrated entities**.
- Vertical integration gives Producer Responsibility Organisations, at least theoretically, the ability and incentive to harm competitors in upstream and/or downstream markets by raising their prices through some form of refusal to supply, bundling of products, or leveraging—i.e. **vertical foreclosure** (input and/or customer). This allows the integrated entity to forgo some profits at one level of supply in order to may earn additional profits at a different level. This may result in rivals finding it more difficult to compete, either because they lose customers and/or forego economies of scale.
- Vertically-integrated entities also give rise to a concrete risk of **information leakage**. That is, the potential flow of commercially sensitive competitor information to the vertically-integrated entity's competing subsidiary via its other subsidiary operating at a different level of supply. This can lead to an integrated Producer Responsibility Organisation having an unfair advantage.
- Vertical foreclosure and information leakage may coexist—potentially reinforcing the effects of each.
- There is some evidence that in Estonia, Romania, and Slovenia, the market entry of vertically-integrated entities has led to vertical foreclosure and information leakage. Non-integrated market players have reportedly seen their market share decrease to the benefit of vertically-integrated entities. In some cases, there has reportedly been a reduction in the collection of packaging waste and/or a reduction of collection, sorting and recycling facilities.
- Conversely, in Czechia and Slovakia where vertical integration has not yet been allowed, no such effects have been reported.
- In Germany, the national competition authority has blocked the vertical integration of a Waste Management and recycling company with a Producer Responsibility Organisation because of fears that this would lead to vertical foreclosure.
- The EU and its Member States should remain vigilant in order to preserve the welfare of customers, consumers, and ultimately the environment by subjecting vertical mergers of PROs to careful scrutiny by competition authorities.

II. VERTICAL INTEGRATION STUDY

1. Introduction

This report aims at identifying in greater detail how the vertical integration of industry players from different levels of the packaging waste recovery cycle may have anti-competitive effects in the waste recovery market.

This report has been commissioned and funded by EXPRA aisbl/ivzw, the alliance of 26 non-profit packaging and packaging waste recovery and recycling systems from 24 countries which are owned by package producers and importers.

Euclid Law has prepared this report with complete independence, and its findings are based on the available evidence applied to legal and economic theory in the field of theories of harm to competition caused by vertical concentrations.

The report begins by providing a general overview of the EU Extended Producer Responsibility policy and the market that it has created in Member States. It continues by applying legal and economic theory of competition to the context of vertically-integrated Producer Responsibility Organisations. The report also relies on concrete examples collected through a survey of waste recovery markets in the 24 countries where EXPRA's members operate.

Finally, based on the available evidence, this report draws conclusions and makes recommendations to reduce the risk of harm to competition arising from vertical integration in EU waste recovery markets.

2. The market of PROs

2.1. Extended Producer Responsibility and the role of PROs

2.1.1. The Extended Producer Responsibility policy

Extended Producer Responsibility (“EPR”) is a resource management system whereby packaging producers take over the responsibility for the end of life management of the package for their used products, particularly in relation to their environmental impact. This can include packaging collection, sorting and treating for recycling and recovery.

This responsibility encompasses both a product's upstream impact (e.g. the selection of materials; product design; or production processes) and its downstream impact (e.g. use and disposal).

In the context of EPR, Member States share public service responsibilities with private companies in the packaging value chain. This is an EU-wide policy which has contributed to significant increases in recycling rates and public spending savings on waste management.¹

2.1.2. EPR implementation and PROs

It follows that EPR is an obligation on an individual company that places products on the market (the “**Obligated Company**”). In practice, producers often work collectively to exert this responsibility by setting up Producer Responsibility Organisations or Packaging Recovery Organisations (“**PRO**”).

¹ European Commission, DG Environment (2014) Development of Guidance on Extended Producer Responsibility (EPR).

PROs are charged with ensuring the recovery of the used products including by co-financing and organising and/or coordinating the collection as well as the sorting and recycling aspects of packaging waste. For industrial and commercial packaging waste tasks also include steering and monitoring.

At the municipal level, PROs must establish and maintain the necessary infrastructure for the collection, or take-back and the sorting of packaging waste. PROs must, at a minimum, establish a monitoring system for both packaging quantities that have been put on the market and collected as well as recycled.²

2.1.3. PROs' transparency and financing

PROs must guarantee that, once packaging waste is collected, it will be treated appropriately. Their financial stability is especially relevant because PROs often contribute to the municipal authorities' waste collecting costs by paying fees to waste management companies ("WMC") and/or to recyclers who sort and recycle the packaging waste after it has been collected. To ensure that PROs are financially solid, national and local authorities have a strict authorisation process so that only solvent undertakings can be licensed.

Transparency is an important feature of PROs. EPR schemes provide annual reports explaining how the objectives set out by the relevant public authorities have been fulfilled. When targets are not met, PROs may be subject to sanctions ranging from fines to license withdrawal.

PROs collect the required financial contributions from Obligated Companies that join in as members of that EPR scheme. These fees are used (co-)finance the collection, sorting and recovery of packaging waste. Obligated Companies thereby finance the take-back, or separate waste collection and treatment, of their own packaging within their PRO's collection systems at the municipal level. Packaging waste that is either littered or ends up within municipal solid waste is not currently part of the producers' financial responsibility.

In summary, PROs perform the following functions:

- organise, often in conjunction with local authorities, the collection of consumed products;
- ensure that recovery and recycling targets are met;
- assist companies in (packaging) waste prevention, eco-design promotion & communication materials towards the waste holder, in conjunctions with the local authorities;
- verify the data and reporting of those companies; and
- report to national authorities.

In some Member States, PROs have a public service mission and operate in a non-for-profit or profit-not-for-distribution basis (with PRO ownership usually exclusively reserved for Obligated Companies).

In other Member States, PROs are for-profit companies owned by investors, or industry players such as WMCs and/or recyclers—i.e. potentially creating a **vertically-integrated entity**.³

2.2. Market models and types of PROs

As EPR requirements differ between Member states, the role of PROs varies as well. Key features include:

- the type of responsibility, either financial or organisational;

² EXPRA, *Extended Producer Responsibility at a glance* (EXPRA 2016) Ch 1 and 2.

³ *ibid*, Ch 2.

