Conselho Administrativo de Defesa Econômica

V+ Guidelines

Guidelines for the Analysis of Non-Horizontal Mergers

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Guidelines for the Analysis of Non-Horizontal Mergers

Administrative Council for Economic Defense – CADE

SEPN 515 Conjunto D, Lote 4, Ed. Carlos Taurisano

Zip Code: 70770-504 – Brasília-DF

www.gov.br/cade

INSTITUTIONAL PRESENTATION

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Ministry of Justice and Public Security
Ricardo Lewandowski

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CADE´s Chief Economist
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EDITORIAL INFORMATION

Coordination
Alexandre Barreto de Souza
Diogo Thomson de Andrade
Danielle Kineipp de Souza
Letícia Ribeiro Versiani

Editing
Danielle Kineipp de Souza
Felipe Neiva Mundim
Guilherme Mendes Resende
Juliana de Oliveira Domingues
Letícia Ribeiro Versiani
Lilian Santos Marques Severino
Luiz Augusto Azevedo de Almeida Hoffmann
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Internal Collaboration
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Beatriz Pierri
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Marcus Vinícius Silveira de Sá
Priscilla Craveiro da Costa Campos
Rafael Rossini Parisi
Rodrigo Monteiro Ferreira

External Collaboration
Amanda Athayde (UNDP consultant)[1]

Editing and Graphic Designing
Communication Department

Translation
The Brazilian Institute of Studies on Competition, Consumer Affairs and International Trade- IBRAC

Editing and Proofreading (English) - CADE
Danielle Kineipp de Souza
Letícia Ribeiro Versiani
Paula Regina Ferreira da Silva
Roberto de Araújo Chacon de Albuquerque

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INTRODUCTION

The Administrative Council for Economic Defense (CADE) is responsible for reviewing acts of economic concentration (”mergers”), which meet the requirements set out in Articles 88 and 90, items I to IV, of Law No. 12,529, of November 30, 2011. This responsibility existed under previous laws, such as Law No. 8,884/94, although the requirements were different.

Mergers can generate negative and positive effects simultaneously. With respect to the negative effects of a merger, on one hand, these may include: an increase in prices for consumers; a decrease in the quantity, quality and/or variety of products or services at a given price; and a reduction in the pace of innovation compared to the levels that prevailed before the transaction. On the other hand, a number of positive effects specific to the transaction may also arise, such as: potential increases in productivity and competitiveness derived from the efficiency gains of the transaction; improvements in product quality; greater product diversity; the introduction of better technology; and so on. CADE must assess whether the negative effects of a merger outweigh its positive effects. In other words, if the net result is non-negative for consumers, the merger may be approved. The Guidelines refer exclusively to transactions involving non-horizontal (vertical and conglomerate) mergers between companies and aim to provide greater transparency in the analysis undertaken by CADE; guide CADE’s members to employ best practices in investigations involving vertical mergers; and assist market participants in understanding the steps, techniques, and criteria adopted in the analyses conducted by CADE. It should be noted that the Guidelines are non-binding and non-normative. Therefore, non-compliance with any provision contained herein does not result in any nullity of the analysis. The analytical process undertaken by CADE will be adapted to each specific case, considering the characteristics of the relevant markets, the activities of the companies involved, and other factors. Finally, it should be noted that the information contained herein may be changed at any time to align these Guidelines with any changes in CADE´s Resolutions and Regulations, as well as in Law 12.529/11.

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I. IDENTIFYING NON-HORIZONTAL MERGERS

Pursuant to Article 90 of the Competition Law (Law 12,529/2011), “[...} a concentration act (“or “merger”) i occurs when: I - two or more previously independent companies merge; II - one or more companies acquire, directly or indirectly, by purchase or exchange of shares, quotas, bonds, or securities convertible into shares, or assets, tangible or intangible, by contract or by any other means or form, the control or parts of one or other companies; III - one or more companies incorporate another or other companies; or IV - two or more companies enter into an associative contract, consortium, or joint venture.“ According to antitrust case law and literature, such mergers are commonly classified based on the links in the production chain and the relevant markets specifically affected by the transaction, as well as the activities involved by the applicant companies: horizontal, diagonal[2], vertical, and conglomerate mergers. Depending on the scope, size, and complexity of the transactions, they may give rise to horizontal, vertical, and conglomerate effects simultaneously.

The classification mentioned above is therefore useful for identifying the methodologies and procedures that should be applied to assess the different effects of a transaction, based on the various theories of harm that each type of concentration can cause in a particular case, without implying limited analyses. When analyzing each specific case, in the pre-merger analysis, CADE seeks to examine whether the non-horizontal transaction - through the creation or increase of market power - will eliminate or reduce competition in a substantial part of the respective relevant affected market(s), resulting in a loss of social welfare, ultimately harming consumers and society as a whole, according to Article 88, §5, of Law 12.529/2011. This is because when competition in a given market is reduced, there may be an increased likelihood that the remaining companies will raise their prices (or reduce the quality, supply or innovation of their products), since they face less competitive pressure (e.g., less price competition between competitors; fewer options for consumers).

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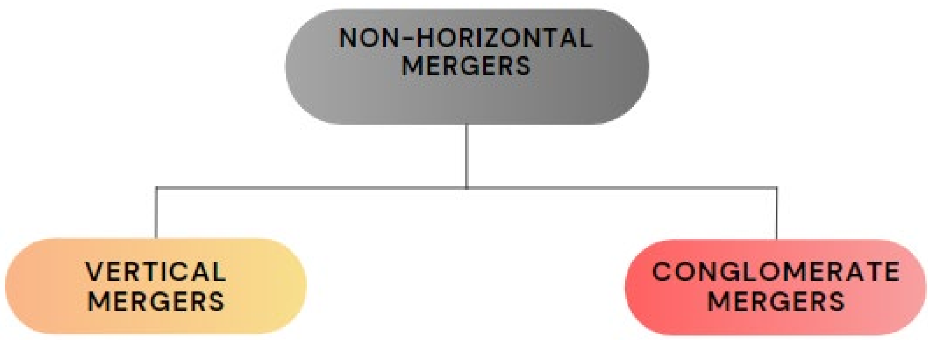
[2] Diagonal integrations (or vertical quasi-integrations) are situations in which it is possible to have “horizontal effects” of a merger without properly having a horizontal merger *per se* or even a vertical relationship between the parties. Diagonal integrations and horizontal mergers have already been explained in CADE's H Guideline. CADE. Horizontal Merger Analysis Guide. 2016. Available at: https://cdn.cade.gov.br/Portal/centrais-deconteudo/publicacoes/guias-do-cade/guia-para-analise-de-atos-de-concentracao-horizontal.pdf.

Even though some transactions may reduce competition, it is possible that competitive pressures (e.g., the existence of rivals; customers with bargaining power; a market with low barriers to entry) will be sufficient to mitigate any competitive concerns caused by the merger, enabling CADE to approve the transaction, even without restrictions. Pursuant to Article 88, paragraph 6 of Law 12.529/2011, mergers that imply the elimination of competition in a substantial part of the relevant market, the creation or strengthening of a dominant position or that may result in the domination of the relevant market for goods or services, pursuant to paragraph 5, "[...] may be authorized, provided that the limits strictly necessary to achieve the following objectives are observed: I - cumulatively or alternatively: a) an increase in productivity or conditions of competition; b) an improvement in the quality of goods or services; or c) provisions for efficiency and technological or economic development; and II - a relevant part of the resulting benefits are passed on to consumers." The Guidelines are intended to present specific procedures and methodologies for vertical (Section I.1.) and conglomerate (Section I.2.) types of mergers, which is why it is titled “V+ Guideline”, to distinguish it from CADE's existing “H Guideline”.

Image 1 – Types of non-horizontal mergers analyzed in this Guideline

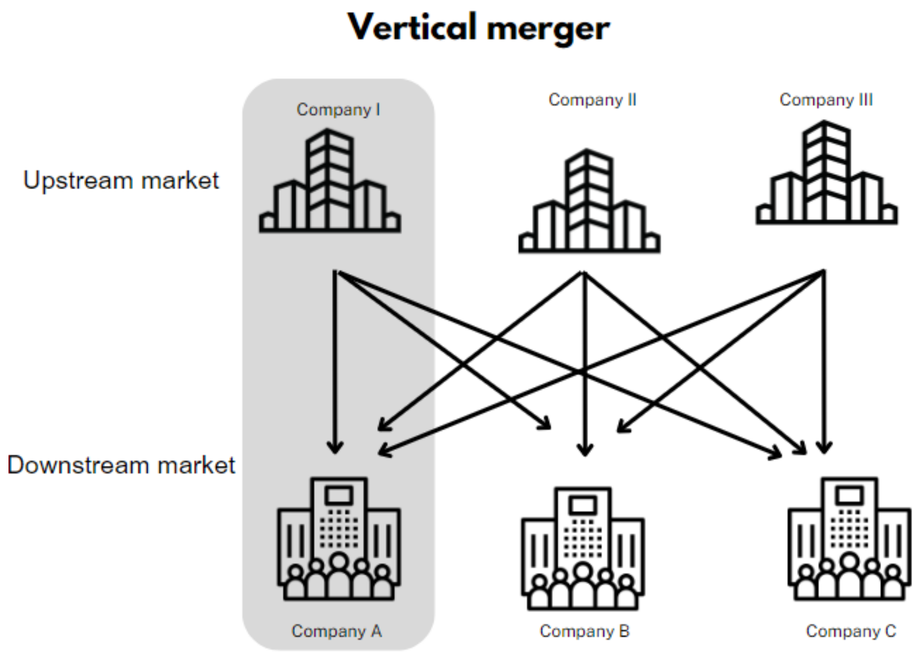


Source: prepared by UNDP consultancy.

I.1 Vertical mergers

A vertical merger involves the upstream and downstream segments (activities) of a given supply chain. It can be said that a vertical integration occurs when, as a result of a given transaction, a productive organization starts to act at different and interconnected levels of the same productive chain so that competition in one market may be directly affected by the results of the other.

Image 2 – Example of a vertical merger



Source: prepared by CADE's Vertical Integrations Working Group and UNDP consultancy.

In the example above, companies I, II, and III compete with each other in the upstream market - that is, they manufacture a good or provide a service, which is used as an input by companies A, B, and C in the downstream link of the chain. A, B, and C use this input as a raw material in the production process to manufacture a certain final good or service, which is then sold on the market to some other intermediate economic agent or to the final consumer.

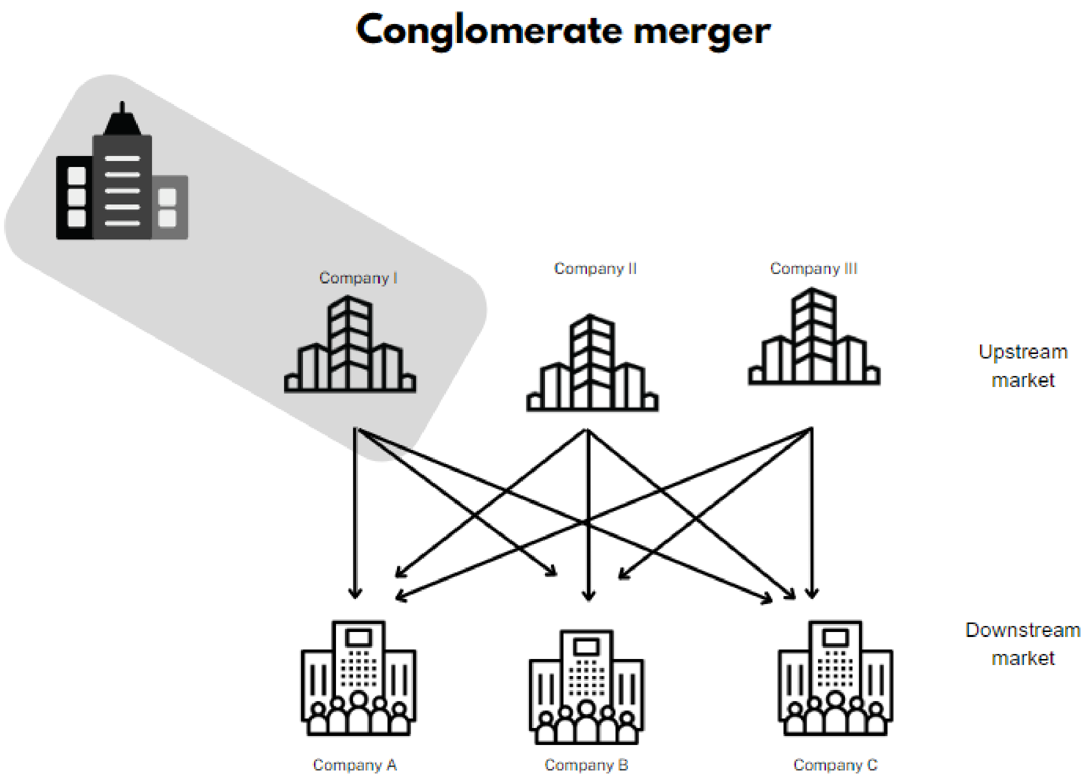
A vertical business relationship has a broad concept, comprising not only the different links in the production chain of a tangible good, but also the provision of services, the transaction of production factors (know-how, property rights, etc.) with different economic agents, provided that the links involved in the transaction have an interdependent relationship between the different parts of the production chain.

I.2. Conglomerate mergers

Conglomerate mergers, on the other hand, tend to be defined by exclusion, i.e., mergers that do not encompass horizontal, diagonal or vertical relationships. They are therefore transactions in which the activities of the involved companies are somehow related (e.g., they are intended for the same intermediate customers or final consumers; products used or consumed together; products of similar production processes).

This designation can be used to refer to strictly conglomerate mergers or to a conglomerate element in a more complex merger, since, in general, it is common for transactions to involve horizontal, vertical and conglomerate aspects at the same time.

Image 3 – Example of a conglomerate merger



Source: prepared by UNDP consultancy.

II. PROCEDURES FOR REVIEWING NON-HORIZONTAL MERGERS

The non-horizontal merger review procedures adopted in this “V+ Guideline” consist of five steps:

§ Step 1: Definition of the Relevant Market(s) (Section II.1)

§ Step 2: Definition of the Market Share and Concentration Levels (Section II.2)

§ Step 3: Analysis of the Potential Harm to Competition (Section II.3)

§ Step 4: Analysis of the Net Benefits Arising from the Transaction (Section II.4)

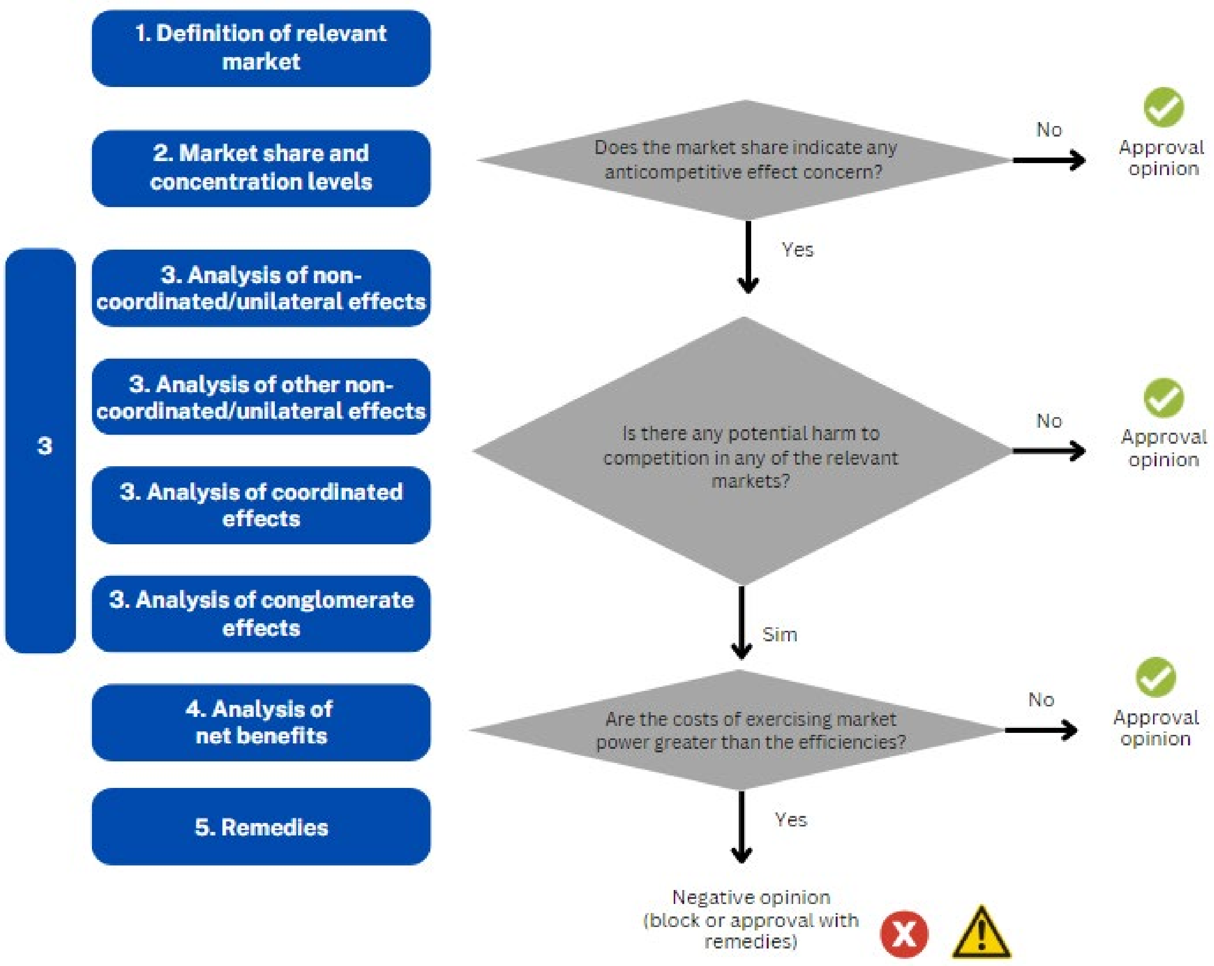
§ Step 5: Antitrust Remedies (Section II.5)

These steps do not necessarily have to be fulfilled in sequence. The analysis of the possibility of harm to competition, for example, may be carried out without having reached definitive conclusions on Step 2, whenever it is possible to assess market power without defining the relevant market, or when treating this market conservatively, or based on additional evidence that arises from the possibility of the exercise of market power during the course of the analysis. These suggestive steps may be softened, modified and/or complemented with other relevant elements for antitrust scrutiny.