- the presence of competition among PROs and among waste treatment operators; and
- the transparency and surveillance features such as free-riders' surveillance, waste management activities and PROs.

It follows that each market's particular features will shape the PROs active in it. These can be:

- (a) **Non-profit PROs** (in Belgium; Czechia; Ireland; Italy; France; the Netherlands; Norway; Slovakia; and Spain): Obligated Companies create usually one common not-for-profit or profit-not-for-distribution entity that collects the necessary funding, cooperates with local authorities and ensures recycling in the most cost-efficient and environmental way. Further:
 - (i) in Belgium; Czechia; France; Italy; the Netherlands; and Spain the **responsibility is shared** between Obligated Companies and local authorities based on local collection agreements. Municipalities are responsible for collection, and often for sorting of packaging waste, arising on the municipal level, while Obligated Companies' financial responsibility differs from country to country;
 - (ii) in France; and Spain, PROs are only responsible for packaging arising at the municipal level. In Belgium, PROs are responsible for both municipal packaging and commercial packaging. Whereas in Czechia; Italy; and the Netherlands, PROs run integrated packaging waste streams.
- (b) **Dual model** (in Austria; Germany; and Sweden): Obligated companies have full operational and financial responsibility over collection, sorting and recycling. There is a separate collection system designated to local authorities, but their role is secondary.
 - (i) Further, in Germany and Austria, **collection infrastructure is shared** as consumers have access to a common container and the collected packaging waste is split between the various PROs prior to being sorted. In this case, the cost distribution is established by a clearing house. Finally, PROs are only responsible for packaging arising at the municipal level.
- (c) **Tradable Credits Model** (in the UK; and partly in Poland): There is neither a link between Obligated Companies and municipalities, nor differentiation between commercial and packaging arising at the municipal level.

In Bulgaria; Estonia; Germany; Poland; Romania; and Slovenia (where PROs can be for-profit companies) there has been an increase in PROs operating as **vertically-integrated entities** competing with one another to attract Obligated Companies to sign up to their own EPR scheme. Further, in Estonia, PROs also compete on the infrastructure by offering their own containers to consumers.

Finally, in Bulgaria; Latvia; Lithuania; Malta; Romania; and Slovakia, each PRO operates in a separate geographic district. In fact, PROs sign up with as many municipalities as needed to fulfil targets, according to market shares.⁴

⁴ *ibid*, Ch 3.

Packaging cycle



fig. 1 – the EPR market⁵

3. PROs as vertically-integrated entities and the potential harm to competition

Vertical integration involves the merging of companies that do not compete at the same level of supply. Instead, they are active in the supply of complementary goods or services in the same supply chain.

In EPR markets where PROs compete with one another, their customers are Obligated Companies who outsource their producer responsibility to PROs by purchasing their services (see figure 2 below).

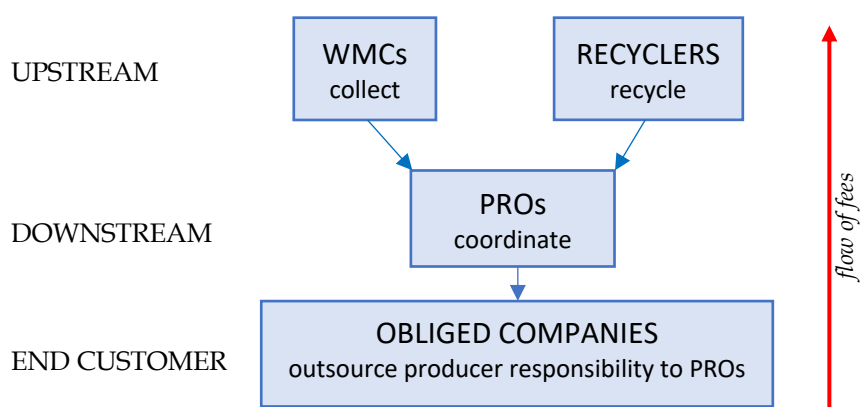
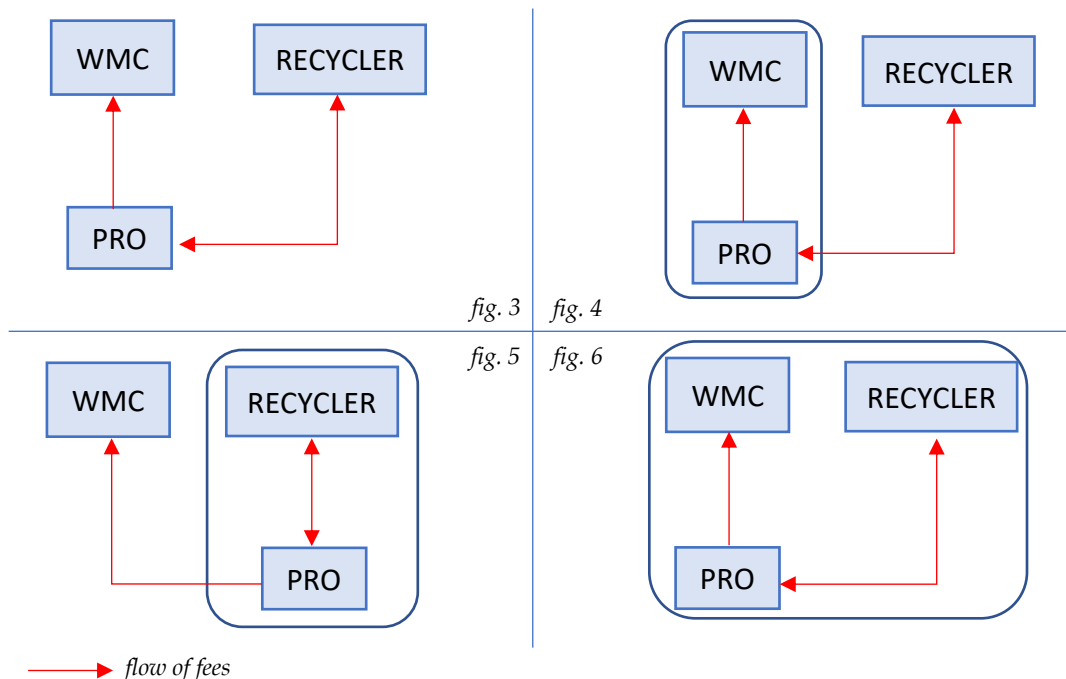


fig. 2

Therefore, PROs vertical integration relates to the merging of a PRO with a WMC and/or recycler, two players operating at the upstream level of the EPR supply chain (see figures 3-6 below).

⁵ ibid 5.



In fig. 3 the three companies are three independent entities operating separately on the market.

In fig. 4 the PRO and the WMC are one company or have a parent-subsidary relationship.

In fig. 5 the PRO and the recycler are one company or have a parent-subsidary relationship.

In fig. 6 the PRO, the WMC and the recycler are one company or part of the same company group.

3.1. Theories of harm to competition

3.1.1. Vertical foreclosure

One of the concerns raised by vertically-integrated PROs is their ability and incentive to harm competitors in upstream and/or downstream markets by raising their prices through some form of refusal to supply, bundling of products, or leveraging. Economists refer to this as **vertical foreclosure**, and specifically:

- (a) **input foreclosure** is the ability of a vertically-integrated PRO to stop selling its upstream product (i.e. WMC and/or recycling services) to rival PROs. While the profits from selling those upstream services are forgone, the integrated PRO may earn additional profits downstream as rival PROs may find it more difficult to compete for the business of Obligated Companies (see figure 7).⁶

In fact, the rival PROs may face higher costs in sourcing upstream services, which they may have to pass on to Obligated Companies. Further, a market's reduced upstream capacity might cause rival PROs not to meet their recovered materials quotas which have been outsourced to them by Obligated Companies. Ultimately, rival PROs may lose market share and possibly be pushed out of the market altogether. This, in turn, would mean less downstream competition for the integrated PRO, thus less choice and higher prices for Obligated Companies;

- (b) **customer foreclosure** is the ability of a vertically-integrated PRO to cut off or significantly cut down its purchasing of upstream services from rival WMCs and/or recyclers. The integrated

⁶ Gunnar Niels and others, *Economics for Competition Lawyers* (OUP 2011) para 7.5.2.

PRO may earn additional profits upstream as rival WMCs and/or recyclers lose economies of scale and may find it more difficult to compete for the business of rival PROs (see figure 8 below).⁷

Ultimately, rival WMCs and/or recyclers may lose market share and possibly be pushed out of the market altogether. This would mean less upstream competition for the integrated PRO, thus less choice and higher prices for rival PROs when sourcing upstream services. Further it could result in the loss of collecting, sorting and recycling facilities to the detriment of the entire EPR system, the environment and individuals. This was one of the concerns of the German competition authority when it blocked the *Remondis/DSD* merger (see § 4.1.2 below).

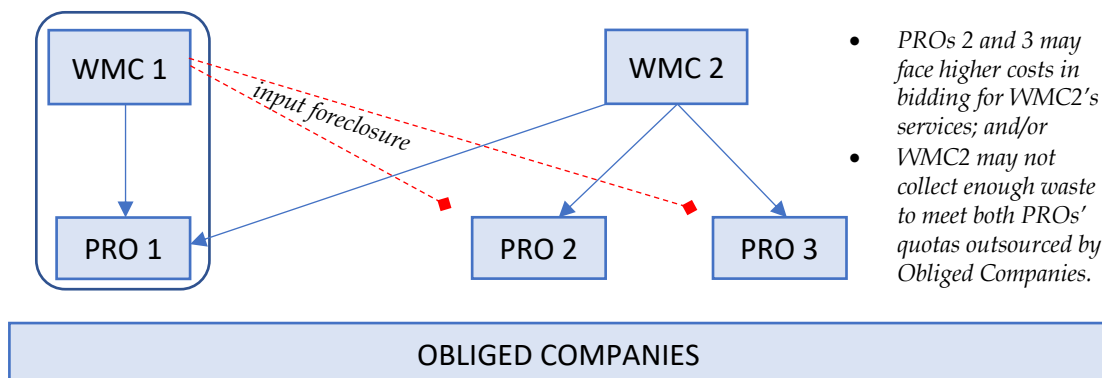


fig. 7 – input foreclosure

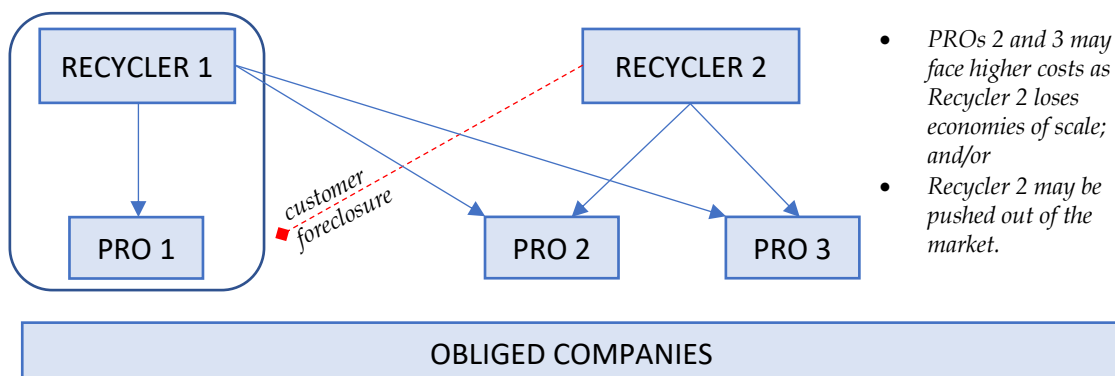


fig. 8 – customer foreclosure

Customer and input foreclosure can coexist. Suppose that, in addition to the customer foreclosure in figure 8, vertically-integrated PRO 1 also refuses to sell recycling services to PROs 2 and 3. The rival PROs can now only buy recycling services from Recycler 2. If Recycler 2 has lost economies of scale and became inefficient as a result, the services purchased by PROs 2 and 3 might be inferior to those provided by Recycler 1 to PRO 1. Therefore, the integrated PRO might be able to attract more business from Obligated Companies, gaining additional market share downstream.⁸

Ultimately, Recycler 2, PRO 2 and PRO 3 may all lose market share and possibly be pushed out of the market altogether. This would mean less competition for PRO 1 and Recycler 1, thus less choice and higher prices for Obligated Companies. Further it could result in the loss of recycling and sorting

⁷ ibid

⁸ ibid

facilities, as Recycler 2 exits the market, to the detriment of the entire EPR, the environment and individuals.