Indeed, as indicated in “H Guideline”, a merger analysis may consider complementary and alternative methods of analysis (such as counterfactual analysis and simulations) and/or other factors of analysis (in cases of maverick[3] elimination, two-sided markets, among others).The image below shows the steps to be followed for the analysis and the decisions to be taken based on these steps. It is a "decision tree" that serves as a non-binding roadmap for the analysis.

[3] Maverick companies are those that have a disruptive type of rivalry; that is , they have more incentives to deviate compared to most part of the rivals.

Image 4 – Traditional steps for non-horizontal merger review and the Decision Tree



Source: prepared by CADE's Vertical Mergers Working Group and UNDP consultancy.

II.1 Step 1: Definition of the Relevant Market(s)

Defining the relevant market is the process by which the set of economic agents (consumers, producers, and competitors) that actually influence and restrict decisions related to pricing strategies, quantities, quality, innovation and other aspects of the firm resulting from the transaction is identified.

CADE may delimit the relevant market, keep it open or work with the development of different scenarios, in all possible geographic and/or product dimensions. It may also be necessary to evaluate the overall dynamics of the markets and their competitive structures, as well as detail how the affected markets are interrelated.

Market definition is a useful tool, but it is not a goal in itself. The identification of possible competitive effects requires the assessment of factors that are sometimes outside the scope of the previously delimited relevant market, since the market is dynamic. Therefore, the definition of the relevant market is not binding on CADE, since it is only an analytical tool.

Vertical mergers[4] generally involve two types of markets: the upstream input market (the sellers of the input) and the downstream customer market (the buyers of the input).

The upstream input market (*upstream* – the sellers of the input) comprises the producers of the input produced by the merging firm, as well as rival producers of close substitute inputs in terms of quality and price that can exert competitive pressure on the integrated firm.

The downstream customer market (downstream – the buyers of the input) comprises the customers of the input. In many cases, the input may be used by companies operating in relevant markets other than the one in which the merging firm operates downstream.

The same basic principles used in “H Guide” for defining relevant markets apply to the analysis of non-horizontal mergers, namely the aggregation of producers that exert competitive pressure on each other and are seen as substitutes by the buyers of their products (either companies purchasing inputs or final consumers). However, it is necessary to point out the following specific considerations when defining relevant markets in vertical integrations:

a) The analysis may require the definition of more relevant markets than in horizontal mergers;

[4] The concept of inputs adopted in this Guideline is broader and should be considered as an umbrella term for products, services, distribution channels, essential assets, access to technology, etc.

b) The definition of relevant markets should also consider the competitive dynamics from the perspective of the other side of the production chain, since it involves input-sale relationships;

c) The geographic dimensions of the relevant markets along the production chain do not necessarily coincide;

d) Relevant markets may be restricted to only certain stages of the production chain;

e) It is necessary to consider not only the commercial relationships that actually exist, but also potential relationships;

f) A transaction may generate more than one vertical concern, and different concerns may affect different relevant markets.

The definition of the relevant market can be challenging in complex markets, especially those that are more technology-intensive or where there is intense innovation (e.g., digital platforms)[5]. In these cases, an analysis of the transaction in light of the circumstances of the specific case will be necessary.

II.2 Step 2: Definition of the Market Share and Concentration Levels

Market shares and market concentration levels provide the first indications of the market power and competitive relevance of both the parties involved in the merger and their competitors. As with horizontal merger reviews, the level of market share is -a sign of potential harm to competition, although holding a high market share alone is not sufficient to conclude that the transaction will result in harmful effects on competition.

A **summary (or fast-track) review of vertical mergers** may, in principle, occur in situations where the market shares of the companies involved are not sufficient to raise competitive concerns in any of the markets directly affected by the transaction.

[5] For further information on digital markets, see CADE's studies on this subject: https://www.gov.br/cade/pt-br/centrais-de-conteudo/publicacoes-institucionais/estudos-economicos/cadernos-do-cade.

It is important, however, to clarify that, in some cases, non-horizontal mergers may still raise competitive concerns even when market share levels are low.

According to Article 8, item IV of CADE Resolution No. 33, of April 14, 2022, " a low market share in a vertical merger, characterized by situations in which neither of the applicants nor their economic group demonstrably controls more than 30% of any of the relevant vertically integrated markets, is a scenario that falls under the fast-track procedure". It should be noted that this type of situation (in which both applicants have less than 30% of the relevant market), as stated above, is not an absolute presumption in favor of approving the transaction under review. In fact, CADE may demonstrate that there is a competitive concern even in this situation. For example, it is possible that the applicants' products are highly differentiated from other products in the market.

Fast-track procedure may be recommended when the supply and purchase of the input take place on an exclusively captive basis by the companies involved in the transaction at the pre-merger stage, as in such situations mergers tend not to alter competitive conditions at the vertical level. Although the existence of some horizontal effects in this type of situation is not ruled out, such an assessment is not part of the discussion in these Guidelines.

Fast-track procedure may be recommended when at least one of the undertakings involved is already vertically integrated prior to the transaction (i.e., when the transaction involves both a vertical merger and a horizontal merger), the increase in market share is limited[6], and the companies' incentives may not be significantly altered. It should be noted, again, that the recommendation for fast-track procedure is not an absolute presumption in favor of approving the transaction, and there may be other factors in the specific case that raise competitive concerns.

[6] According to Article 8, item V of Cade Resolution No. 33, of April 14, 2022: "Art. 8 The following transactions are eligible for the Fast-Track Procedure: (...) V - Absence of a causal link: horizontal mergers that result in an HHI variation of less than 200, provided that the transaction does not result in control of a relevant market share greater than 50%".

II.3 Step 3: Analysis of Potential Harm to Competition

In the analysis of non-horizontal mergers, several theories of harm can be identified[7]. These theories help deduce the main possible anti-competitive effects[8] arising from a given non-horizontal merger. Some of the theories of harm[9] in non-horizontal mergers include the following:

- Market foreclosure (full or partial) to current and future upstream and downstream competitors;
- Raising rivals' costs
- Increased bargaining power of the applicants' business units in bilateral negotiations;
- Access to rivals' competitively sensitive information due to the companies' role as supplier or buyer (depending on the market context, this may include data on specific sales, bids, pricing strategies and algorithms, technical specifications of products, and innovation plans);
- Coordination between applicants and their rivals, for example, by facilitating the flow of information between rivals;
- Potential and dynamic competitive risks if, as a result of the transaction, companies cease to launch competing products or if the transaction aims to eliminate a disruptive or innovative market player;
- Circumvention of regulatory standards[10] (evading regulation);
- Changes in non-price competitive parameters[11] (especially relevant in markets where consumers do not pay a monetary value to purchase or use a certain service, such as digital platforms, or in markets where prices are regulated);

[7] The term "theory of harm" is customarily used in the context of antitrust law to refer to a structured theoretical proposition designed to demonstrate/describe the reasons why a given conduct or merger may cause harm to competition.

[8] These anti-competitive effects resulting from theories of harm may be related to a reduction in incentives for competition and innovation, an increase in prices or a reduction in the quality of products or services, among other effects.

[9] These theories of harm could result in anti-competitive effects, such as: reducing incentives for competition, innovation or better prices for products or services, among others.

[10] This can occur when the merged company operates in one link of the production chain where prices are regulated and in another link of the same chain where prices are not regulated. In this situation, the company can circumvent price controls by using intra-group transaction strategies and transferring profit to the segment where prices are not regulated.

[11] These parameters can be related to innovation, product/service quality, (excessive) data collection, etc.

- Increased incentives for closing digital ecosystems[12], preventing third parties from participating in these ecosystems (avoiding multi-homing or interoperability, for instance), or imposing discriminatory access conditions; among others.

It is worth mentioning that many of the above-mentioned theories of harm can also be verified in some unilateral (non-coordinated) conduct that may be anticompetitive, such as refusal to contract, maintenance of exclusive relationships, price discrimination, among others.

Some of these theories of harm will be detailed in this Guideline, in Sections III and IV.

The methodology for analyzing these theories of harm involves assessing: (1) the ability to cause anticompetitive harm, (2) the incentive to engage in harmful conduct under the theory, and (3) the expected post-merger effects.

II.3.1 Ability to exercise market power

The question to be asked is: does the integrated firm have the **ability** to implement anti-competitive strategies?

The analysis consists of assessing the integrated firm's ability to:

- Cause significant sales losses for a rival firm in the relevant market, either by restricting its access to inputs, limiting its access to customers, or increasing its costs;
- Force the rival company to exit the market or reduce its competitivity intensity in the relevant market.

To this end, CADE analyzes:

- the relevance of the applicants in the markets in which they operate and the possibility of exercising market power;

[12] Ecosystems are a common form of business organization in the digital economy and comprise a set of tools, platforms, and applications consolidated under a common strategy, with the aim of improving the positioning of a product, service, brand or economic group.

- whether the applicants control an input that is difficult to substitute and replicate, and that can be considered essential for the performance of other market participants (related to the essential facility theory);
- whether there are significant barriers to entry and/or expansion in the market (aspects such as the Minimum Viable Scale – MVE required to operate in the market);
- whether there are high costs for customers to switch supplier (or for suppliers to serve other customers) (switching costs), and whether those switching costs could lead to higher prices for final consumers; and
- whether there is countervailing bargaining power from the customers' side (or upstream suppliers) (buyer power).

In addition, the following aspects are also analyzed: timeliness, sufficiency, and likelihood of market entry; the existence of rivalry; as well as the level of idle capacity of rivals, as already defined in "H Guideline".

CADE generally considers that vertical transactions that do not exceed 30% of the market share in any of the affected markets have a relative presumption of not raising competitive concerns.

II.3.2 Incentives to exercise market power

The question to be asked is: Does integration create changes in the **incentive** structure for the practice of anti-competitive strategies? Even if the applicants have the ability to do so, are there economic incentives to implement such strategies?

When the theory of vertical harm involves a discussion of market foreclosure, the analysis of the existence of incentives consists essentially of assessing whether the partial or total foreclosure of inputs or customers, upstream or downstream, among other actions, will be rational/profitable for the integrated firm (cost/benefit analysis). The reason is that, for example, the (total or partial) foreclosure involves giving up sales (e.g., in the upstream market) in order to harm competitors of the applicants (in the downstream market), aiming to leverage the applicants' sales in the vertically related market (downstream) with the elimination or reduction of competition.

Just like in horizontal transactions, the main drivers of vertical pressure on prices are the sales diversion rates to the integrated company and the profit margins.

Regarding the diversion rate, it is possible to measure the proportion of sales between the upstream applicant company and the downstream company, and vice versa. It is also important to assess whether the downstream company has the capacity and size to purchase all the production of the upstream company (and vice versa), which helps to understand the potential incentives the integrated company might have to raise prices or adopt practices that harm competition.

As for the profit margins, it is important to examine the profitability of the applicants' upstream and downstream businesses in order to assess whether it makes economic sense to proceed with such a sales sacrifice, in a cost-benefit analysis. In this regard, CADE not only considers the exact profitability figures, but also the magnitude of the profitability of any exclusionary practice. The integrated firm will weigh how the foreclosure will impact not only the profits of its upstream division but also of its downstream division, with the net result of the impacts on these two links being the determining factor in whether there are incentives or not.

The analysis employed at this stage can be both quantitative and qualitative, depending on the characteristics of the market under examination. For example, markets considered traditional and/or involving homogeneous products favor and make the quantitative analysis of data more reliable. In more dynamic and constantly evolving markets, qualitative analysis may become more relevant, as the analysis of past data may provide limited indications on the future of that market.

It is also important for the antitrust authority at this stage to analyze both static (short-term) and dynamic (long-term) competition in the market, evaluating potential developments of new technologies, new products or production processes, and innovation. This analysis of dynamic competition can be complex in practice, as in many cases there may not be sufficient data available to safely assess the long-term behavior of markets. Alternatively, one could seek to qualitatively evaluate the relevance of possible long-term strategic reasons for market foreclosure, such as preventing or hindering new competitors from entering into the market.

The following aspects are also considered:

- the level of rivalry in the vertically related market (e.g., are there many buyers for the input? Are there customers that represent a significant share of the firm's sales?)
- how contracts are structured in the market (e.g., long-term contracts; spot contracts; predominance of single-homing or multi-homing);
- the effect on prices, to what extent the transaction alters the competitive behavior of incumbents and hinders the entry of new firms; and
- involvement of homogeneous or differentiated products in the market.

CADE evaluates the incentives for potential total or partial foreclosure, bearing in mind that, depending on the circumstances of the specific case, it may be more advantageous for the applicants to only partially foreclose the market.

Quantitative methods can be used for this analysis. The method most commonly used by CADE is **vertical arithmetic**[13]. It is a quantitative analysis of vertical integrations that evaluates whether the total foreclosure of rivals would be profitable given the margins obtained by the integrated firm and the expected diversion ratio of rivals foreclosed by the integrated firm. One of its advantages is the low data demand, as it only requires profit margin data from each of the applicants and the market shares of the applicants and their rivals in each market. On the other hand, it has limitations such as not allowing the analysis of partial foreclosures and not considering the incentives of upstream and downstream price increases, nor the efficiencies derived from integration. Annex I provides a detailed explanation of this methodology.

II.3.3 Anti-competitive effects

The question to be asked is: if ability and incentives are in place, does the implementation of such practices impact competition and harm final consumers? Are there **anti-competitive effects?**

[13] Another possible quantitative method is vGUPPI. This is a methodology proposed by MORESI & SALOP (2012). These authors developed the concept of vGUPPI (vertical Gross Upward Pricing Pressure), which seeks to identify price-raising incentives derived from vertical transactions, thus aiming to address some of the limitations related to vertical arithmetic.

When the vertical theory of harm involves a discussion of market foreclosure, for instance, the analysis of the effects that the transaction is likely to have on the market involves assessing whether the market foreclosure strategy will significantly reduce competition (either in the upstream market or in the downstream market) and may result in price increases or a reduction in supply, quality, or innovation.

The antitrust authority also analyzes the likelihood of the occurrence of the aforementioned coordinated effects.

Thus, understanding the rationale and economic justification of the transaction is relevant, given the possibility of generating both pro-competitive and anti-competitive effects. The counterfactual market scenario (that may occur if the transaction is not approved) should also be considered.

It should be noted that, in practice, these aspects often need to be examined together, as they are closely interlinked.

II.4 Step 4: Analysis of the Net Benefits Arising from the Transaction

If it is concluded that there are ability, incentives and anti-competitive effects that have not been mitigated in step 3, it is necessary to assess whether there are net benefits that counterbalance these effects, in order to verify whether the transaction under analysis will have non-negative net effects.

In addition to the potential anti-competitive effects, any pro-competitive effects of vertical integration must also be assessed. Vertical integration tends to be a means of reducing costs and/or increasing the quality of the products offered, thereby improving efficiency in production processes. It is also essential that, alongside the efficiencies of the transaction, the incentives to pass on at least some of these efficiencies to the consumer are detailed.

In order to better understand the incentives involved, it is important to present a detailed rationale for the transaction, supported by both qualitative and quantitative evidence. This should include internal documents prepared for the Board of Directors and Management, or even for shareholders, such as presentations, business plans, and internal market analyses.

Documents and evidence produced in contexts prior to the negotiation and disclosure of the notified transaction tend to be given more weight in forming a conviction regarding the companies' understanding of the analyzed markets, including the competitive conditions of the markets if the transaction did not occur. The behavior of the companies during the pre-transaction period is often carefully assessed, especially any contradictory statements made by the firms in previous transactions analyzed by CADE in the same markets, or in public channels, such as statements to the press, the industry or trade associations, as well as prospectus for the sale of securities and announcement of shareholders' meetings.

In this sense, it is necessary to take stock of the net economic result of the transaction, subtracting the quantification of anticompetitive effects from the efficiency gains. As in horizontal transactions, to be considered an efficiency gain stemming from vertical integration, the efficiencies must:

- Be probable, i.e., the likelihood of their occurrence after the transaction must be high;
- Be verifiable, and, whenever possible, be prone to measurement;
- Be transaction-specific, covering only those gains that could not be achieved in any other way that is less restrictive to competition, other than through integration;
- Occur in a timely manner, over a period of less than two) years;
- Result in benefits that have a relevant share passed on to consumers.

II.4.1 Elimination of the Double Margin

This tends to be the most notable efficiency; it is specific to vertical mergers and stems from the fact that the integrated firm can efficiently supply the input to itself.

Thus, eliminating double marginalization may result in lower prices for end consumers and increased sales (and supply). Capturing the upstream margin can make the downstream price reduction profitable, which can benefit both the firm resulting from the transaction and the downstream buyers of the product or service.

However, CADE does not presume that the elimination of double marginalization will occur or that it will be sufficient to reverse the price-increasing incentives or identified competitive harm. The elimination of double marginalization should be treated in the same way as other claims of potentially competitive benefits obtained by the parties. The parties must demonstrate that the benefits are merger-related, verifiable, and sufficient to reverse any anticompetitive harm in the relevant markets. Verified benefits may not be sufficient to prevent competitive harm.

Double marginalization may also not be eliminated pre- or post-transaction if companies are concerned with the possibility that their low prices may spread to other downstream and upstream companies or if there is price coordination.

Moreover, a merger may not be necessary to eliminate double marginalization.