3.1.2. Leakage of commercially sensitive information

Another concern raised by vertically-integrated PROs is the potential leak of competitively and commercially sensitive information which can lead to an integrated PRO having an unfair advantage when competing for the business of Obligated Companies.

Specifically, that is the flow of a rival's commercially sensitive information to the vertically-integrated entity's competing subsidiary via its subsidiary operating at a different level of supply.

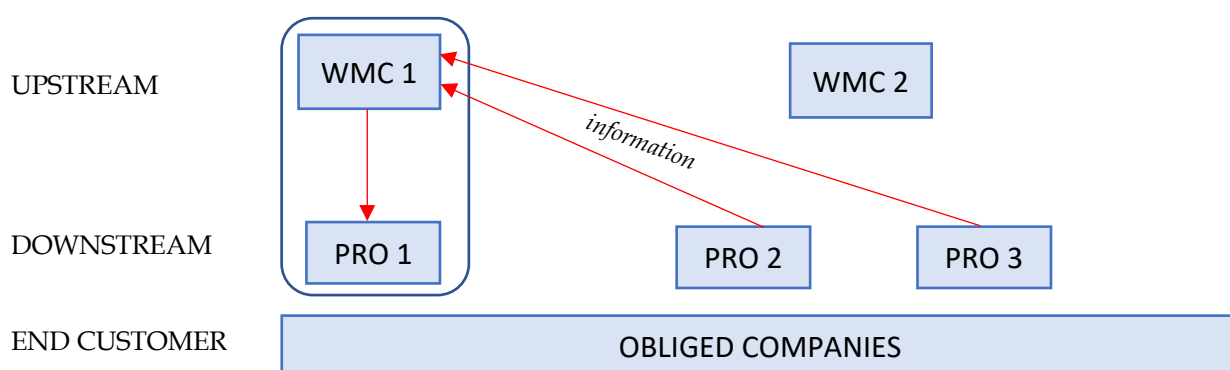


fig. 9 – downstream information leakage

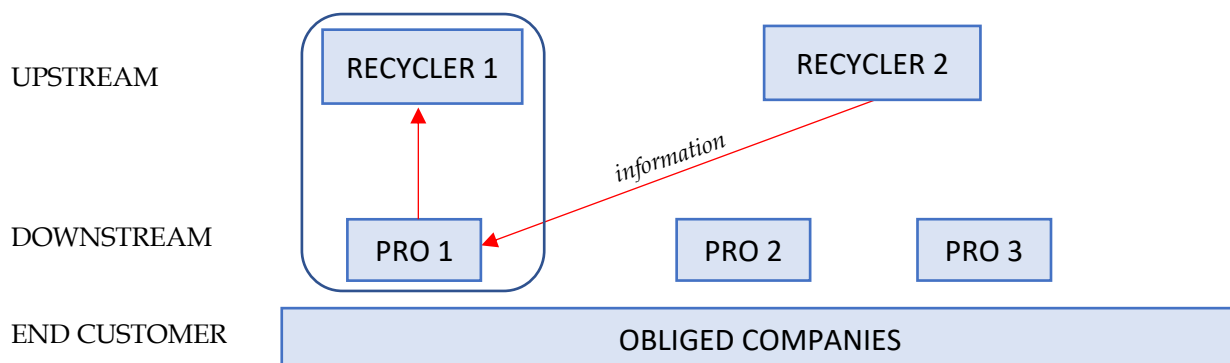


fig. 10 – upstream information leakage

- (a) **Downstream information leakage** (figure 9) occurs when rival PROs' commercially sensitive information reaches the vertically-integrated entity's PRO via the integrated upstream WMC and/or recycler. In figure 9, information pertaining to PROs 2 and 3 is shared with WMC 1 for the purpose of WMC 1 providing them with upstream services. However, this information leaks within the vertically-integrated entity to PRO 1, a direct competitor of PROs 2 and 3. This may allow PRO 1 to unfairly compete for the business of Obligated Companies, as the leaked information may relate to rivals' pricing, offers, and bids.

Ultimately the integrated PRO may be able to indirectly push its rivals out of the market. This, in turn, may lead to less downstream competition and, therefore, higher prices and/or lower quality of service for Obligated Companies.

- (b) **Upstream information leakage** (*figure 10*) occurs when rival WMCs' and/or recyclers' commercially sensitive information reaches the vertically-integrated entity's upstream subsidiaries via the integrated downstream PRO. In *figure 10*, information pertaining to Recycler 2 is shared with PRO 1 for the purpose of Recycler 2 providing PRO 1 with upstream services. However, this information leaks within the vertically-integrated entity to Recycler 1, a direct competitor of Recycler 2. This may allow Recycler 1 to unfairly compete with its rivals for the business of other PROs, as the leaked information may relate to its rival's pricing, offers, and bids.

Ultimately the integrated WMCs and/or recyclers may be able to push or price rivals out of the market. This, in turn, could lead to less upstream competition and, therefore, higher prices and/or lower quality of service for independent PROs. These may be passed on to Obligated Companies further down the line causing the independent PROs to lose market power as well as their prices increase. Further it could result in the loss of recycling and sorting facilities, if Recycler 2 exits the market, to the detriment of the entire EPR, the environment and individuals. This was one of the concerns of the German competition authority when it blocked the *Remondis/DSD* merger (see § 4.1.2 below).

As with vertical foreclosure, downstream and upstream information leakage may coexist. Further, information leakage and vertical foreclosure may coexist – doubling up the harm to competition.

Finally, that the risk of commercially-sensitive information leakage is present even where upstream vertical integration has not taken place. That can be the case where PROs are competing for Obligated Companies' business, yet PRO ownership and control is either partially or totally in the hands of Obligated Companies.

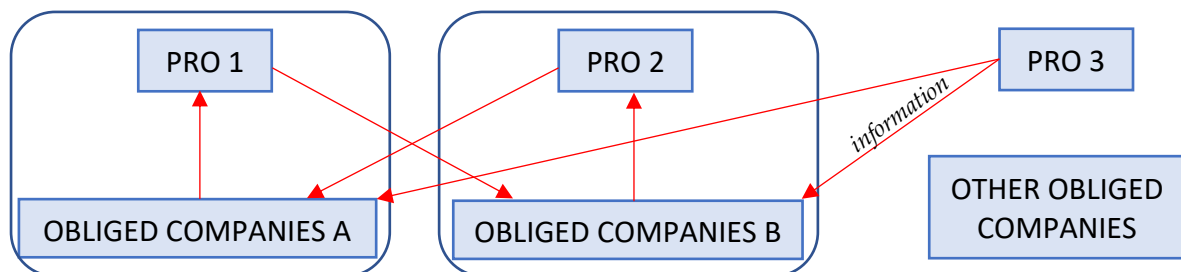


fig. 11 – information leakage through owner-client

In *figure 11*, PROs 1 and 2 are owned and controlled by two distinct consortia of Obligated Companies (A and B). PRO 3 is, instead, owned by external investors. PRO 3's pricing information may reach Obligated Companies A and B through a bid, and could be leaked to their controlled PRO. This may allow PROs 1 and/or 2 to price PRO 3 out of the market; thus, reducing competition and leading to higher prices and/or lower quality of service for those Obligated Companies outside consortia A and B. Further, this may also allow PROs 1 and 2 to align their pricing, which is tantamount to a price-fixing cartel.

It should be noted that this risk does not exist when PROs do not compete for the business of Obligated Companies (i.e. they only provide services to their respective member).

3.2. Vertically-integrated retailers

A more recent development in EPR markets has seen large retailer groups, such as LIDL's parent company Neckarsulm Schwarz Group ("**Schwarz**") acquiring waste management and recycling businesses.⁹

In Schwarz's case, the move is not only aimed at reducing and recycle waste originated from its retailer chains in an efficient vertically-integrated way but, also, it seeks to provide WMC and recycling services on the wider EPR market.¹⁰

Schwarz's waste management and recycling brand PreZero wishes to become Germany's leading player in the recycling industry and the "first point of contact for municipalities and small and medium-sized companies in recycling management."¹¹ PreZero also plans to launch its own dual system in Germany in 2020.¹²

It is yet unclear at this stage whether this type of vertical integration with a retailer, also offering EPR services on the wider market, could lead to harmful effect to competition similar to those identified in § 3.1. Some EPR market players have expressed concern that a major retailer controlling the entire EPR value chain could theoretically foreclose on suppliers not using its PRO by refusing to stock their products. Additionally, a PRO that is vertically integrated with a retailer chain might refuse to sell its services to those manufacturers that don't supply its shops.

Competition authorities should remain vigilant of developments in this space, mindful that the creation of efficiencies at one end of the EPR market might inadvertently cause distortions elsewhere.

4. Case studies in some EXPRA Member States and Germany

In light of the above discussion, it appears that the vertical integration of PROs potentially poses serious questions regarding its potential anticompetitive effects on EPR markets, and potential detriment to the environment as a result.

In this section, we have collected market information from industry sources in five Member States which have an EXPRA member PRO. Our research included a survey of EXPRA members across jurisdictions. Additionally, we looked at Germany (where EXPRA has no members), where the national competition authority recently stopped the integration of the country's largest PRO with its largest WMC because of the harm this would have caused to competition on the German EPR market.

4.1. Vertically-integrated markets

4.1.1. *Estonia*

Estonia has three non-profit PROs that compete on the national EPR market:

- ETO (EXPRA member) is a non-integrated PRO exclusively owned by 16 Obligated Companies with a reported market share of approximately 30%.

⁹ EUWID Recycling, "Schwarz Group buys plastic recycler Sky Plastic" (EUWID 2019) <<https://www.euwid-recycling.de/news/wirtschaft/einzelansicht/Artikel/schwarz-gruppe-kauft-kunststoffrecycler-sky-plastic.html>> accessed 10 February 2020.

¹⁰ EUWID Recycling, "PreZero is aiming for strong growth" (EUWID 2019) <<https://www.euwid-recycling.de/news/wirtschaft/einzelansicht/Artikel/prezero-strebt-starkes-wachstum-an.html>> accessed 10 February 2020.

¹¹ *ibid*

¹² EUWID Recycling, "Lidl licenses 2020 with Noventiz and PreZero" (EUWID 2019) <<https://www.euwid-recycling.de/news/wirtschaft/einzelansicht/Artikel/lidl-lizenziert-2020-bei-noventiz-und-prezero.html>> accessed 10 February 2020.

- OÜ Eesti Pakendiringlus is a vertically-integrated PRO, owned by four WMCs, including Estonia's largest, Eesti Keskkonnateenused AS. Reportedly, its share of the market is approximately 49%.
- OÜ Tootjavastutusorganisatsioon is owned by eight members, including a subsidiary of a large WMC, Ragn-Sells AS. Reportedly, its share of the market is approximately 21%.

Separately, a monopoly deposit system for soft drinks and alcohol packaging (glass, metal, and plastic) exists.

No PRO shareholder may own more than 25% of a PRO's voting rights; and no person whose principal activity is waste handling may control a PRO. However, industry sources report that often the largest member WMC in a PRO has *de facto* control regardless of shareholding.

PROs are required to tender following a competitive and transparent process, which follows public procurement rules. PROs must structure their fees and collection charges in a non-discriminatory way (equal fees for all clients). PROs may not offer discounts. Written contracts are the norm for PRO agreements.

Estonian PROs must reinvest their profit into their activities; thus they may not issue dividends or share profit. However, industry sources report having observed integrated PROs purchasing services from their parent WMCs in larger amounts and at a higher price, thus indirectly transferring profits. Additionally, PROs are not prohibited from receiving loans from WMCs.

While vertical foreclosure has not been directly reported on the Estonian EPR market, the above conduct may lead to it indirectly. Further, vertically-integrated PROs have been reported offering bundled deals of their upstream and downstream products, which can also indirectly lead to foreclosure.