II.4.2 Reduction of transaction costs

The integrated firm can reduce transaction costs by allowing the various activities of a production chain to be internalized in a single entity, reducing dependence on recurrent market transactions, as well as allowing better coordination in terms of product design, organization of the production process, and sales methods for products.

This benefit is particularly relevant when there is a high volume of transactions between two firms. With the two firms acting as a single entity, prices can be set at an agreed-upon, non-negotiable rate.

II.4.3 Improved coordination of the production process

After integration, processes that were previously independent and internal to each firm become integrated and focused on the joint efficiency of the verticalized firm, which now has full control of all processes in the production chain. The integrated firm can improve coordination of product development, organization of the production process, and the effective marketing of products, generating efficiencies that may possibly result in benefits that can be passed on to consumers.

II.4.4 Improved coordination of the distribution process

The integrated firm can generate logistical gains from optimizing production, technological gains from productive integration, as well as economies of scope by taking advantage of complementarities between different stages of the production chain.

Vertical integration efforts can facilitate coordination between input suppliers and companies in downstream markets, resulting, among other things, in lower inventory costs, higher-quality products and shorter lead times for new product development.

II.4.5. Alignment of incentives

Integration allows the alignment of incentives that were not convergent before.

With integration there can be a realignment of incentives, since the gains from certain investments can be internalized as a result of increased sales in one of the integrated markets.

II.4.6 Reducing hold-up problems

The hold-up problem derives from the theory of incomplete contracts. Firms that interact vertically could operate more efficiently if they maintained a certain level of alignment with each other, but they refrain from doing so due to concerns that they may give the other party greater bargaining power and thus reduce their own profits. In the case of vertical mergers, there would be incentives to reduce this type of problem since the related parties become part of a single entity.

II.4.7. Data sharing

The integration of production processes allows for access to strategic information between the different links in the production chain of the integrated firm.

In some cases, this access can be pro-competitive. For example, the integrated firm can make more assertive decisions regarding production or upstream investment levels if it has access to information about the final customers of its downstream link.

On the other hand, such sharing of information may also raise relevant competition concerns. This is the case, for example, when one of the links of the integrated firm gains access to competitively sensitive information, such as prices and sales volume of competing companies in its link, as a result of the integration. For example, by becoming the supplier of downstream competitors, the integrated firm may obtain critical information from these competitors, such as their input costs and production volume, putting them at a competitive disadvantage. These possible risks will be further addressed in the analysis of other non-coordinated/unilateral effects (Section III.2.2.).

II.4.8. Elimination of the free riding effect

The integrated firm can eliminate the so-called free riding effect, which consists of opportunistic behavior by a third party that benefits from an investment made by another agent. The risk of free riding is a factor that can prevent relevant investments from being made in the production chain, so its mitigation can generate pro-competitive effects. Thus, vertically integrated companies may establish a contractual link in which they assume responsibility for a particular investment, respecting the mutual effort in building up brands and assets that may be of interest to all those who are part of the vertical merger.

II.5 Step 5: Antitrust remedies

It is possible to apply remedies in merger reviews as a way of mitigating potential anti-competitive effects of verticalization or to ensure the achievement of efficiency gains promised by the applicants. Remedies can be negotiated between parties by mutual agreement or imposed unilaterally by CADE when it approves a transaction with restrictions.

The authority, however, should be careful not to adopt remedies that would nullify the alleged positive effects of verticalization.

That is, when a competitive risk is identified and considering the difficulty of weighing identified risks against potential efficiency gains stemming from the transaction, CADE must be careful not to approve a transaction conditioned on structural or behavioral remedies[14] that go directly against the economic logic of the integration of production chain activities. If there is no certainty as to the potential negative effects on the competitive environment, in these cases, the remedy itself may make the alleged gain from the transaction unattainable.

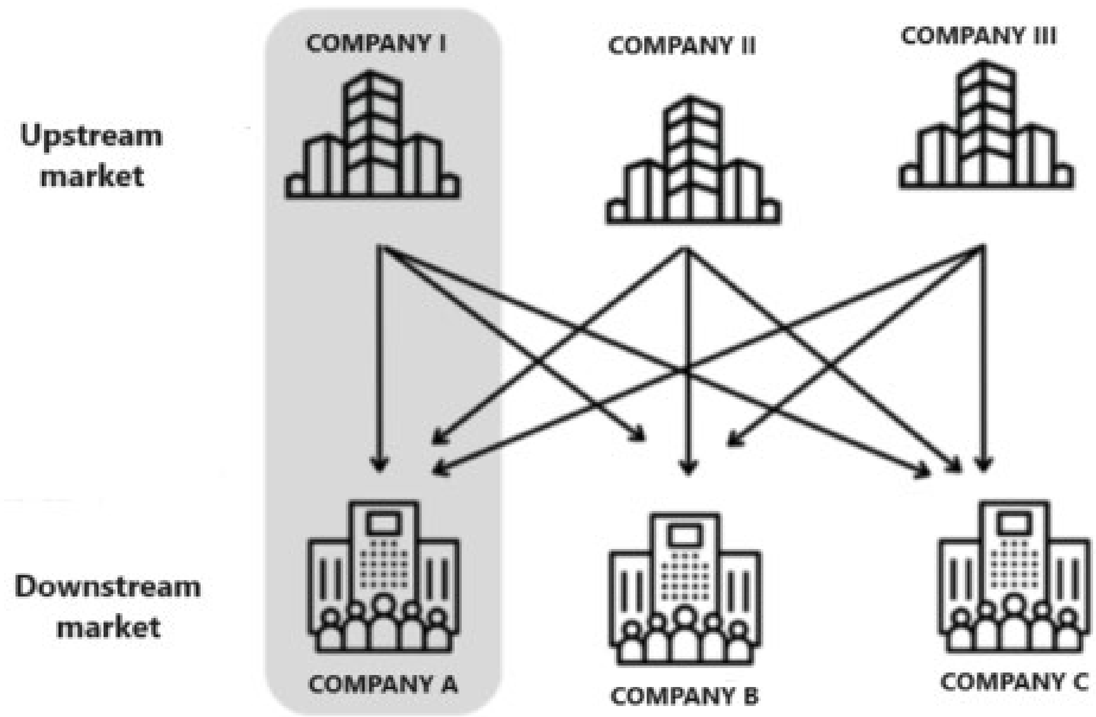
In addition, remedies that require mere compliance with the law, or that address issues not related to the vertical integration, should be avoided.

[14] For further details on structural and behavioral antitrust remedies, see “Antitrust Remedies Guide” (Cade, 2018).

III. VERTICAL MERGERS

A vertical merger involves the upstream segment (upstream) and the downstream segment (downstream) of a given production chain. Thus, it can be said that a vertical merger occurs when, by virtue of a given transaction of economic concentration, a productive organization starts to act at different levels of production and in an interconnected chain in a way that competition in a market can be directly affected by the results of the other.

Image 5 – Example of a vertical merger



Source: prepared by CADE's Vertical Integrations Working Group and UNDP consultancy.

This Section III of the Guideline develops Step III of the analysis of non-horizontal mergers (Section II.3 above), which consists of the analysis of the potential harm to competition downstream and upstream.

The concerns arising from non-horizontal mergers are limited to two main types of possible anticompetitive effects, namely: non-coordinated/unilateral and coordinated ones.

Image 6 – Potential harm to competition from non-horizontal mergers

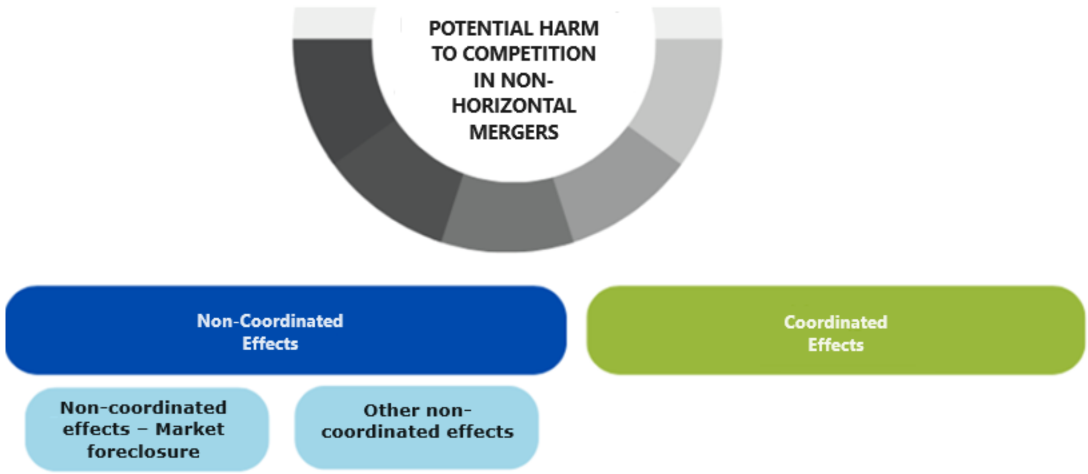
ource: prepared by UNDP consultancy.

Non-coordinated/unilateral effects of vertical mergers can occur when companies exercise market power by profitably and sustainably raising prices (or decreasing quantities, quality, or innovation) without increasing the probability of express collusion with other competitors, even if these competitors react by accommodating themselves to the new, higher equilibrium price level. The antitrust authority must assess whether the transaction lessens the competitive pressures faced by the applicants in the market (e.g., elimination of a competitor), so that the applicants would have incentives to increase prices (or decrease the supply, quality or innovation) of products after the transaction.

Coordinated effects of vertical mergers may arise from conditions that favor collusion, since (i) due to a reduction in the number of competitors in the market, integration can facilitate coordination between companies; (ii) vertical mergers can increase the possibility of deterrence mechanisms by the integrated firm; and (iii) they can reduce the possibility of reaction from companies that do not participate in the coordination and are not integrated, among other factors. Unlike unilateral effects, therefore, coordinated effects necessarily depend on the behavior of other companies in the market.

The hypotheses of non-coordinated/unilateral anti-competitive effects arising from vertical mergers are varied, among which the following stand out: market foreclosure (Section III.1) and other non-coordinated effects (Section III.2.). The analysis of possible coordinated effects will be detailed later on (Section III.3.).

Image 7 – Potential harm to competition from vertical mergers – non-coordinated/unilateral and coordinated effects



ource: prepared by UNDP consultancy.

III.1. Non-coordinated/unilateral effects in vertical mergers: market foreclosure

Market foreclosure occurs when the access of actual or potential rivals to inputs[15] or to customers/consumers is harmed or eliminated as a result of a merger, thus reducing the capacity and/or incentive of these rivals to compete in the market.

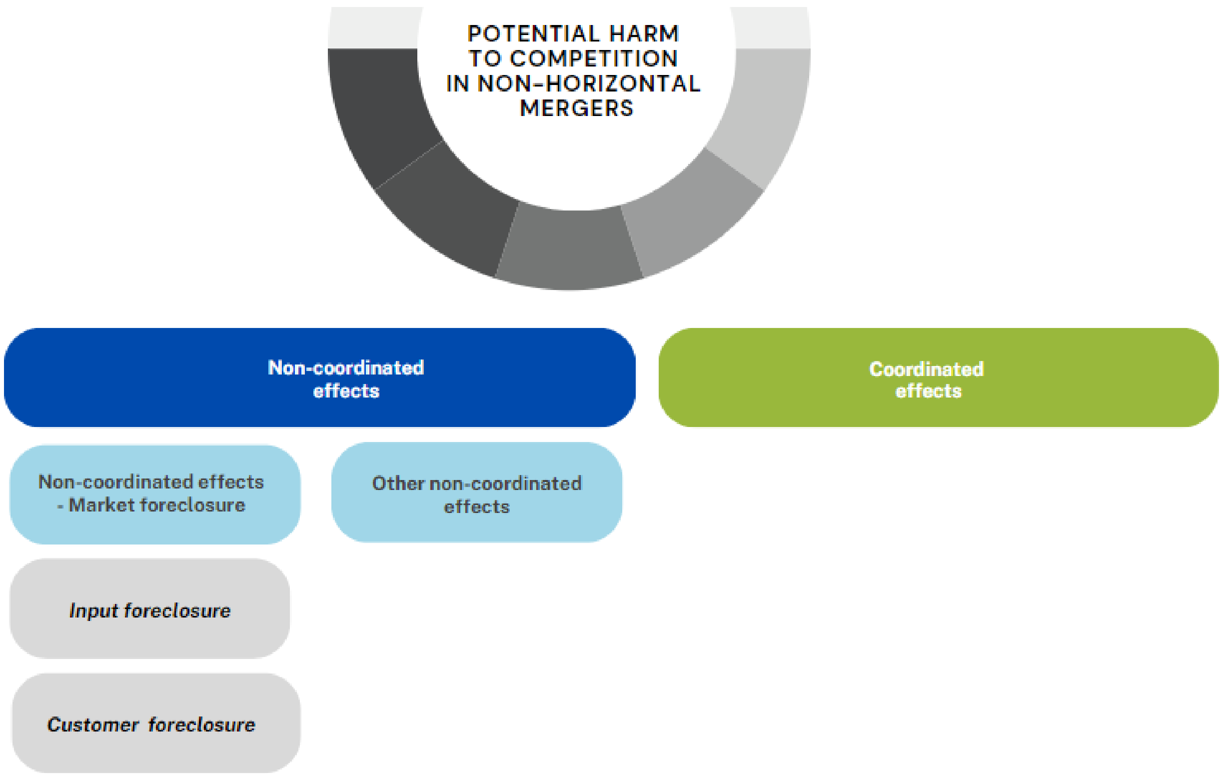
The main concern lies within the possibility that the new vertically integrated firm will limit or hinder (total or partial foreclosure) the performance of competitors (actual or potential) that depend on access to a certain market vertically related to the product under analysis. Thus, following a transaction that leads to vertical integration,

[15] As previously mentioned, vertical mergers not only involve the production chain, but also the distribution or service provision.

the merged firm may have incentives not to serve or to discriminate against its rivals, thereby reducing or eliminating these companies' ability and/or incentive to compete. Market foreclosure may also discourage entry or rivals' expansion or encourage their exit from the market. It doesn´t necessarily need to force affected rivals out of the market: it is enough that they are disadvantaged and, consequently, led to compete less effectively.

The hypotheses of non-coordinated anti-competitive effects arising from vertical mergers are varied, among which the following stand out when it comes to market foreclosure: *input foreclosure* (Section III.1.1.) and *customer foreclosure* (Section III.1.2.).

Image 8 – Potential harm to competition from non-horizontal mergers – non-coordinated/unilateral effects – market foreclosure

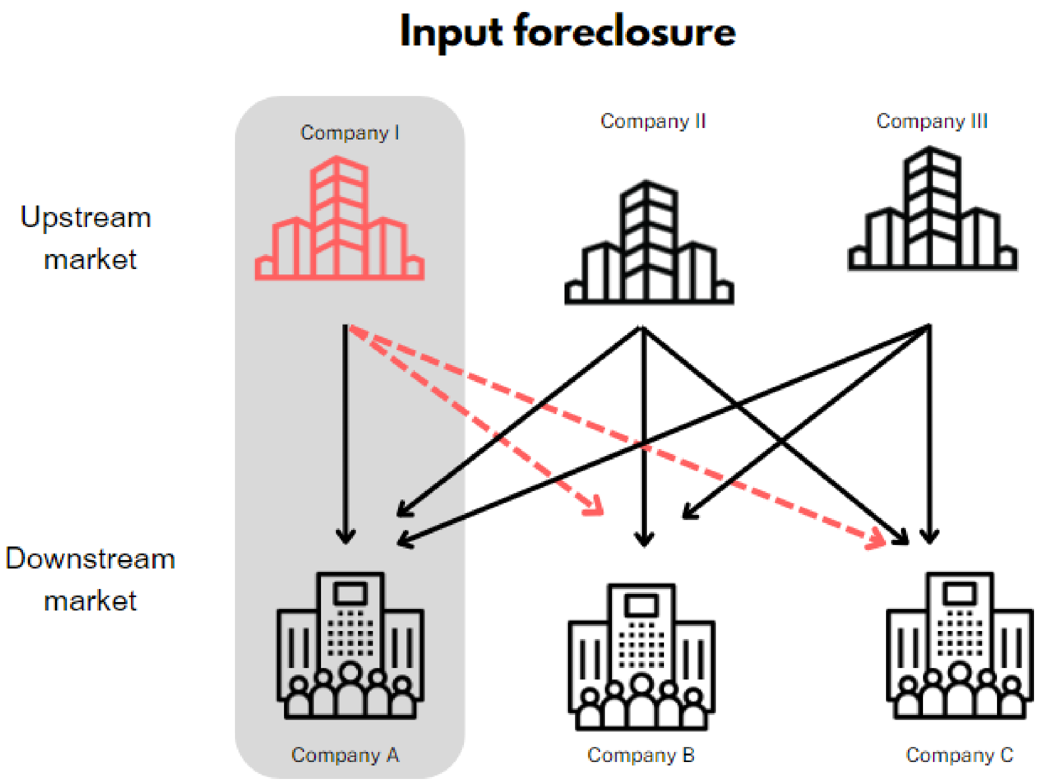


Source: prepared by UNDP consultancy.

III.1.1. Input foreclosure

Input foreclosure may occur when a possible transaction between vertically related companies gives the new firm the ability and incentives to restrict access to one or more relevant input(s) – products or services – for its production process, by downstream competitors (actual or potential), which would normally be supplied in the absence of the merger.

Image 9 – Input foreclosure



Source: prepared by UNDP consultancy.

With this conduct, the merged firm eliminates or raises its rivals' costs in the market, making it more difficult or limiting the supply of the input(s) at prices and conditions similar to those existing in the absence of the transaction.

As already explained in Section II.3. above, the analysis methodology consists of the following steps: (1) ability, (2) incentive, and (3) effects.