The possibility of vertical foreclosure indirectly taking place on the Estonian EPR market is further evidenced by industry reports that the amount of upstream outsourcing (e.g. waste collation, or sorting) has decreased following the vertical integration of some PROs. In fact, market players have been lamenting that, while official reports show that the proportion of consumer sales packaging collected from municipal waste as opposed to industrial waste is approximately 60:40, in reality way ore industrial packaging is collected. However, no reduction in waste sorting or processing facilities has yet been reported.

Industry players also voice a strong suspicion that vertically-integrated PROs have used information gathered through upstream integration to gain a competitive advantage downstream against rival PROs.

Market players also report a swim or sink market dynamic, whereby any player that loses market share is bought up by a bigger competitor.

4.1.2. Germany

EXPRA does not have a member PRO in Germany. However, anticompetitive effects of PRO vertical integration in Germany have been observed and prevented by its national competition authority, the Bundeskartellamt ("**BKartA**").

On 11 July 2019, the BKartA blocked the proposed acquisition of Germany's largest dual-system PRO (DSD – Duales System Holding GmbH & Co. KG) by its largest WMC (Remondis SE & Co. KG).¹³

The BKartA observed that the proposed vertical integration would have led *Remondis/DSD* to pursue a conduct of vertical input foreclosure (see § 3.1.1(a) above). In Germany, contracts to provide upstream services such as the collection of sales packaging are put out to tender by dual systems PROs like DSD. WMC tender for these contracts. As a WMC, Remondis would have had a post-integration incentive to charge DSD's competitors higher prices for the collection, sorting and reprocessing services than before the acquisition in order to place them at a disadvantage to its own company, DSD. This strategy of raising the costs of DSD's rivals would have enabled *Remondis/DSD* to gain significant additional market share, squeeze out competitors and, ultimately, enforce higher prices on the market for dual systems PROs for packaging recycling. This would translate into higher prices for packaging which consumers would end up paying.¹⁴

Moreover, the BKartA found that the proposed vertical integration would have led to vertical customer foreclosure (see § 3.1.1(b) above). DSD would have been able to use its significant demand volume to squeeze Remondis' competitors out of the market. Due to its high market share, DSD has high-level access to quantities of sales packaging placed on the market by the manufacturers, importers and retailers for sorting, reprocessing and recycling. The vertically-integrated *Remondis/DSD* could have diverted these waste quantities to Remondis' plants for further processing and strategically subcontract remaining quantities for reprocessing to competitors.¹⁵

The above would have inevitably caused the amount of materials being processed and recycled at independent upstream facilities to drop, causing independent recyclers to lose economies of scale. This, in turn, would have resulted in a reduction in the number of processing, sorting and recycling facilities on the German territory, to the detriment of the entire EPR, the environment and consumers.

The BKartA's findings in *Remondis/DSD* were partly informed by the sheer market power that both DSD and Remondis had on their respective relevant markets. Regardless, it signals that one of Europe's leading national competition authorities has serious concerns regarding the anticompetitive effects of vertically-integration of PROs on EPR markets.

4.1.3. Romania

Romania has recently overhauled its EPR market, which has led to a significant rebranding of active PROs. There are currently 12 newly licensed PROs. Industry sources gather that nine out of the 12 are vertically-integrated with WMCs and/or recyclers.

Until the end of 2018, PROs in Romania were profit-not-for-distribution companies. Since January 2019, this changed, and Romanian PROs are now for-profit companies. Further, while only Obligated Companies may be the ultimate shareholders in a PRO by law, this is often in name only, as there is no minimum threshold as per the production/import of packaging for an undertaking to become an Obligated Company.

There are no legal limits on the percentage that each shareholder may own in a PRO. There are no restrictions on PROs obtaining loans from WMCs. There is no requirement that PROs put out to tender following a competitive process akin to public procurement.

¹³ *Remondis/DSD* (Bundeskartellamt Decision) B4-21/19 of 11/07/2019 <https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Fallberichte/Fusionskontrolle/2019/B4-21-19.pdf?__blob=publicationFile&v=2>.

¹⁴ Bundeskartellamt, "Bundeskartellamt prohibits *Remondis/DSD* merger" (BKartA 2019) <https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/11_07_2019_Remondis_DSD.htm>

¹⁵ *ibid*

However, PROs cannot structure their fees independently, but must pay the full net cost for packaging waste that has flowed down into municipal waste following a statutory fee structure calculated by sanitation operators (until 2019 PROs could negotiate their fees). Conversely, upstream service providers are free to structure their fees without restrictions.

Municipal waste collection in Romania is reserved for sanitation operators (public or private) requiring a special licence. The Romanian EPR market is heavily regulated, and agreements are based on written contracts. However, informal collection by scavengers remunerated through cashier's cheque is very common.

While vertical foreclosure on the Romanian EPR market has not been independently verified, industry sources believe that vertical foreclosure practices have seriously and negatively affected various market players by causing major distortions to the market.

The possibility of vertical foreclosure indirectly taking place indirectly in the Romanian EPR market is further evidenced by one vertically-integrated PRO reaching a market share of 30% in only two years since its creation. Whereas non-integrated PROs market shares have progressively diminished. Further, vertically-integrated PROs are suspected of offering bundled deals of their upstream and downstream products, which can indirectly lead to foreclosure. However, no reduction in waste sorting or processing facilities has yet been reported.

Industry players also say that "beyond doubt" vertically-integrated PROs have used information gathered through upstream integration to gain a competitive advantage downstream against rival PROs. They also report that information gathering takes place via producers/importers as shareholders.

Market players also report that non-integrated PROs have exited the market and/or consolidated in response to vertical integration. Conversely, PROs that have neither integrated nor consolidated have lost significant market share (e.g. Eco-Rom significantly down from over 50%).

4.1.4. Slovenia

Slovenia has a shared responsibility system (*see §2.2(a)(i) above*), which means that collection of municipal packaging waste is carried out by publicly owned WMCs, whereas the collection of industrial packaging waste is carried out by privately-owned WMCs.

Slovenia has six PROs, of which only Slopak (EXPRA member) is non-profit and non-integrated. Slopak is owned by Obligated Companies; whereas:

- Dinos d.o.o. is a for profit, vertically-integrated PRO/WMC owned and controlled by Scholz International Holding GmbH;
- Embakom is a for profit, vertically-integrated PRO majority owned by private WMC Komteks, and minority owned by public WMC Javno podjetje Vodovod Kanalizacija Snaga;
- Suorovina d.o.o. is a for profit, vertically-integrated PRO wholly owned by private WMC Eko Suorovina;
- Interseroh is a for profit, vertically-integrated PRO wholly owned by private German recycler Alba Group; and
- Recikel d.o.o. is a for profit, vertically-integrated PRO wholly owned by Curator Nova, a subsidiary or private WMC, Salomon.

There are no restrictions on PROs in how they run their business, however their collection quota of packaging materials is assigned to them according to market share on a national basis. Written

contracts are the industry norm, although industry sources report that transparency is not always guaranteed.

Industry sources report extensive vertical foreclosure conduct by vertically-integrated PROs. Their allegation is evidenced by some PROs market share increasing exponentially following vertical integration (e.g. Recikel). Conversely, non-integrated Slopak's market share steadily decreased from 70% in 2012, to 20% in 2014. This loss of market power coincided with the entrance of vertically-integrated PROs on the Slovenian EPR market.

Further, integrated PROs are reported to offer bundle discounts for the purchase of both their upstream and downstream services; and bundle discounts for the purchase of different waste-type services. This conduct can be a sign of deliberate conduct aiming at foreclosing competitors. In any case, bundling has been known to lead to indirect foreclosure.

Equally, integrated WMCs have been reported to quote higher prices when invited to tender by non-integrated PROs. Integrated WMCs have also been reported to enter into informal agreements with the non-integrated PRO's clients when performing services on the PRO's behalf. These agreements often result in collected waste being disposed through unofficial routes, causing the PRO to be unable to meet its quota requirements and, potentially, threatening its existence. In other cases, integrated WMCs have been reported to achieve a similar result by falsely reporting lower amounts of packaging collected on behalf of the non-integrated PRO.

Generally, market sources report a reduction in collection of packaging materials, as they report vertically-integrated PROs not collecting their full quotas in relation to cost-intensive waste types. Reduction in waste collection can be evidence of vertical foreclosure as it is often a direct consequence of the practice.

Finally, industry sources say that vertically-integrated PROs are able to collect rivals' pricing and client information through the upstream activities. Reportedly, integrated PROs have been using rivals' commercially sensitive information to target clients with below-market prices and other inducements to gain their business.

- The Slovene waste management cartel

In 2020, the Slovenian Competition Protection Agency found that Suorovina, Dinos, Salomon d.o.o. Ljubljana, and Recikel took part in cartel (a horizontal agreement having the object or effect of restricting competition) in breach of Article 101(1) Treaty for the Functioning of the European Union, and Article 6 Slovenian Competition Act.¹⁶ All four of the cartelists are vertically-integrated PROs operating at multiple levels of the EPR market.

The cartel members agreed that Salomon, Suorovina and Dinos would cease to provide WMC services to Interseroh, another vertically-integrated PRO. This would in turn reduce Interseroh's ability to provide PRO services and increase its costs (i.e. result in vertical foreclosure). Ultimately, the goal was to push Interseroh out of the EPR market, so that Recikel, Suorovina, and Dinos would be able to step in, and each take a portion of Interseroh's customers.¹⁷

While the Agency's decision is subject to appeal, it is evidence that some vertically-integrated PROs are engaging in the types of anticompetitive conduct that are the subject of this study.

¹⁶ CPA, *Slovenian Competition Protection Agency concluded with the assessment of the waste management cartel* (CPA 2020) <<http://www.varstvo-konkurence.si/en/information-centre/news/slovenian-competition-protection-agency-concluded-with-the-assessment-of-the-waste-managem-222/>> accessed 6 March 2020.

¹⁷ *ibid*

Further, this is also significant in light of the lack of any available extraneous evidence that Slovenian vertically-integrated PROs engage in vertical foreclosure through unilateral conduct. It is at least conceivable that the practice of vertical foreclosure as a unilateral conduct by integrated PROs also exists in the Slovene EPR market.

4.2. Non-vertically-integrated markets

4.2.1. *Czechia*

In Czechia, EKO-KOM (EXPRA member) is a profit-not-for-distribution PRO covering the take-back and recycling of more than 80% of the packaging waste on the market. It operates through established partnerships with 6,000 municipalities covering 99% of the population. Further, it runs a transparent and effective system, which has made Czechia one of the highest-ranking EU Member States in terms of both packaging waste recycling and per-citizen yearly financial costs spent on sorting and recycling.

EKO-KOM's share of the market for consumer packaging is 95%, whereas its share of the market for industrial packaging is 80%.

PROs in Czechia can only be owned by Obligated Companies, and each PRO must have at least four shareholders with equal holdings. EKO-KOM has 10 Obligated Companies as shareholders, each with 10% shareholding.

PROs may not receive loans from shareholders and their revenues must be reinvested into the business. PROs are also restricted from engaging in any activity other than the take-back, recycling and recovery of packaging waste. Thus, they may not deal with any other type of waste.

PROs' fees must be transparent and structured in a non-discriminatory manner. Thus, there is no contractual freedom for PROs, and agreements are reportedly entered with market transparency and written contracts.

There has been no vertical integration of PROs in Czechia, thus no instances of vertical foreclosure have been reported. Equally, no commercially sensitive information leakage has been reported.

4.2.2. *Slovakia*

The majority of Slovak PROs are privately owned companies (joint stock or limited). By law, all Slovak PROs are profit-not-for-distribution undertakings. All Slovak PROs deal in all types of packaging waste.

The industry players and market shares are:

- ENVI - PAK, a.s. (47%);
- NATUR-PACK, a.s. (37,1%);
- RECoBal s.r.o. (3,1%);
- ELEKOS (3,3%);
- NOWAS s.r.o. (3,0%);
- RECYKLOGROUP, a.s. (2,1%);
- E-cycling s.r.o. (1,7%);
- SEWA, a.s. (1,1%); and
- OZV Slovensko s.r.o. (1,6%).

ENVI-PAK (EXPRA member), has eight Obligated Companies as shareholders with equal holdings.