III.1.1.1. Input foreclosure - Ability

The ability to foreclose the input market (input foreclosure) will be relevant if the integrated firm, by totally or partially reducing access to its own products or services upstream, manages to negatively affect the general availability of inputs to the agents of the downstream market in terms of price or quality.

This occurs when, for example, the other upstream suppliers are less efficient, offer worse alternatives, or do not have sufficient idle capacity to expand production in response to supply constraints.

On the other hand, even in situations where there is idle capacity available, a market foreclosure stemming from vertical integration is capable of generating another level of market equilibrium within the input market, where all market prices rise. Thus, even the remaining companies that, in theory, did not carry out any type of supply constraint, may, on a case-by-case basis, have their prices raised, due to the new market equilibrium after the vertical merger[16].

The ability to implement a foreclosure can occur in different ways, for example:

- Direct refusal to contract with actual or potential competitors in the vertically related market;
- Constraints on input(s) supply by reducing the quantity and/or quality of inputs supplied;
- Increase in input(s) prices to competitors in the downstream market, turning supply conditions less favorable than those that would prevail in the absence of the merger;
- Reduction in quality or service levels (e.g., deterioration of product interoperability, delay in the release of updates, restriction on intellectual property licensing, deactivation of APIs, reprioritization of R&D expenses). The integrated firm resulting

[16] In a case where A has a 14% market share; B has a 14% market share and C has a 72% market share, with the market's own elasticity of demand being -1 and A's own elasticity of demand being -2, with a merger between A and B, according to the PC-AIDS model, for example, it is expected that the price of A and B (with only 28% of the market) will increase by around 7%, and C, in this situation, should raise prices by 1.3%, if it acts rationally.

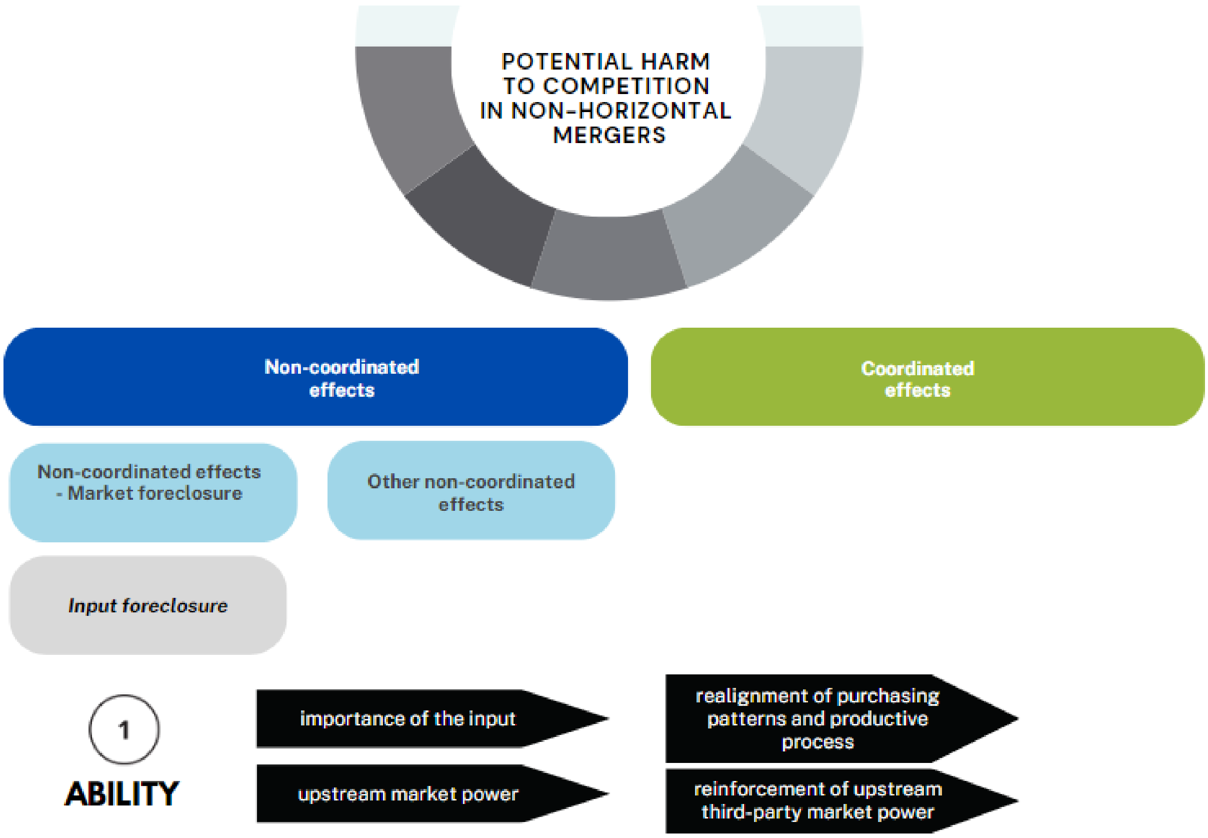
from the transaction starts using specific technology incompatible with the technologies used by competing companies, which degrades the quality of supplies.

- Limitation of access to data.

The analysis is, therefore, not segmented, but directed at a broader spectrum, in order to assess whether these mechanisms, if implemented together, would have the ability to allow the integrated firm to foreclose rivals or change the equilibrium of market prices.

Some assumptions tend to be relevant to the capacity analysis, as shown below, among which the following stand out: the importance of the input (III.1.1.1.1.), the upstream market power (III.1.1.1.2.), the realignment of purchasing patterns (III.1.1.1.3.), and the reinforcement of upstream third-party market power (III.1.1.1.4.).

Image 10 – Potential harm to competition from non-horizontal mergers – non-coordinated/unilateral effects – ability to foreclose the input market (input foreclosure)



Source: prepared by UNDP consultancy.

III.1.1.1.1. Importance of input

The integrated firm will have the ability to foreclose production factors to downstream competitors if, by reducing access to its own products or services in the upstream market, it negatively affects the overall availability of goods and services in the downstream market, in terms of price or quality.

The starting point for assessing the ability to foreclose markets is the structure of the upstream market. In the case of input foreclosure, it is necessary that the integrated firm holds some input that is relevant to its downstream competitors.

Any input can be assessed by CADE as capable of generating competition concerns. Some circumstances may represent additional concerns, especially when the input:

- represents a significant cost of the final product manufactured downstream;
- is an essential/critical component for production, without which the downstream product could not be manufactured or sold in the market;
- represents a significant source of downstream product differentiation;
- cannot be replaced by alternative production factors without high costs;
- has high profit margins, which reflect the fact that customers cannot easily switch to alternative suppliers;
- plays a decisive role in the quality of the product or in the degree of innovation;
- is the object of exclusivity contracts between the integrated firm and independent suppliers for the same product/service, as this may further limit the downstream rivals' ability to access inputs.

The financial and reputational costs or costs of contract termination as elements of incentive (or not) to input foreclosure may be presented.

III.1.1.1.2. Upstream market power

As already mentioned, the starting point for this assessment is the structure of the upstream market. In the case of input foreclosure, it is necessary that the integrated firm holds, at the same time, some input that is relevant to its downstream competitor (III.1.1.1.1.) and significant market power (not necessarily a dominant position) related to the input upstream market (III.1.1.1.2.).

The greater the upstream market share of the companies involved in the transaction, the greater i its ability to foreclose the market. It should be noted, however, that foreclosure capacity and market power are different concepts, the latter being just one of the elements (but not the only one) used to assess this capacity.

The higher the proportion of competitors that could be subject to downstream market foreclosure, the greater the likelihood that the merger may cause a significant increase in prices in the downstream market and, therefore, significantly restrict effective competition in that market. Despite this, even in cases where the competing firm that may be affected has a low market share, it may play a relevant competitive role if, for example, it is a close competitor of the vertically integrated firm or because it is a particularly aggressive competitor.

To identify the existence of upstream market power (not necessarily a dominant position), it is investigated whether there are characteristics of the market structure that can limit the ability to restrict upstream rivals, such as:

- economies of scale, especially if they give a competitive advantage to the new firm that is difficult for other upstream competitors to replicate,
- switching costs for hiring an alternative input supplier,
- barriers to entry in general,
- degree of rivalry,
- direct or indirect network effects[17],
- brand relevance and reputation,
- high fixed costs,
- control of intellectual property,
- access to relevant data that is hard for competitors to replicate,

[17] Direct network effects occur when the utility for users (of the product/service) increases with the increase in the number of users of the same product/service. Indirect network effects occur when one group of users benefits more when the number of members in another group grows, and possibly vice versa. In the case of a digital platform, for instance, if it provides a better service on one side of the market, the demand for that service on the other side increases.

- integration into broader ecosystems, such as digital markets.

III.1.1.1.3. Realignment of purchasing standards and in the production process

In the analysis of the ability to foreclose the input market, it is necessary to assess whether, with the integration, the verticalized firm, when starting to acquire inputs from its upstream unit, will generate idle capacity in the alternative suppliers of that link, which could be used by its downstream competitors as an option to avoid a possible foreclosure, **redirecting** the demand for **inputs** to these alternative suppliers.

Obviously, this type of situation only occurs when the downstream firm verticalizes with a firm from which it did not previously purchase inputs or only used to supply part of its needs.

Thus, a factor that might mitigate concerns about the merger is that the integrated firm will be able to free up productive capacity from other suppliers in the upstream market, and they will be able to realign the purchasing patterns of companies in the downstream market, which will acquire inputs from other upstream suppliers.

However, while "freeing up idle capacity" for downstream competitors is a possibility, it is also possible to have price increases in the upstream market, due to the decrease in supply and in the number of players in the market, in the event of a partial market foreclosure.

Thus, it is important to consider the level of price rivalry of all market agents, the level of entry barriers in the market, and the quality of other products available in the upstream market, as well as the switching costs, to assess whether downstream rivals can easily (and without price increases) switch from the upstream firm to effective alternative suppliers.

The possibility of **changes in the production process** of the companies affected by foreclosure should also be taken into consideration, in order to make them less dependent on this input, as well as the possibility of new entries in the input market, including those encouraged by companies affected by the foreclosure.

III.1.1.1.4. Reinforcement of upstream third-party market power

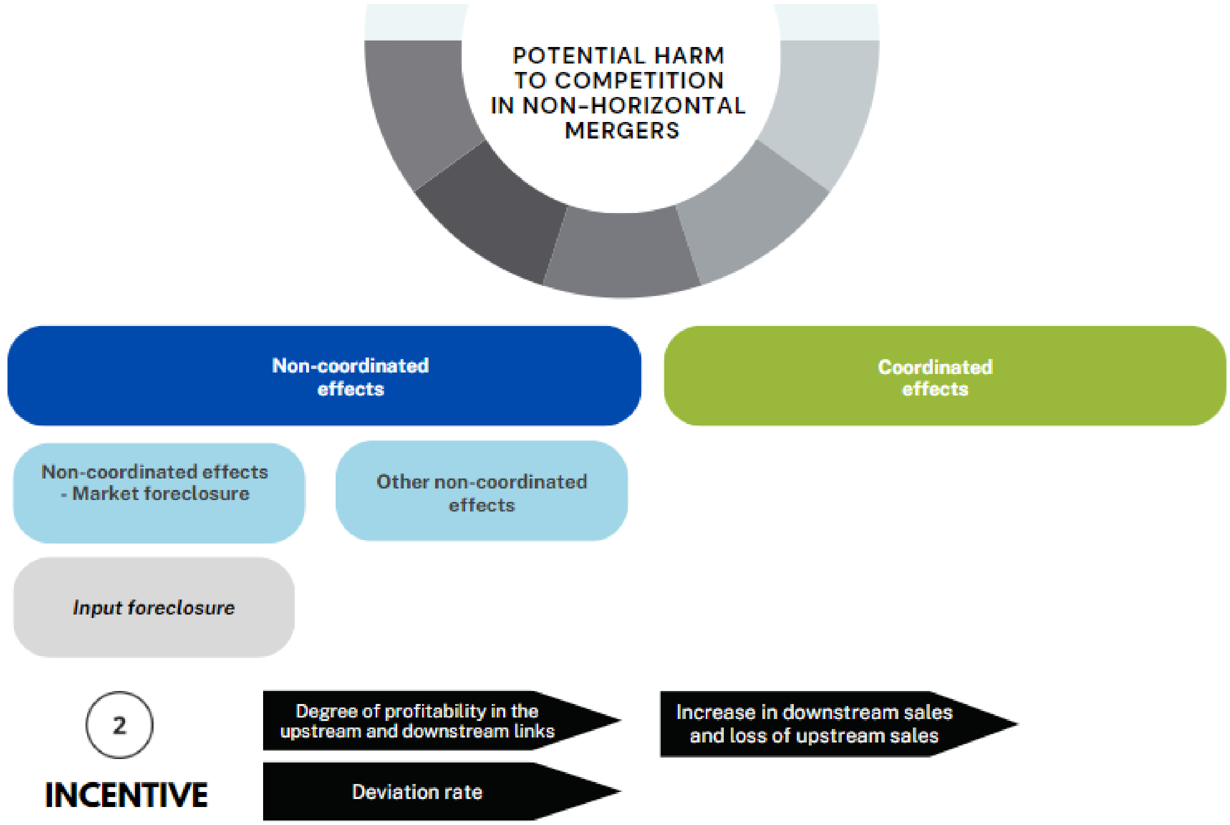
As previously noted, it is reasonable to assume that, as a result of possible foreclosure, the reduction of competitive pressure on other input suppliers may allow them to increase the prices of input charged to non-integrated downstream companies. Thus, attempts to foreclose the input market may eventually be accommodated by rival suppliers, which results, *ceteris paribus*, in a less aggressive type of competition.

Thus, market foreclosure may result in a reinforcement of third-parties market power. However, the attempt to raise input prices can be prevented if independent suppliers, faced with reduced demand for their products, react with a more aggressive pricing policy or if there are low barriers to entry in the upstream market. Nevertheless, robust evidence of this situation must be presented in the transaction's review, since this is counterintuitive and unexpected behavior. It is more likely that, if some kind of market foreclosure occurs, there will be some level of accommodation and reinforcement of third-party market power at the upstream level.

III.1.1.2. Input foreclosure - Incentives

Even if the integrated firm has the ability to foreclose the input market for downstream competitors, it is necessary to assess whether the integrated firm will have economic incentives to do so. This analysis involves a series of factors related to the cost-benefit of such conduct, among which the following stand out: the degree of profitability in the upstream and downstream links (III.1.1.2.1.) and the increase in downstream sales, the loss of upstream sales and the possibility of diversion (III.1.1.2.2.).

Image 11 – Potential harm to competition from non-horizontal mergers –non-coordinated/unilateral effects – incentive to foreclose the input market (input foreclosure)



Source: prepared by UNDP consultancy.

III.1.1.2.1. Relative degree of profitability in the upstream and downstream links

The integrated firm faces a trade-off between losing profit upstream due to a reduction in input sales to (actual or potential) rivals and gaining profit, in the short or long term, through the expansion of downstream sales, resulting from the capture of sales from its competitors affected by the foreclosure or, as the case may be, from the increase in consumer prices.

The trade-off will depend on the profit margins obtained at each link in the chain, being a cost-benefit assessment of the result for the new entity. All other variables constant, the smaller the upstream margins relative to the downstream, the greater the incentives to foreclose (the smaller the losses resulting from reduced upstream sales of goods and services). Likewise, the higher the downstream margins, the higher the gains resulting from the increase in downstream market share, at the expense of the competitors subject to foreclosure.

Thus, the incentive to foreclose the input market will depend on the degree of profitability in the upstream and downstream links. That is, the merged entity will weigh, on the one hand, the profit losses in the upstream market in the event of a reduction in input sales to competitors (actual or potential) in the downstream market, and, on the other hand, it will consider the profit gains resulting, in the short or long term, from the expansion of its downstream sales or from price increases to consumers.

III.1.1.2.2. Diversion rate for the integrated firm

The mentioned trade-off will also depend on the diversion rate for the integrated firm. This is the share of downstream demand diverted from excluded rivals that the downstream division of the integrated firm is able to capture. This share will normally be higher the more that firm's products and those of excluded competitors are close substitutes.

The integrated firm's incentive to foreclose the input market depends on the extent to which downstream demand is likely to be diverted from the foreclosed competitors and the proportion of diverted demand that the integrated firm can capture. This percentage may vary depending on the capacity restrictions to which the merged entity is subject in relation to downstream competitors that are not subject to market foreclosure and the greater the degree of substitutability between the integrated firm's products and the competitors targeted by the foreclosure.

When it is not possible to calculate this diversion rate more precisely, proxies can be used, such as market shares of downstream companies and the analysis of historical data indicating changes of sellers by buyers.

III.1.1.2.3. Increase in downstream sales and loss of upstream sales

The incentive to foreclose the input market to actual or potential competitors may depend on the extent to which the downstream division of the new integrated firm can take advantage of price increases downstream, resulting from the strategy of increasing the costs of competing companies. Thus, the greater the market share of the firm resulting from the transaction in the downstream market, the larger the sales base on which such higher margins can be applied.

It should be noted that even a monopolistic upstream firm that is already able to extract all available profits from vertically related markets may have an incentive to protect its monopoly position (and seek to exclude from the market any potential agents seeking to verticalize upwards, challenging its monopoly). Thus, there may be defensive strategies that differ from those based solely on a short-term evaluation.