Generally, vertical integration of PROs in Slovakia is prohibited by law. In fact, Slovak PROs may not be founded, owned or controlled by a company that directly or indirectly holds any ownership, decision-making or voting rights in a WMC or recycler in Slovakia or another Member State. Equally PROs, may not establish; own; be personally involved; hold voting rights or be linked by means of ownership or personally to WMCs in Slovakia or another Member State.

However, there are no restrictions on PROs sourcing debt finance from WMCs or recyclers.

PROs must tender out following public procurement rules. PROs waste collection targets are set up yearly for each PRO by the Ministry of Environment at a municipal level. PROs have complete contractual freedom on the fee structure. Written contracts are the industry norm, and transparency is often guaranteed.

As a result of lack of vertical integration, no instances of vertical foreclosure have been reported. Equally, no commercially sensitive information leakage has been reported.

5. Conclusions and recommendations

The above analysis demonstrates that the vertical integration of PROs raises potentially serious concerns of harm to competition in EPR markets. Further, distorted EPR markets could lead to dysfunctional dynamics in the packaging recovery cycle to detriment of customers, consumers, and the environment.

Our survey of Member States, and specifically the responses received from Czechia and Slovenia, shows that EPR markets work in a functional and competitive way where vertical integration has not been permitted.

However, the simple existence of a vertically-integrated PRO in a market is not sufficient to cause harm to competition. Rather, it is the integrated PROs' future conduct which is capable of distorting the market because of its unique characteristics and incentives. Nonetheless, the available evidence suggests that the incentives to engage in anticompetitive behaviour by virtue of vertical integration are evident in a number of Member States.

The survey responses received from Estonia, Romania and Slovenia suggest that it is extremely difficult to definitively prove that a vertically-integrated PRO is engaging in foreclosure and/or information leakage. Such difficulties remain despite the abundance of evidence that might be available.

The entire EU approach to competition in EPR markets is in need of a strategic rethink. Such overhaul should be devised with the aim of pre-empting vertically-integrated PROs' anticompetitive behaviour in the first place rather than relying on *ex-post* enforcement. This new *ex-ante* approach may take different forms. However, two main models can be identified:

- an outright ban on the vertical integration of PROs in EPR markets (similar to Czechia and Slovakia – see §§ 4.2.1 and 4.2.2 above); or
- the designation of EPR markets as strategic, and the requirement that all mergers and acquisitions of EPR market players with a PRO be notified to the relevant competition authority for assessment (similar to what the BKartA did in the *Remondis/DSD* case – see § 4.1.2 above).

In the absence of a common approach at EU-level, Member States remain free to impose *ex-ante* regulation on their national EPR market to curb the anticompetitive effects of the uncontrolled vertical integration of PROs. This freedom will be retained even if the European Commission were to intervene as long as it does not exhaust the remedies available to it.

Member States may therefore pass legislation to:

- ban the vertical integration of PROs in their national EPR market (similar to Czechia and Slovakia – see §§ 4.2.1 and 4.2.2 above); or
- designate EPR markets as strategic, and requirement that all mergers and acquisitions of EPR market players with a PRO be notified to the relevant competition authority for assessment (similar to what the BKartA did in the *Remondis/DSD* case – see § 4.1.2 above).

Additionally, or in the alternative, a Member state may choose to impose strict conditions on the activities of vertically-integrated entities. Such remedies may include:

- management and operational separation between subsidiaries at different levels of the EPR market; and/or
- comprehensive information barriers between subsidiaries at different levels of the EPR market.

Imposing management and operational separation on both existing and prospective vertically-integrated entities would limit their ability to coordinate and leverage their position at one level of the EPR market to gain an unfair advantage at a different level. This can minimise the risk of vertical foreclosure. Examples include:

- a ban on senior managers and directors of a WMC and/or recycler acting simultaneously as senior managers and/or directors of a PRO;
- a restriction on the mobility of senior management and directors between a PRO and a WMC and/or recycler within the same vertical-integrated entity (e.g. long cooling off periods); and
- a restriction on the ability of a WMC and/or recyclers to directly or indirectly control or influence a PROs annual budget and business plan within the same vertical-integrated entity.

Equally, imposing information barriers on both existing and prospective vertically-integrated PROs would limit the flow of competitors' sensitive information from the level of the market where it is harvested to a level where it might be used to gain an unfair advantage. This can minimise the risk of information leakage. Examples include:

- teams from the PRO and the WMC and/or recycler not being based on the same building floor to minimise the possibility of overhearing live or phone conversations, and limit access to printed documentation;
- access to floors hosting the PRO team being restricted to the WMC and/or recycler team by use of access cards and vice versa. If both teams are hosted on the same floor, phone cubicles and meeting rooms should be provided for all sensitive conversations and phone calls. A policy of clear desks should be implemented;
- separate and segregated IT systems should be put in place for vertical-integrated entities subsidiaries at different levels of the market; and
- clear roles attached to employees, and mobility between the PRO and the WMC and/or recycler should be minimal and controlled (with cooling-off periods – see above). Employees should not be allowed to work with both a PRO and a WMC or recycler on an ad-hoc basis.

The experience of Estonia, Romania and Slovenia appears to demonstrate that uncontrolled vertical integration of PROs is likely to cause market distortion and ultimately consumer detriment.

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APPENDIX A – DOCUMENTS RELIED UPON

- [1.] Bundeskartellamt, “Bundeskartellamt prohibits *Remondis/DSD* merger” (BKartA 2019) <https://www.bundeskartellamt.de/SharedDocs/Meldung/EN/Pressemitteilungen/2019/11_07_2019_Remondis_DSD.html>.
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- [9.] Euclid Law survey of EXPRA members (Euclid Law 2019) Czechia’s response.
- [10.] Euclid Law survey of EXPRA members (Euclid Law 2019) Estonia’s response.
- [11.] Euclid Law survey of EXPRA members (Euclid Law 2019) Romania’s response.
- [12.] Euclid Law survey of EXPRA members (Euclid Law 2019) Slovakia’s response.
- [13.] Euclid Law survey of EXPRA members (Euclid Law 2019) Slovenia’s responses.
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- [15.] Niels G, Jenkins H, and Kavanagh J, *Economics for Competition Lawyers* (OUP 2011).



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