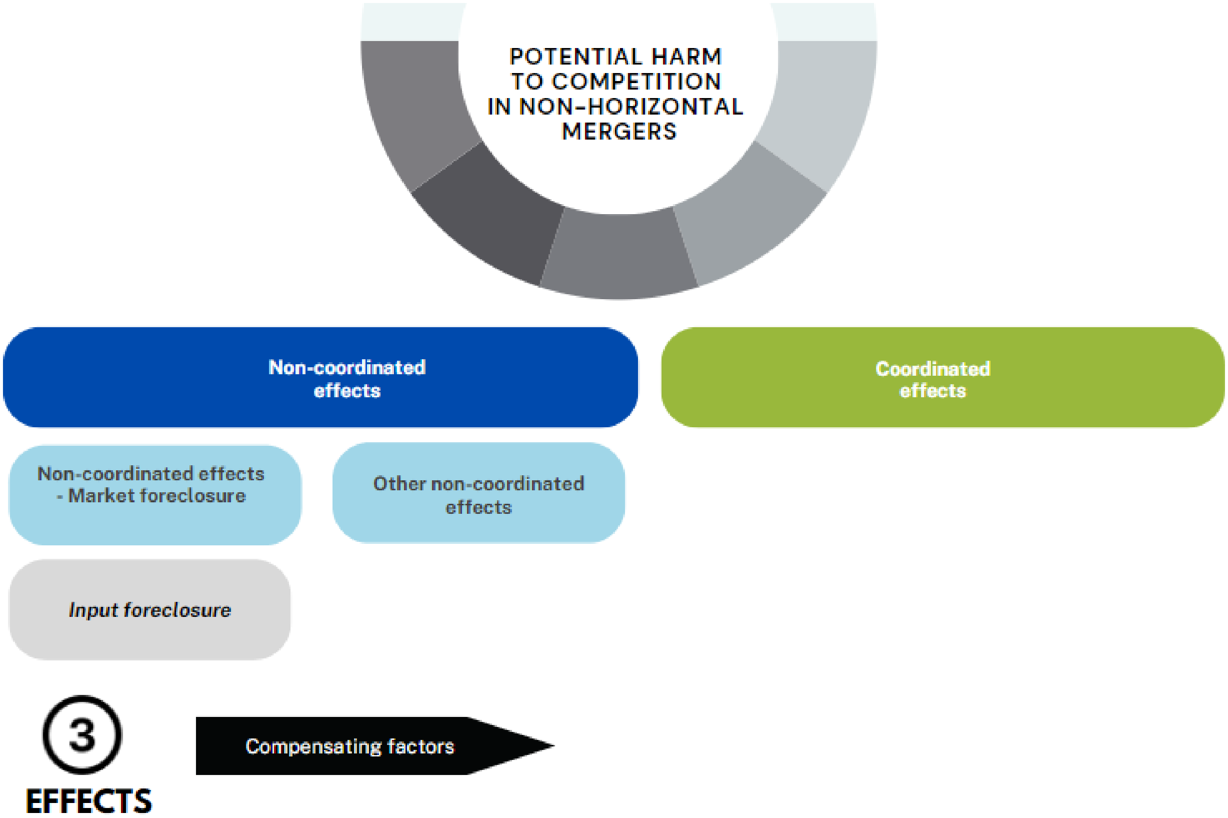
Other factors that could be taken into consideration include the corporate structure of the integrated firm (for instance, the presence or absence of shared control in one of the vertically integrated entities), the type of commercial strategies already adopted in the past, or the content of the firm's internal strategic documents. It is important to note that partial and total ownerships confer different incentive structures for foreclosure (or other theories of harm), so they must be weighted, as incentive alignment is not one-sided.

III.1.1.3. Input Foreclosure - Effects

The foreclosure of the input market will only impact competition if, by reducing access to its own products or services in the upstream market, it negatively affects the overall availability of goods and services in the downstream market, in terms of price or quality.

Thus, the concern lies in the risk of the new integrated firm using its control over a key input to undermine the competitive conditions for its downstream rivals, for example by refusing to supply the input (total foreclosure) or by raising the price or lowering the quality of the input supplied to them (partial foreclosure). This can harm overall competition in the downstream market to the detriment of customers. Furthermore, this may occur regardless of whether the companies involved in the transaction have a pre-existing business relationship.

Image 12 – Potential harm to competition from non-horizontal mergers – non-coordinated/unilateral effects – input foreclosure effects



Source: prepared by UNDP Consultancy.

The determination of significant harm to effective competition depends on the affected companies playing a sufficiently important role, individually or collectively, in the downstream competition process. In other words, the greater the market share of the competitors affected by input foreclosure, the greater the negative impact of vertical mergers.

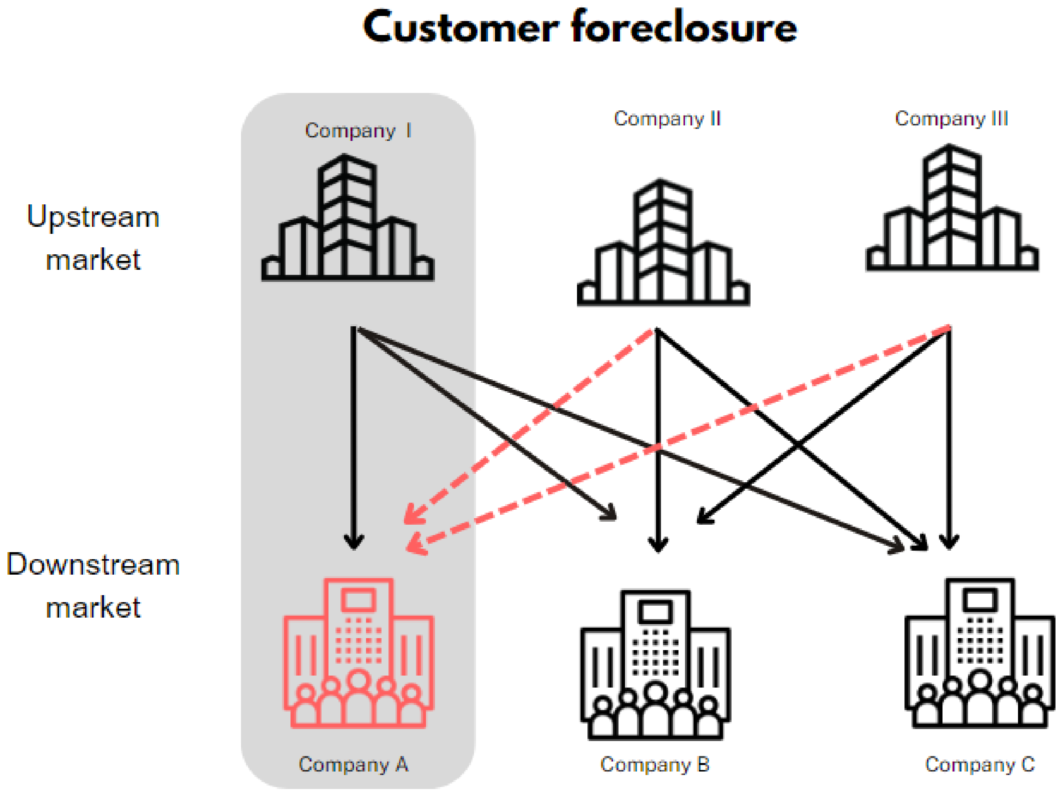
Effective competition could also be significantly constrained by the increase in barriers to entry for potential competitors. Vertical mergers can lead to foreclosure of potential competition in the downstream market when it is likely that the merged entity will not supply inputs to new potential entrants in the downstream market or will only supply them under less favorable conditions than would be applicable in the absence of the merger. Effective competition tends to be weakened by an increase in entry barriers, especially in the scenario where input foreclosure forces potential competitors to enter both the downstream and the upstream markets to compete effectively in either of the two markets.

The effect on competition of input market foreclosure must be assessed in light of compensating factors. Vertical mergers typically yield efficiency gains as mentioned previously (such as potential reduction of double marginalization). Therefore, it is up to the applicants to demonstrate and quantify, whenever possible, these efficiencies in order to evaluate the net effect of the merger, that is, whether the efficiency gains compensate for any potential issues arising from the risk of market foreclosure.

III.1.2. Customer foreclosure

Customer foreclosure may occur when a potential transaction between vertically related companies results in an upstream restriction or suppression of access by competitors (current or potential) to a sufficient customer base, reducing their ability or incentive to compete.

Image 13: Customer foreclosure



Source: elaboration UNDP Consultancy.

As already explained in Section II.3. above, the methodology of assessment consists of the following steps: (1) ability, (2) incentive, and (3) effects.

III.1.2.1. Customer foreclosure - Ability

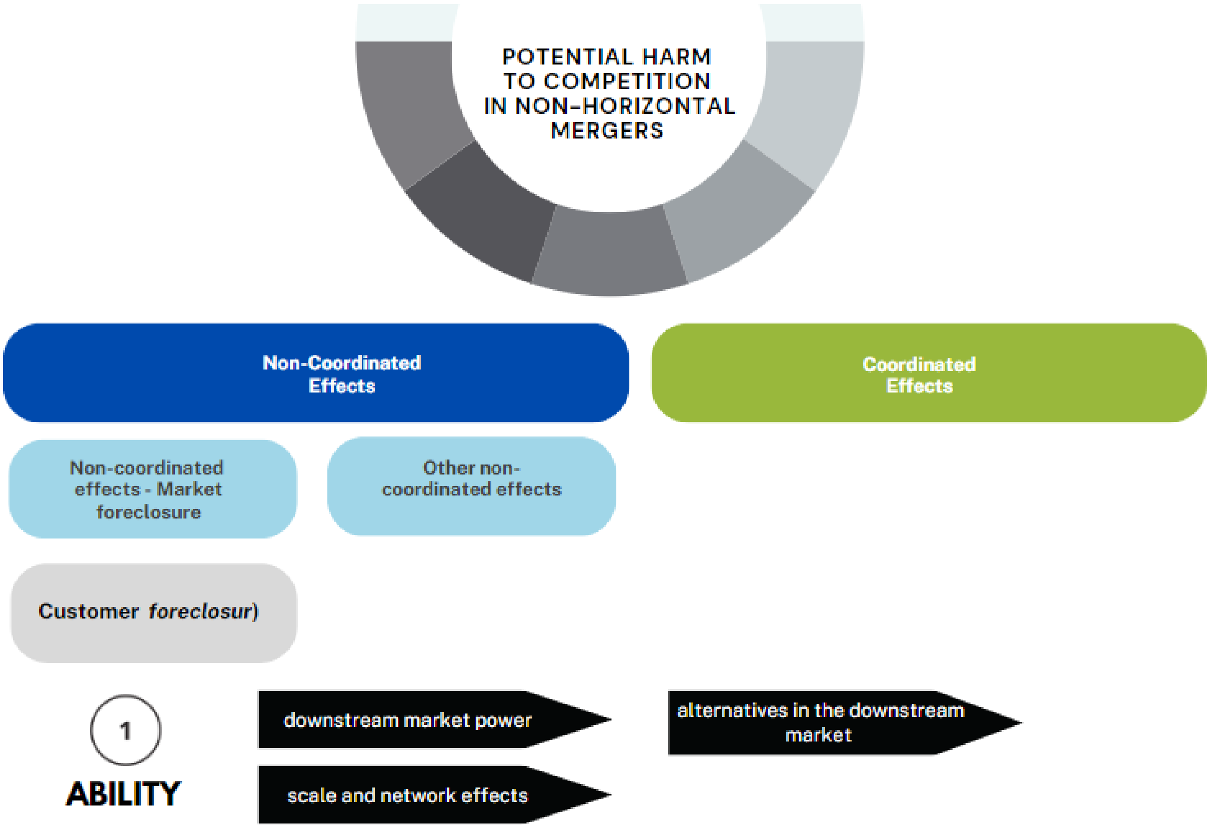
A customer-market foreclosure can be verified when, after the integration between a supplier (upstream) and an important customer in the downstream market, this customer breaks ties with another rival supplier, current or potential, in the upstream market. Thus, these upstream rivals may see their ability or incentive to compete in this input market reduced, as they lack access to a significant customer base. This situation may lead to an increase in the costs of downstream competitors, making it difficult for them to acquire inputs at prices and conditions similar to those that would have prevailed if the merger had not taken place. For customer foreclosure to be detrimental to consumers, it is not necessary that the merged entity's competitors be forced out of the market. The question that must be answered in this type of analysis is whether or not the increase in input costs causes an increase in prices (or a worsening of other conditions) for consumers.

Therefore, the capacity of foreclosure can be implemented in many alternative or complementary ways, such as:

- Obtaining all the inputs needed from its own upstream department and thus stopping purchases from upstream competitors;
- Reduction of purchases from upstream competitors;
- Increased costs in the downstream market, due to lack of adequate inputs produced at the appropriate scale;
- Increased access costs to downstream customers;
- Closing distribution channels to other input producers;
- Restricting access to a significant customer base.

Some assumptions tend to be relevant to the capacity analysis, as shown below, among which the following stand out: downstream market power (III.1.2.1.), importance of scale and network effects (III.1.2.1.2), and alternatives in the downstream market (III.1.2.1.3).

Image 14: Potential harm to competition from non-horizontal mergers - non-coordinated/unilateral effects - ability to foreclose the customer market (customer foreclosure)



Source: elaboration UNDP Consultancy.

III.1.2.1.1. Downstream market power

In the case of customer foreclosure, it is necessary to verify whether the integration involves a firm with high market power in the downstream market

In this context, the power of an agent in the downstream market usually depends more on its purchasing power (share of the input purchase) than on its share in the sales of downstream products. It is not uncommon for an input to be used to produce goods/services that are part of distinct relevant markets. It is also not uncommon for the geographic dimension of the input purchase market to differ from that of the final product sales market. Therefore, high participation in downstream markets does not necessarily indicate that a firm has the capacity to foreclose the market.

When customer foreclosure has an impact on upstream competitors' revenue streams, it can significantly reduce their capacity and incentive to reduce costs, as well as their incentive to invest in research and development and product quality.

In practice, the possibility of downstream market foreclosure occurs when the upstream firm has market power and incentives to direct its products/services exclusively to the verticalized firm, or even to practice behaviors that tend to increase the costs of downstream competitors, such as price discrimination.

It is necessary to assess whether the integrated firm would have the capacity to prevent access to downstream markets by reducing the volume of sales available to its upstream rivals. If there is a sufficiently large buyer base, current or potential, that can turn to independent suppliers, the capacity for foreclosing becomes less significant. Thus, a firm's share of the purchasing market for an input may be a better measure of its ability to block access to customers than its share of sales of downstream products.

In contrast, it is possible to verify whether there are effective, timely, and sustainable long-term strategies that competing companies can, with a high degree of probability, use to counteract the action of the newly integrated firm (*e.g.* aggressive pricing policy to maintain sales levels in the downstream market).

III.1.2.1.2. Importance of economies of scale in the market and upstream network effects

Customer foreclosure can increase input prices if there are economies of scale (especially when there are upstream competitors operating at or near the minimum efficiency threshold and, with customer foreclosure and loss of production to competitors, there is an increase in the average cost of production, resulting in upward pressure on prices to customers) or when demand is characterized by network effects.

In the case of economies of scale, customer foreclosure may result in less attractiveness for entry into the upstream market for potential competitors, as it significantly reduces their revenue prospects.

In these cases, the entry of potential upstream competitors also ends up being discouraged, given the lower attractiveness resulting from the reduction in margins caused by the reduction in scale and/or scope.

III.1.2.1.3. Downstream market alternatives

When determining the ability of the merged entity to foreclose access to downstream markets, one should analyze whether there are sufficient economic alternatives in the downstream market for competitors (current or potential) located upstream to sell their output (and whether other downstream competitors would be subject to a limited supply of less efficient inputs after the merger in question).

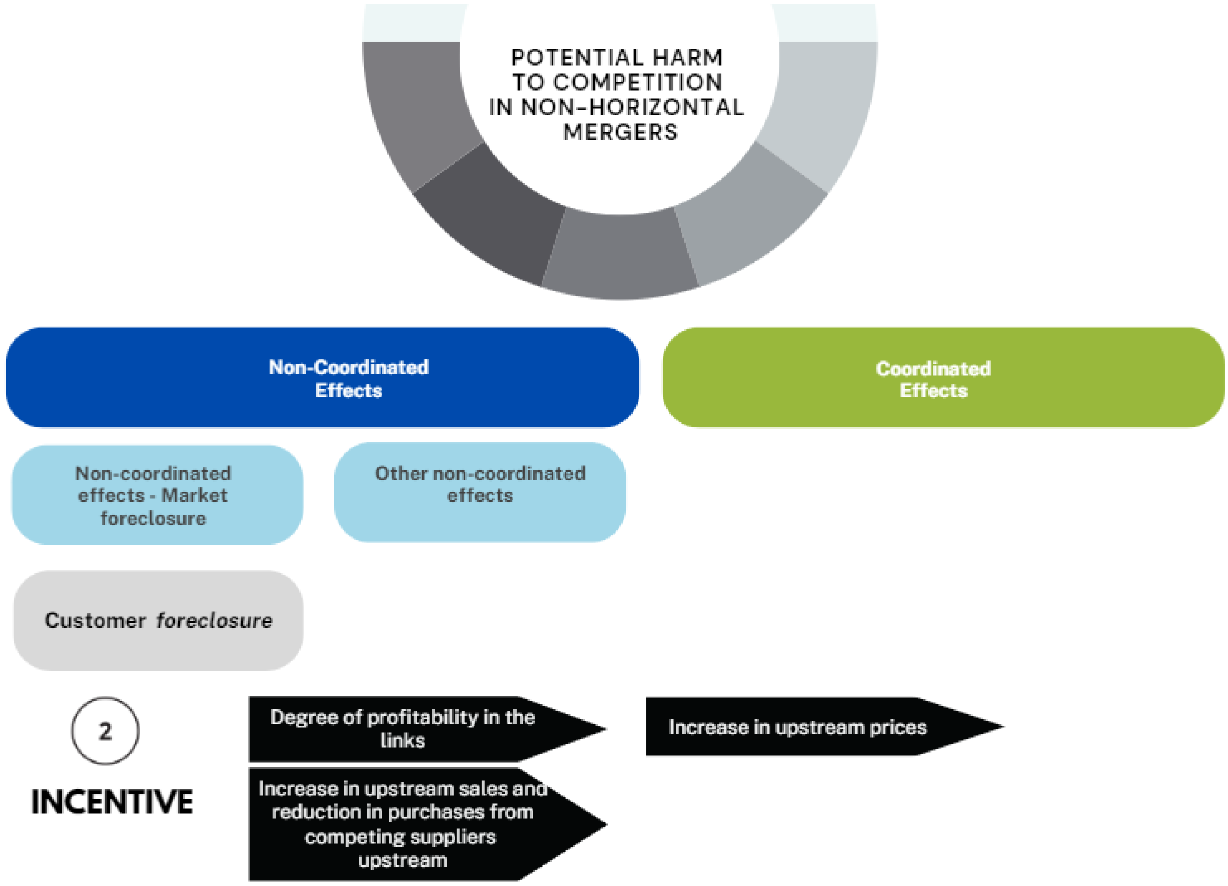
Thus, for customer foreclosure to become a competitive concern, vertical mergers must involve a firm that is an important customer, with a significant degree of power in the downstream market and that can affect input prices by limiting the level of efficiency in the upstream. If, on the contrary, there is a sufficiently broad customer base, current or potential, available (regardless of concentration) and likely to resort to independent suppliers, competition concerns would be unlikely.

The existence or absence of different markets corresponding to different uses of the input should also be considered. An upstream supplier can continue to operate efficiently if it finds other uses or secondary markets for its inputs without incurring significantly higher costs.

III.1.2.2. Customer foreclosure - Incentives

Despite having the ability to foreclose the input market, it is necessary to assess whether the integrated firm will have the incentives to do so. This analysis involves a series of factors, among which the following stand out: the degree of profitability in the downstream and upstream links (III.1.2.2.1.), the increase in upstream sales and reduction in purchases from competing suppliers upstream (III.1.2.2.2.), and the increase in upstream prices (III.1.1.2.3.).

Image 15: Potential harm to competition from non-horizontal mergers - non-coordinated/unilateral effects - incentive to customer foreclosure



Source: elaboration UNDP consultancy.

III.1.2.2.1. Degree of profitability in the downstream and upstream links

The incentives to adopt a market foreclosure strategy depend on its profitability, as the merged entity must weigh, on the one hand, the costs associated with not purchasing products from upstream competitors and, on the other hand, what will be gained with this strategy (*e.g.*, upstream or downstream price increases), in the short and long term.

III.1.2.2.2. Increased upstream sales and reduced purchases from competing upstream suppliers

The integrated firm again faces a trade-off between the possible costs associated with not purchasing products from upstream rivals and the possible gains from doing so arising, for example, from the possibility of being able to raise prices in the upstream or downstream markets.

This also occurs if this unit does not have idle capacity or if inputs from rival companies are of better quality or have some type of differentiation relevant to the integrated firm.

The costs associated with reducing purchases from competing upstream suppliers are higher when the integrated enterprise's upstream department is less efficient than the suppliers being closed down (*e.g.*, capacity constraints or undifferentiated products).

III.1.2.2.3. Upstream price increase

The integration between a supplier and a major customer in the downstream market gives the merged entity the possibility to foreclose its current or potential competitors in the upstream market to a sufficient customer base, reducing its ability or incentive to compete. This situation may increase the costs for downstream competitors, making it difficult for them to supply inputs at prices and conditions similar to those that would have prevailed if the merger had not taken place. The integrated firm can, thus, profitably charge higher prices in the downstream market.

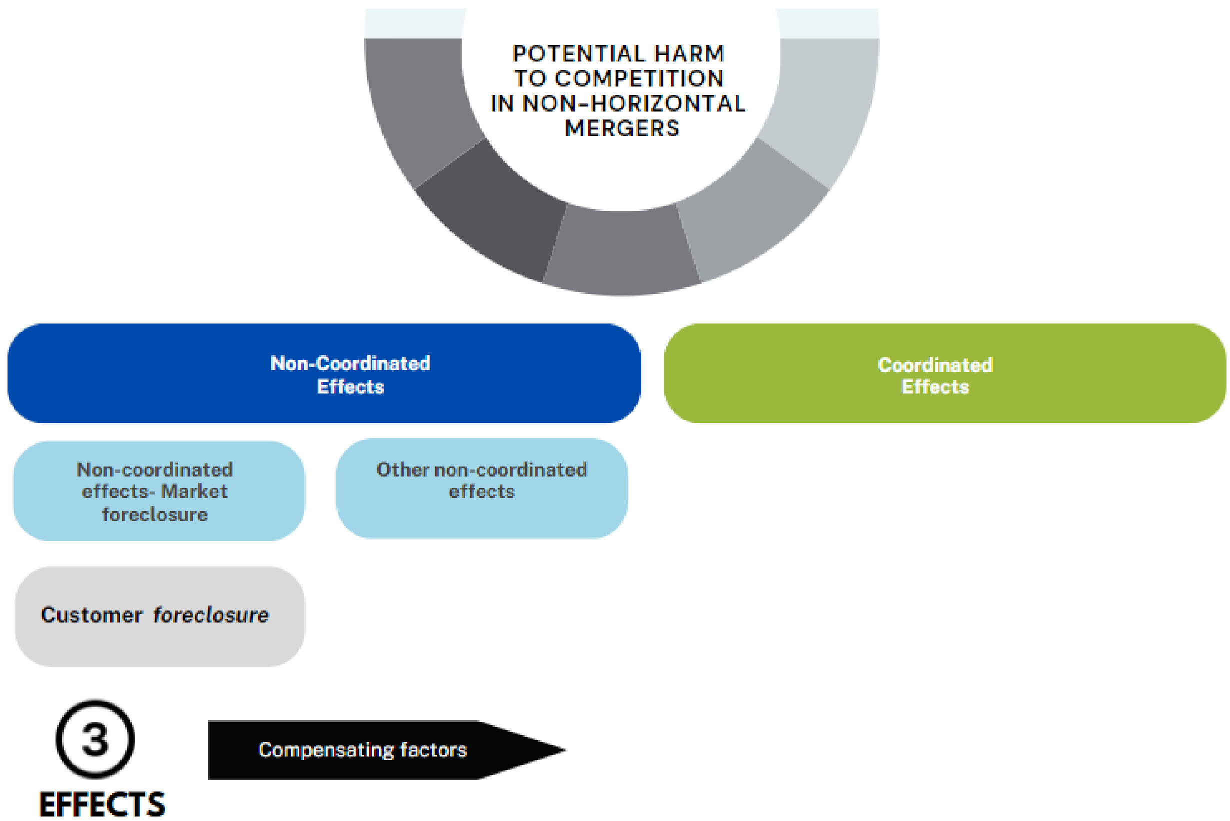
The incentives to adopt a customer foreclosure strategy depend on the extent to which the merged entity's upstream department can benefit from price increases in the upstream market resulting from the foreclosure of upstream competitors. The incentives will be greater the more likely the downstream department of the integrated firm will be able to benefit from the downstream price increase resulting from the foreclosure. Thus, the greater the downstream market share, the greater the sales base on which higher margins can be obtained.

As the restriction of access to buyers and the consequent reduction in sales by rivals upstream increase the variable costs of production in this market, increasing pressure is generated on the prices charged for inputs by companies downstream.

III.1.2.3. Customer foreclosure - Effects

By denying (upstream) competitors' access to a significant customer base for their products, the merger may reduce these competitors' ability to compete for the foreseeable future. In this way, downstream competitors' risk being put at a competitive disadvantage, for example through an increase in their input costs, while the integrated firm may raise prices or reduce total output in the downstream market.

Image 16: Potential harm to competition from non-horizontal mergers - non-coordinated/unilateral effects - effects of foreclosing the customer market (customer foreclosure)



Source: elaboration UNDP Consultancy.

The restriction would be significant to effective competition in the upstream market if customer foreclosure affects a significant proportion of upstream production, through the reduction in revenues caused by the vertical integration.

Effective competition could also be significantly constrained by raising entry barriers for potential competitors, especially if foreclosure to customers forces potential competitors to enter both the downstream and upstream markets in order to be able to compete effectively in either market.

The negative impact can be subtle, as foreclosure for customers may occur in the revenue streams of upstream competitors', reducing their incentive to invest in cost reduction, product quality or other competitive factors.

For customer foreclosure to be harmful to consumers, it is not necessary that competitors are excluded from the market. It is enough to verify whether or not the increase in input costs causes an increase in prices for consumers. Effective competition in the upstream market can also be significantly impacted by creating barriers to entry for potential competitors.

It is necessary to assess the net economic effect of the transaction to verify whether the upward price pressure cannot be canceled out by the downward price pressure related to the elimination of double marginalization (if any); reduction of transactional costs; better organization of processes; reduction of coordination problems and hold-up or other efficiencies.

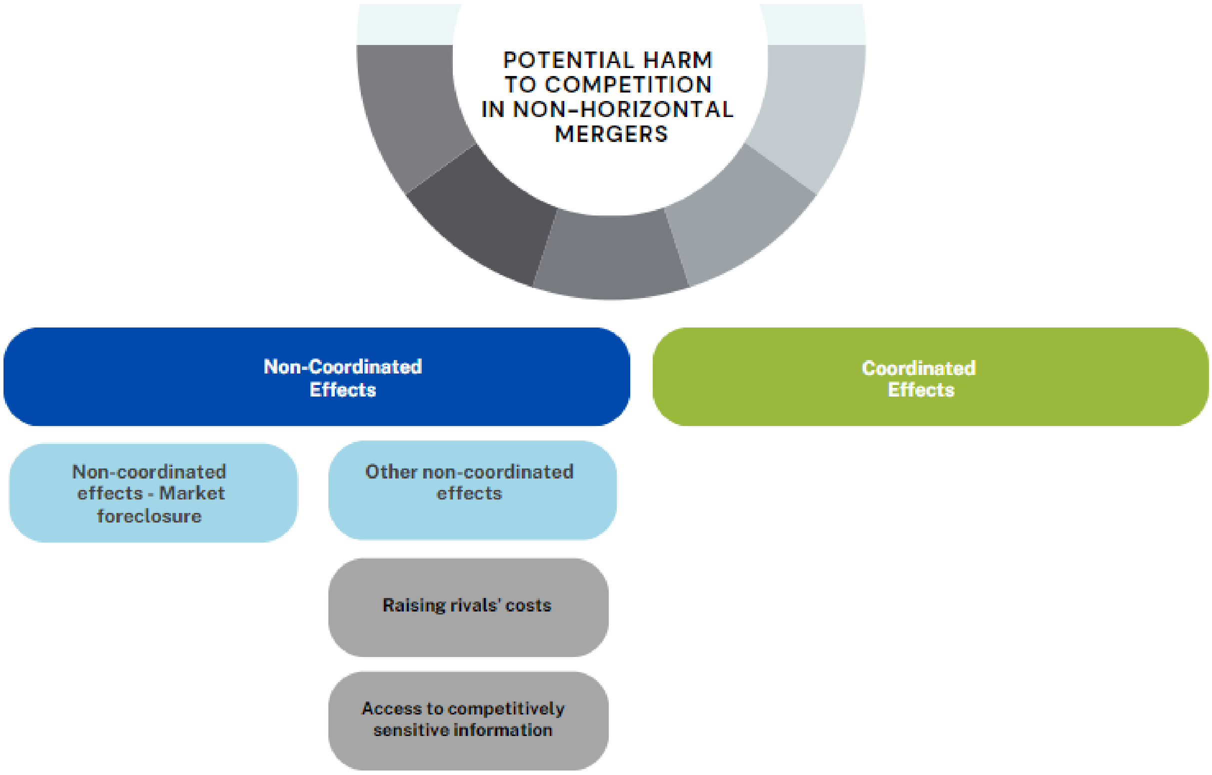
In contrast, it is necessary to assess whether there are other unaffected upstream competitors so that the competition exercised by them is sufficient to avoid an increase in upstream prices and, consequently, in the downstream market. For these companies to exercise sufficient competitive pressure, it is necessary that they are not confronted with barriers to expansion (*e.g.* capacity restrictions or product differentiation). Elements such as the presence of bargaining power of buyers or the likelihood that the entry of new upstream competitors will preserve effective competition in upstream or downstream markets should also be analyzed.

The impact on consumers may take some time to materialize, as the primary impact of foreclosure is on upstream rivals' revenues, reducing their incentives to invest in cost reduction, product quality improvement or other competitive dimensions.

III.2. Other non-coordinated/unilateral effects

The hypotheses of non-coordinated anti-competitive effects arising from vertical mergers are various, among which the following stand out when it comes to other non-coordinated effects: increase in rivals' costs (Section III.2.1.) and access to competitively sensitive information (Section III.2.2.).

Image 17: Potential harm to competition from non-horizontal mergers - other non-coordinated/unilateral effects

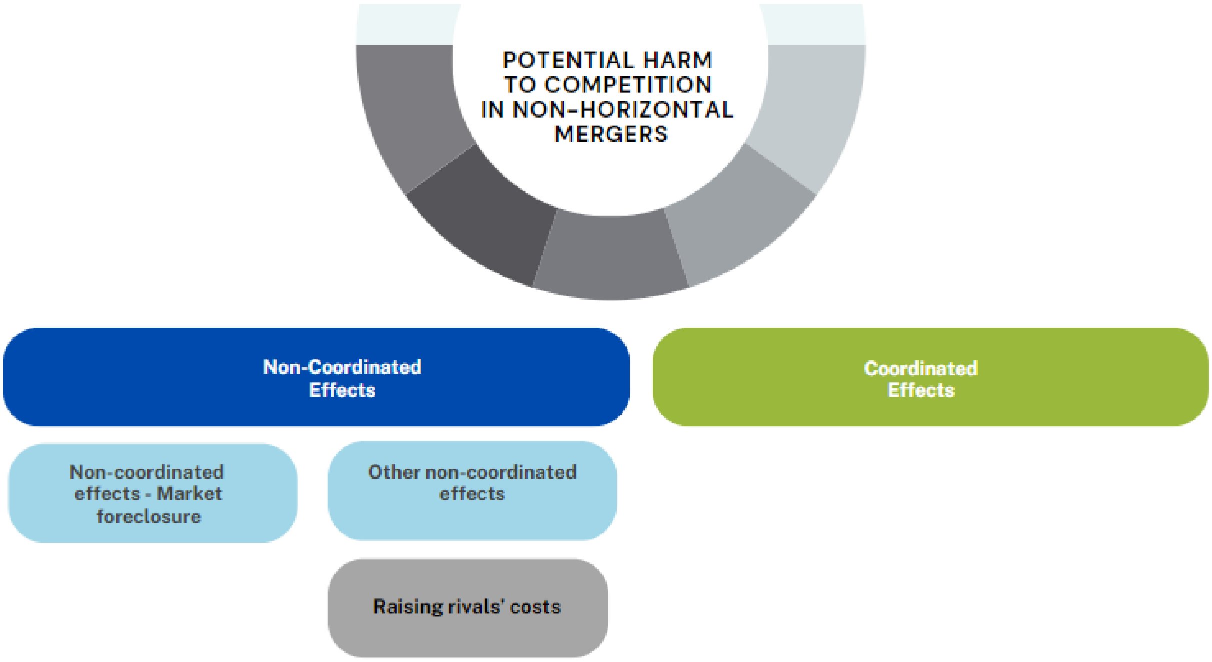


Source: elaboration UNDP Consultancy.

III.2.1. Raise of rivals’ costs

The merged entity could, through vertical integration, raise rivals' costs.

Image 18: Potential harm to competition from non-horizontal mergers - other non-coordinated/unilateral effects – increase in rivals’ costs



Source: elaboration UNDP Consultancy.

If, on the one hand, the analysis of market foreclosure (Section III.1.) takes into account the conduct of the vertically integrated firm after the transaction and its potential incentive to deny or restrict access to a certain input or distribution channel to its competitors, the analysis of rising costs of rivals, on the other hand, focuses on the performance of other non-vertically integrated suppliers that, as a result of the transaction, may be able to increase their market power and, therefore, put pressure on the costs of downstream competitors.

A certain vertical merger, for example, can lead to a reduction in the supply of a given input, generating shortages and, consequently, increasing the capacity of other upstream suppliers to raise prices of that input. This scenario could result in an increase in the internal costs of market agents in the downstream segment. Furthermore, as the integrated entity will probably continue to have access to the same input at lower costs, this tends to ensure it has a more favorable condition to compete with upstream companies, which may influence competitive conditions in the market.

Another possible way to raise rivals' costs is that, under certain circumstances, a vertical merger can raise barriers to entry in one or both vertically related markets. In this case, it is possible for an entrant to be forced to enter two vertically related markets simultaneously, instead of just one of them - which would make entry costlier for this agent and, ultimately, could discourage it from effectively entering this segment.

In this way, the assessment focuses not only on the integrated firm and on the impacts of the transaction on the affected upstream and downstream markets, but also on the possible effects the transaction may generate on the behavior of rivals.

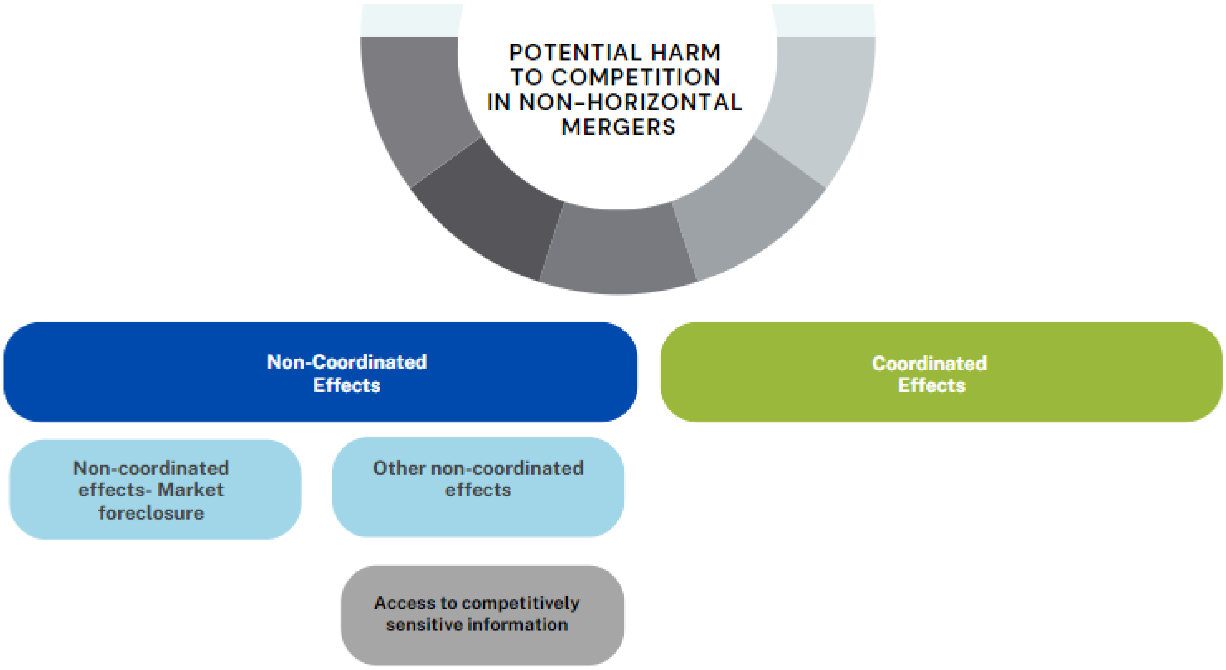
Therefore, to assess the risks of the transaction resulting in the raising of rivals' costs, some elements must be considered, such as:

- Number of companies remaining in the markets affected by the transaction;
- Number of vertically integrated competitors in affected markets. The higher the number, the more likely it is that an entrant will have to start transactions in both vertically integrated markets at the same time;
- Homogeneity of products;
- Rivalry in affected markets prior to the transaction;
- History of competitors' prices, among others.

III.2.2. Access and use of rivals' competitively sensitive information

The merged entity may, through vertical integration, gain access to competitively sensitive information concerning the upstream or downstream activities of its competitors that were not available to at least one of the parties prior to the transaction.

Image 19: Potential harm to competition from non-horizontal mergers - other non-coordinate/unilateral effects - access and use of competitively sensitive information



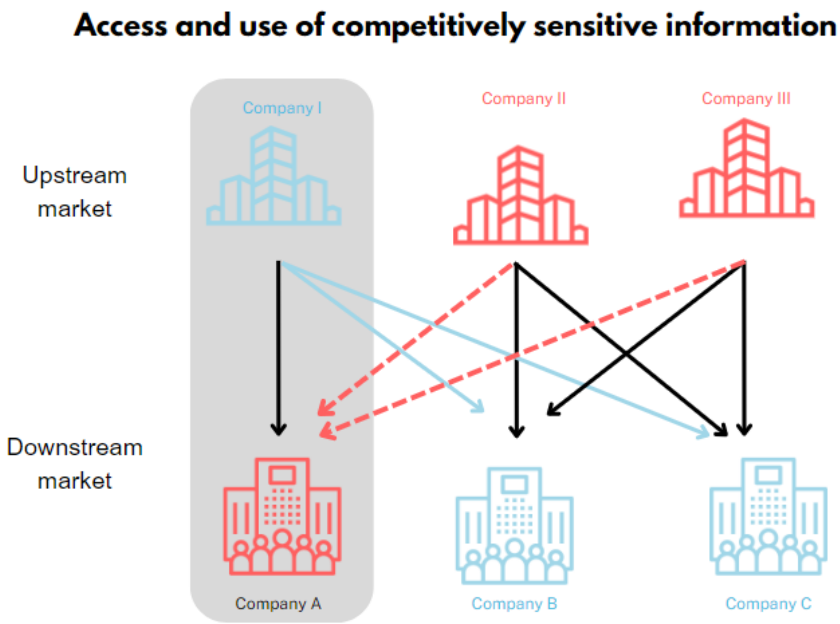
Source: elaboration UNDP Consultancy.

Usually, each party already has access to some information about their customers (in the downstream market) and their suppliers (in the upstream market), given that this type of relationship is inherent to any business model. In a negotiation between companies with a supplier-customer relationship, information is shared that may be considered competitively sensitive, depending on the context applied to the specific case, such as: price, delivery and payment terms, product specifications, customization of technologies, sales volumes, general pricing strategies, technical specifications of products, expansion and innovation plans, etc. After a vertical transaction, however, the integrated/verticalized firm will have access to information about its competitors (at least those who were already customers/suppliers of one of the parties before the transaction).

Under certain circumstances, access to this competitively sensitive information may result in less competition in the markets in which the integrated/verticalized firm operates, since the integrated firm may gain a competitive advantage in the market by having access to competitor information, which it did not have before the transaction.

This occurs when i) the downstream division of the vertically integrated firm continues to acquire part of its inputs from supplier companies competing with its upstream division; or ii) the upstream division continues to supply part of its production to consumer companies competing with its upstream division.

Image 20: Potential harm to competition from non-horizontal mergers - other non-coordinated/unilateral effects - access and use of competitively sensitive information



Source: elaboration UNDP Consultancy.

The integrated firm may, for example, through its upstream link, which is a supplier of a competitor in the downstream link, have access to relevant information about this competitor, since it is also its customer. Such access may, among other things, cause the vertical firm to price less aggressively, harming consumers, or to put this competitor at a competitive disadvantage.

The antitrust authority must identify whether the information to which the verticalized firm will have access after the transaction is, in fact, competitively sensitive information. It is also necessary to evaluate the potential competitive effects arising from access to this information, since there are also efficiencies resulting from vertical integrations related to the reduction of informational asymmetry between economic agents.

The assessment to identify situations in which information sharing may be harmful to competition must be guided by parameters such as:

a) Market structure - the potential harm to competition from access and use of competitively sensitive information from rivals resulting from a vertical integration is amplified in proportion to the degree of concentration of the markets in question. In more concentrated markets, it may be easier to identify and obtain data from competitors in upstream and downstream links, via reverse data engineering. Relevant criteria for identifying market concentration are: (i) composition of C4; (ii) HHI levels; (iii) contestability analysis – rivalry and barriers to entry; and (iv) qualitative analysis of the market – if composed of homogeneous/differentiated products and competitive pressure exerted by imports;
b) The type of information shared and its competitive relevance - there are different degrees of potential harm to competition in different data. Depending on the analyzed market, it is necessary to check which types of information are more competitively sensitive, such as prices, installed/idle capacity, installed distribution locations, for example[18];
c) Level of disaggregation – the potential harm of access and use of sensitive information is proportional to the level of the granularity of the information. The more individualized the variables that would be accessible by vertical integration, the greater the presumption of harm from vertical mergers;
d) Contemporaneity/historicity - access to competitors' information becomes less relevant as the information ages, considering the particularities of each relevant market. Information on the current and future actions of competitors has the greatest potential to harm competition, the degree of harm progressively decreases over time;
e) Whether the source of the information is public or private;
f) Whether the provision of the information is shared or not;

[18] According to CADE's Guidelines for the Analysis of Previous Consummation of Merger Transactions, competitively sensitive information is specific information (for example, not aggregated) that directly relates to the performance of the core activities of economic agents. According to the Guidelines, this information includes specific data on: costs of the companies involved; capacity level and expansion plans; marketing strategies; product pricing (prices and discounts); main customers and guaranteed discounts; employee salaries; main suppliers and terms of contracts concluded with them; non-public information about trademarks, patents, and Research and Development (R&D); future acquisition plans; competitive strategies, etc. CADE. Guidelines for the Analysis of Previous Consummation of Merger Transactions by Cade. 2015. Available at: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/guias-do-cade/gun-jumping-versao-final.pdf.

g) The frequency/periodicity of access/use of information.

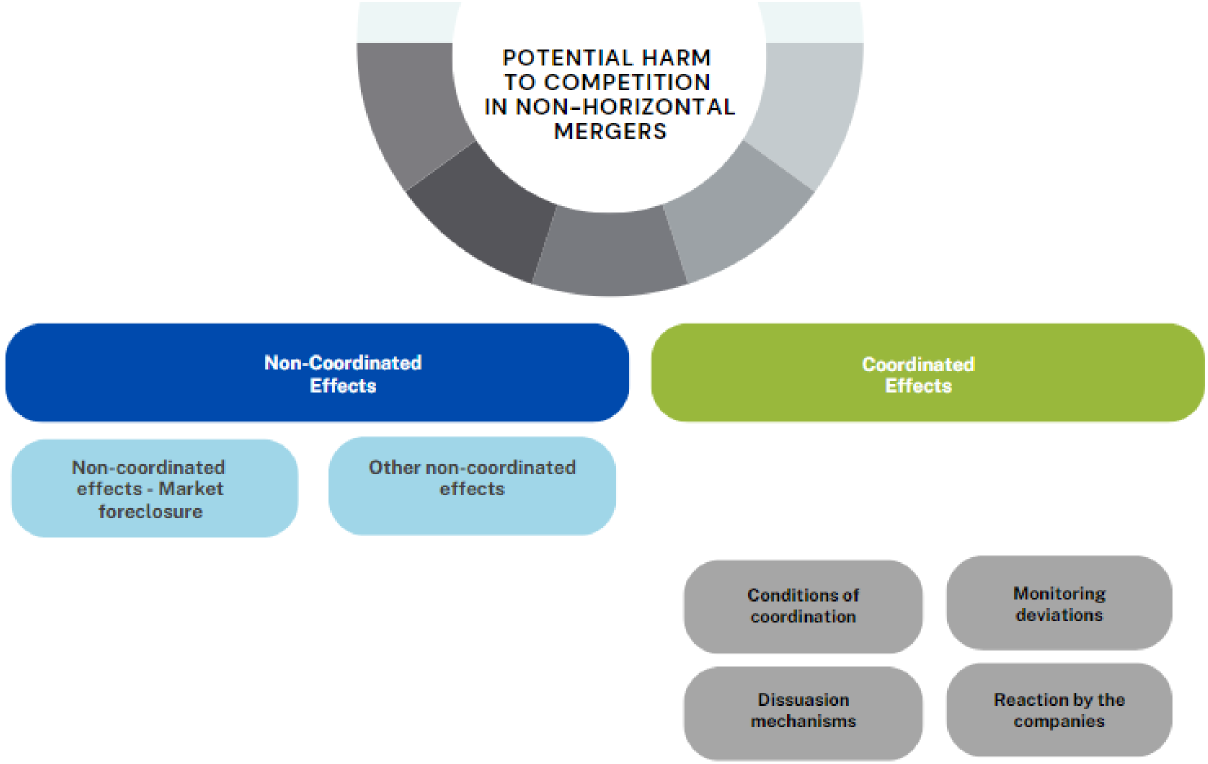
Specifically, on the sharing resulting from the integration and the way it can be harmful to competition, the analysis must be guided by parameters such as:

a) The possibility and probability of obtaining a competitive advantage as a result of sharing this information;
b) The dimension of the competitive advantage that can be obtained as a result of sharing this information, given that other agents do not have the same informational set;
c) The possibility of avoiding or restricting the scope of sharing the information, both by reducing the amount of information shared, or by establishing internal mechanisms for restricting access to this type of information.

III.3. Coordinated Effects

In addition to non-coordinated/unilateral effects, vertical mergers can increase the likelihood of explicit or tacit coordination between competitors or can intensify or facilitate the coordination of collusive strategies that already existed in the market before the transaction. As coordinated actions between competitors can negatively affect the well-being of consumers, the antitrust authority assesses possible coordination risks arising from the transaction.

Image 21: Potential harm to competition from non-horizontal mergers - coordinated effects



Source: elaboration UNDP Consultancy.

The antitrust authority, therefore, must analyze whether the conditions present in the market where the vertical merger took place favor coordination between the actors and whether there is a risk that the transaction will contribute to collusion between the companies. That is, in addition to verifying the current characteristics of the market before the transaction, the authority must analyze whether and how the transaction will affect such market conditions, making potential collusion more likely to occur.

It is argued that vertical mergers can favor collusion, since (i) they reduce the number of players in the market, which may facilitate coordination between companies; (ii) they increase the possibility of dissuasion mechanisms by the integrated firm; and (iii) they reduce the possibility of reaction from firms that do not participate in the coordination and are not integrated, among other factors.

A quantitative parameter that can be used to identify cases in which the chances of developing post-transaction collusion are higher is the use of the C4 index.[19] Transactions that result in a C4 higher than 75% in the upstream or downstream markets may generate greater concerns regarding potential coordinated effects, requiring further analysis to verify other market conditions, such as the homogeneity of the good/service in question; the price elasticity of demand; entry barriers; degree of innovation in the market; and the history of collusion in the markets under analysis.

Additionally, as noted in "Guide H", other factors may increase the likelihood of coordinated effects:

- Reduced number of firms and concentration of a large portion of the supply in a few firms;
- Interaction in several markets (for example, recurring contacts in several markets through several products and production units and distribution) also made possible by vertical transactions in two or more markets;
- Reduced ability of rivals to expand supply in the short term;
- Productive symmetry between companies or technological homogeneity;
- Product homogeneity and no need for customization;
- Reduced purchasing power of customers;
- Frequent and small orders;
- Low elasticity of market demand;
- Transparency in pricing, operating capacity, customer base, and other relevant information about competitors and their behavior;
- Technological stability of products and processes;
- Market maturity and predictability of demand;
- Absence of more aggressive pricing conducts that are not committed to cooperation (mavericks);
- History of coordination in the relevant market under analysis, or in product markets of comparable geographic size;

[19] C4 is the calculation of the aggregated market share of the four biggest companies in the market (Concentration Ratio 4).

- Corporate, business or commercial relationships that may restrict rivalry or increase the transparency of firms' information in the market;
- Low cost of capital.

The absence of some of the above characteristics or the presence of others that reduce the probability of coordination must be weighed and evaluated with other case evidence.

The conditions for coordination are increasingly favorable as (a) the products traded are less differentiated; (b) pricing or commercial measures are public; (c) pricing or changes to commercial conditions are more recurrent – enabling faster reactions; (d) cost structures are more homogeneous – making it easier to isolate profit margins; and (e) the level of market concentration – the more concentrated, the greater the risk of coordination.

The possibility of monitoring possible coordination decreases as the informational barriers of the market under analysis become more relevant. The greater the informational asymmetries, the less public the price information and more differentiated the products, the lower the possibilities of monitoring deviations from coordinated action.

The hypotheses of coordinated anti-competitive effects resulting from vertical mergers are varied, among which the following stand out: conditions of coordination (Section III.3.1.), possibility of monitoring/verifying deviations (Section III.3.2.), existence of dissuasion mechanisms (Section III.3.3.) and probability of reaction by non-participating companies (Section III.3.4.).

III.3.1. Conditions of coordination

A vertical merger can enable companies in the downstream or upstream markets to reach a consensus on the conditions of coordination more easily, due to the reduction in the number of effective competitors, the increase in the degree of symmetry between the companies active in the market, and the increase in the degree of transparency of the market.

III.3.2. Possibility of monitoring/verifying deviations from coordinated action

Vertical mergers can facilitate coordination, by increasing the degree of market transparency between companies, through access to sensitive information regarding competitors or facilitating price verification, for example. Thus, by increasing the degree of transparency of the market between companies, vertical integration can enable the monitoring/verification of deviations from a coordinated action, facilitating coordination.

III.3.2. Existence of mechanisms to deter deviations

Vertical mergers could affect the incentives of companies participating in coordination to comply with coordination conditions, given that an integrated firm could more effectively punish competing companies that deviate from the agreement, since it would be a customer or supplier.

If upstream companies consider sales to a particular customer to be very relevant, they may be tempted to deviate from collusion in an attempt to serve that customer. In the same way, an important buyer may be able to convince the companies participating in the coordination to disregard the agreement, buying a high proportion from a single supplier or offering long-term contracts. The acquisition of such a buyer can increase the risk of market coordination.

III.3.3. Probability that the reaction of companies not participating in the coordination could harm the expected results of the coordination

Vertical mergers could reduce the leeway available to non-coordinated companies to destabilize the market by raising entry market barriers or limiting their ability to compete in other ways.

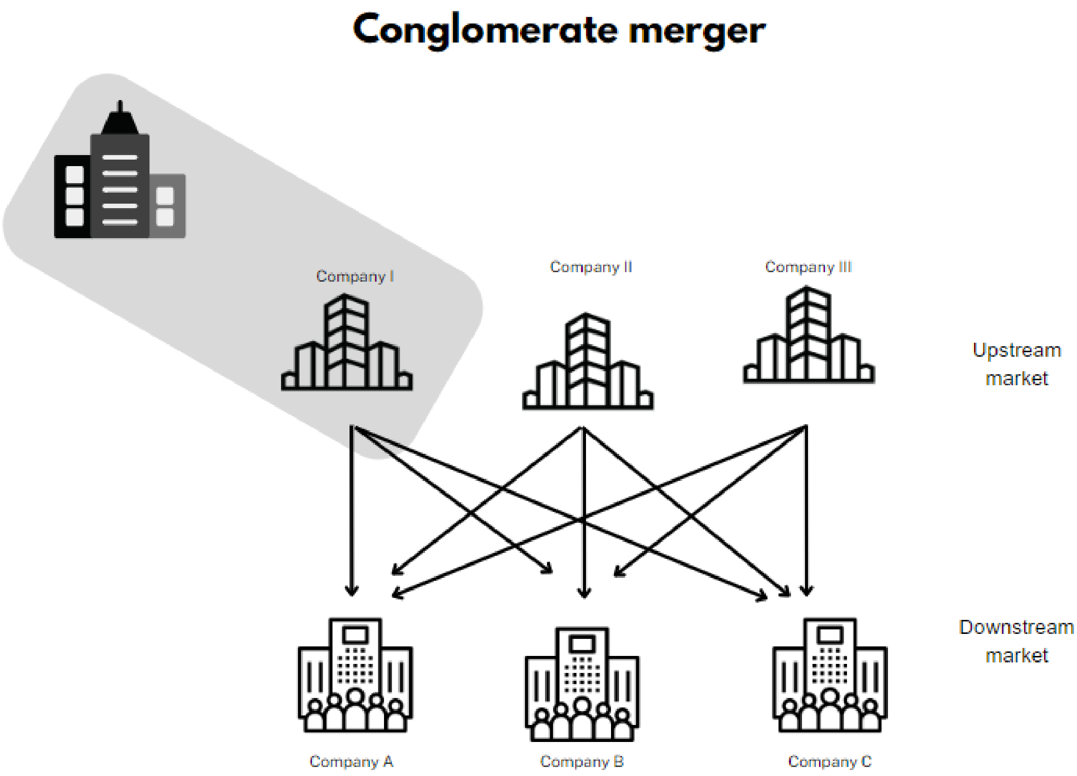
IV. CONGLOMERATE MERGERS

Conglomerate merges, in turn, tend to be defined by exclusion, that is to say, those that do not encompass horizontal, diagonal or vertical relationships. They are, therefore, transactions in which the activities of the companies involved are somehow related (*e.g.*, they are intended for the same intermediary customers or final consumers; products used or consumed together; products from similar production processes). The term may also be used to refer to strict conglomerate mergers or to the conglomerate element of a more complex transaction given that, in practice, it is common to find transactions that involve horizontal, vertical and conglomerate aspects simultaneously.

A conglomerate merger[20] may occur with the intention of: (i) increasing the scope of production with the products or services having some consumer relationship; (ii) expanding geographic presence, when companies manufacture the same product in different regions and use mergers to integrate these markets; (iii) entering a new market previously unexplored by the companies involved.

[20] For more details on conglomerate mergers, please see the Work Document of CADE's Department of Economics (DEE) on the subject: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/estudos-economicos/documentos-de-trabalho/2023/Documento-de-Trabalho-Fusoes-Conglomerais.pdf.

Image 22: Example of conglomerate merger



Source: elaboration UNDP Consultancy.

The products or services involved in conglomerate integrations can be classified as: (i) complementary, (ii) substitutes to some degree or (iii) unrelated.

Complementary products or services (i) are purchased separately but used together. As a rule, they tend to be purchased by the same group of consumers.

In turn, substitute products or services (ii) may, for some customers or specific uses, be used in place of the other, despite not being part of the same relevant market, that is, they are weak substitutes. For conglomerate effects to be possible, they must be purchased by a common set of consumers.[21]

Finally, non-related products or services (iii) are those considered "pure" conglomerates, that is, when the products involved cannot be considered as substitutes

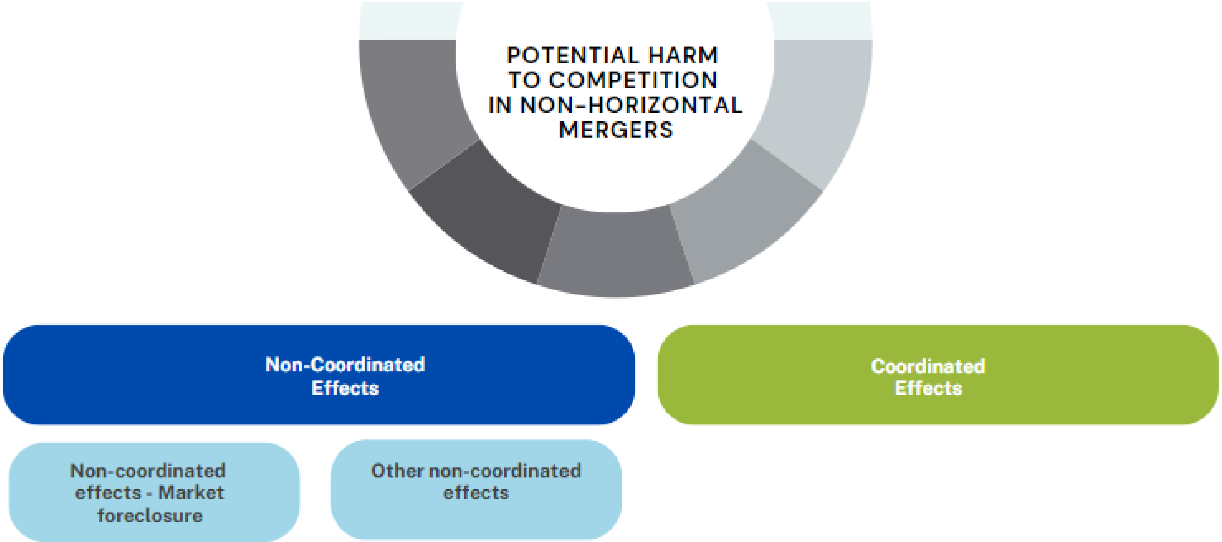
[21] Two examples of neighboring products or services: (a) when the products are independent of each other but share the same distribution channels, promoting distribution economies, and (b) when there are advantages related to providing a large selection of products to consumers, so that the company's demand depends on its product portfolio.

on the demand or supply side, are not part of a vertical relationship and are not seen as complementary or substitutes to some degree.

This Section IV of the “V+ Guide” develops Step III of the analysis of non-horizontal mergers (Section II.3 above), consisting of the analysis of the potential harm to competition downstream and upstream. The premise of the analysis is the existence of market power or dominant position in at least one of the relevant markets involved in the conglomerate transaction.

The hypotheses of non-coordinated/unilateral anti-competitive effects arising from conglomerate mergers are varied, among which the following stand out: market foreclosure (Section IV.1) and other non-coordinated effects (Section IV.2.). The analysis of possible coordinated effects will be detailed in the Section IV.3.

Image 23: Potential harm to competition from conglomerate mergers



Source: elaboration UNDP Consultancy.

IV.1. Non-coordinated/unilateral conglomerate effects – market foreclosure

As for the non-coordinated/unilateral effects of conglomerate mergers, there are concerns about market foreclosure. That is because combining products in related markets could provide the merged entity with the ability and incentive to use, through leverage, its dominant position in one market to strengthen its position in another market.

One of the main concerns of conglomerate mergers is that the resulting entity may prevent its rivals in a given market from accessing customers by using its strong position in a market that is (i) complementary, (ii) a substitute to some degree (weak substitutes) or (iii) unrelated. This may involve linking sales of products belonging to these markets, to the detriment of competitors and, ultimately, consumers.

Another concern related to conglomerate mergers is the portfolio power resulting from the transaction. Portfolio power can hinder the effective entry of new players, the competitor's ability to rival with and facilitate practices that are harmful to competition.

In markets characterized by economies of scope, companies that have a larger portfolio will benefit from lower average production costs than competitors with less variety.

Holding extensive portfolios can reduce customer's transaction costs, as they can deal with only one firm that has different types of products and brands, instead of several small suppliers, one for each product.

Relationships with many suppliers generate significant transaction costs, resulting from aspects such as negotiating prices and conditions for each product, creating and controlling contracts, among others.

However, this power can make it difficult for smaller competitors to access the market, as negotiating with them would result in higher costs for the customer. In the medium and long term, the benefiting firm can take advantage of this situation and exercise the acquired market power, increasing the price of its products and, eventually, gaining market share from smaller companies in the segment analyzed.

The economic agent may use its broad portfolio to adopt aggressive strategies and foreclose markets from competitors, such as reducing prices in a segment where it wants to gain market share while compensating for losses in other markets (cross-subsidies).

Holding an extensive portfolio also has important effects in terms of agents' marketing. Offering several products maximizes the exposure of the firm's brand and the advertising effort is more efficient when the firm has a large portfolio of products, because, by promoting the brand, it is automatically also promoting all of its products.

As already explained in the Section II.3 above, the analysis methodology consists of the following steps: (1) ability, (2) incentive and (3) effects.

IV.1.1. Market foreclosure ability through conglomerate effects

In order to adopt a strategy of excluding competitors in conglomerate integrations, the new entity should hold significant market power in one of the markets in question, without necessarily reaching the level of dominance.

Furthermore, it will only cause significant effects when at least one of the merging parties' products is considered to be particularly important by a large number of customers and when there are few suitable alternatives for that product.

Also, for market foreclosure to be a competitive concern, it would be necessary for there to be a broad base of common customers for each product in question, so that the more customers depend on purchasing both products, the more affected the demand for individual products covered by subordinated or grouped sales will be.

The effects would be more relevant in sectors where there are economies of scale and where the structure of demand at a given moment would have dynamic repercussions on future market supply conditions, as well as if there are network externalities (that is, when customers or producers benefit from the fact that other customers or producers also use the same products).

Alternatively, it is possible to analyze whether there are effective strategies, such as, for example, if, when buying grouped products, a firm can profitably resell them separately, or when competitors adopt aggressive pricing policies, or even when competing companies could group other products and make them more attractive to customers.

IV.1.2. Incentive for market foreclosure due to conglomerate effects

It is necessary to analyze incentives for adopting a strategy of excluding competitors in conglomerate mergers, such as the profitability of such a strategy.

On the one hand, tying or bundling sales, for example, could result in losses, if there is no interest from customers in purchasing bundled products, or when clients purchase the bundled offer from competitors. On the other hand, it could also generate an increase in profits resulting from an increase in market power in the market for subordinated products.

Also, it may be relevant to assess the relative value of the different products, as it is unlikely that the merged entity would be willing to forgo sales in a highly profitable market to gain market share in another market with a relatively small volume of business and modest profits.

When analyzing the incentives, it is possible to consider aspects such as the corporate structure of the entity resulting from the merger (control), the commercial strategies adopted in the past and the firm's internal strategic documents.

IV.1.3. Effects of market foreclosure due to conglomerate effects

The foreclosure strategy in conglomerate mergers can cause significant reduction in the sales prospects for competitors in markets that produce only one component, which, if significant enough, can lead to a reduction in the ability or incentive to compete on the part of other companies.

In particular, market foreclosure practices could deter potential competitors from entering the market by reducing potential competitors' sales prospects in a given market below the minimum scale of viability (in both complementary product markets).

Only when a sufficiently high proportion of output in the market is affected by the foreclosure resulting from conglomerate merger would the transaction be likely to significantly restrict effective competition. If several manufacturers of one of the products maintain an effective presence in any of the markets, competition would not be likely to deteriorate as a result of a conglomerate merger.

Among the factors that offset these effects, one can mention the existence of bargaining power on the part of buyers or the likelihood that the entry of new competitors will preserve effective competition in upstream and downstream markets.

IV.2. Other non-coordinated/unilateral conglomerate effects

In addition to the strategy of excluding competitors in conglomerate integrations, other more subtle practices can be adopted, leading to the decrease in incentives for competitors to exert effective rivalry and higher prices to consumers. Literature and foreign case law identify different types of practices that can lead to these effects, such as:

- Pure bundling:[22] the entity resulting from the transaction does not sell products in other markets separately, but only jointly to customers in fixed proportions. In this category, the products are complementary.
- Mixed bundling: products are offered separately and in bundles, where the bundle price is less than the sum of the individual product prices. This category involves complementary products.
- Tying: there is no possibility of purchasing the products separately and there is no complementary relationship between them. Technical tying may also occur when the subordinate product is designed so that it only works, or works better, with the tying product, but not with the alternatives offered by competitors (*e.g.*, for interoperability reasons).
- Entrenched market power: an increase in financial power and the consolidation of the use of trademarks would mean that the market practices of the firm with economic power could not be followed by its rivals.
- Substantial lessening of competition: conglomerates can increase the scale of competition for products that form integrated systems and new entrants may have reduced incentives to invest in innovation, leading to a reduction in potential competition. This is especially relevant in markets where there are already bundled sales of products.
- Increase in aggregate concentration: in this situation, the increase in concentration would justify the intervention of the competition authority, with no need to demonstrate damage to competition in individual markets.

[22] Practices such as tying or bundling are not necessarily anti-competitive. They can lead to more advantageous offer conditions for consumers and must be evaluated according to the specificities of the case.

Such practices may arise in conjunction with horizontal concerns (*e.g.*, elimination of potential competition or dynamic competition), for example in the context of a digital "ecosystem", which brings together various categories of suppliers, customers and consumers and allows them to interact within a platform. Products or services that are part of the relevant markets that make up this ecosystem may overlap or connect with each other due to their horizontal or vertical complementarity.

IV.3. Coordinated conglomerate effects

As for the coordinated effects of conglomerate integrations, the concern is about facilitating anti-competitive coordination in the market, even in the absence of an agreement or concerted practice. Conglomerate concentration could influence the likelihood of coordinated behavior in a given market by reducing the number of effective competitors to the point where tacit coordination becomes a possibility. Also, competitors not excluded from the market may be less likely to be confronted by the conglomerate, preferring the protection afforded to them by higher prices.

Additionally, a conglomerate merger could increase the scope and importance of multi-market competition, given that competitive interaction in different markets could increase the range and effectiveness of disciplinary mechanisms to ensure respect for coordination conditions. Other factors such as the existence of potentially restrictive commercial practices, the portfolio effect, barriers to entry and the degree of symmetry between agents are factors that may favor the exercise of coordinated power, especially when reinforced as a result of a conglomerate merger.

In all scenarios, both the possible anti-competitive effects of conglomerate mergers and the possible pro-competitive effects resulting from efficiency gains that are duly substantiated by the parties must be considered.

V. FINAL CONSIDERATIONS

This Guide has sought to present broad guidelines on how CADE carries out its analysis of vertical and conglomerate mergers, presenting the relevant analytical procedures.

However, theories of harm evolve, as well as the methods of analysis, and this area of knowledge is always evolving. Furthermore, it is difficult to catalog all the possible implications of non-horizontal mergers. Thus, this guide should only serve as a measure of transparency in CADE's activity, but should in no way limit the interpretative activity of the autonomous agency on the merits of mergers. Dialogue with society regarding the best analytical tools applicable to these types of merger cases should always be open.

ANNEX I - VERTICAL ARITHMETIC

The methodology of vertical arithmetic concerns the advances mentioned by Langenfeld (2016) and by Pittman (2017), in their dealing with vertical mergers.

According to Zenger (2020), vertical arithmetic is the simplest form of quantitative analysis in vertical integrations and is regularly submitted to the European Commission in vertical merger cases. The methodology assesses whether outright foreclosure of rivals would be profitable given the margins achieved by the integrated firm and the expected diversion ratio of foreclosed rivals by the integrated firm.

It is an easy-to-apply methodology that does not require a significant volume of data, and may yield very useful insights. It can be defined as a simplified version of more comprehensive and complex economic models, which require a more extensive data set and analytical effort.

However, as pointed out by Zenger (2020), vertical arithmetic also has limitations. For example, it only considers full foreclosure, although it is typically more profitable for a merged firm to undertake a partial foreclosure.

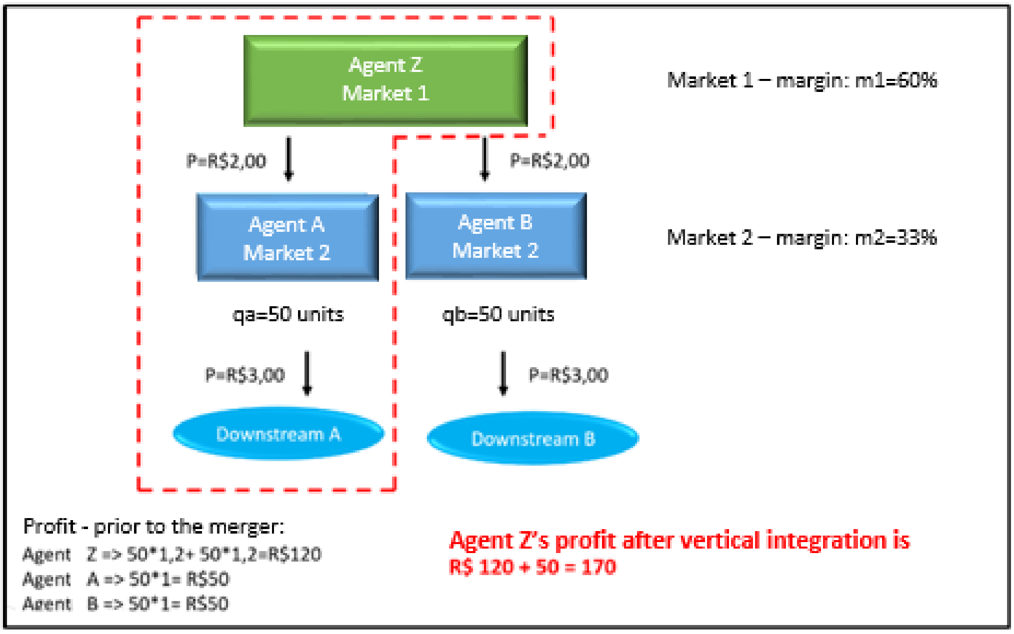
Furthermore, the methodology considers price levels and margins as given, although vertical integrations can change equilibrium prices considerably (for example, due to the elimination of double marginalization, if any). As a result, the methodology can only provide indicative evidence about foreclosure incentives.

However, as the author points out, vertical arithmetic can be useful to identify transactions that are clearly not problematic (if the analysis concludes that there are no incentives, by a large margin), or to provide a first quantification for potentially problematic integrations that can later be complemented (or replaced) by more extensive qualitative and/or quantitative analyses.

The example presented below, illustrates a situation involving input foreclosure, which, as already discussed, is economically analogous to customer foreclosure.

Company Z supplies an input to agents A and B, at R$2.00. Agent Z has 60% profit. Therefore, Z earns R$1.20 of profit per input. Agent Z sells 50 inputs to A and 50 inputs to B. These downstream agents sell the final product at R$3.00, with a profit of R$1.00 and costs of R$2.00 for the purchase of inputs (33% profit). As mentioned in the chart below, the profit prior to the integration of agent Z is R$120.00. The profit after vertical integration is R$ 170.00:

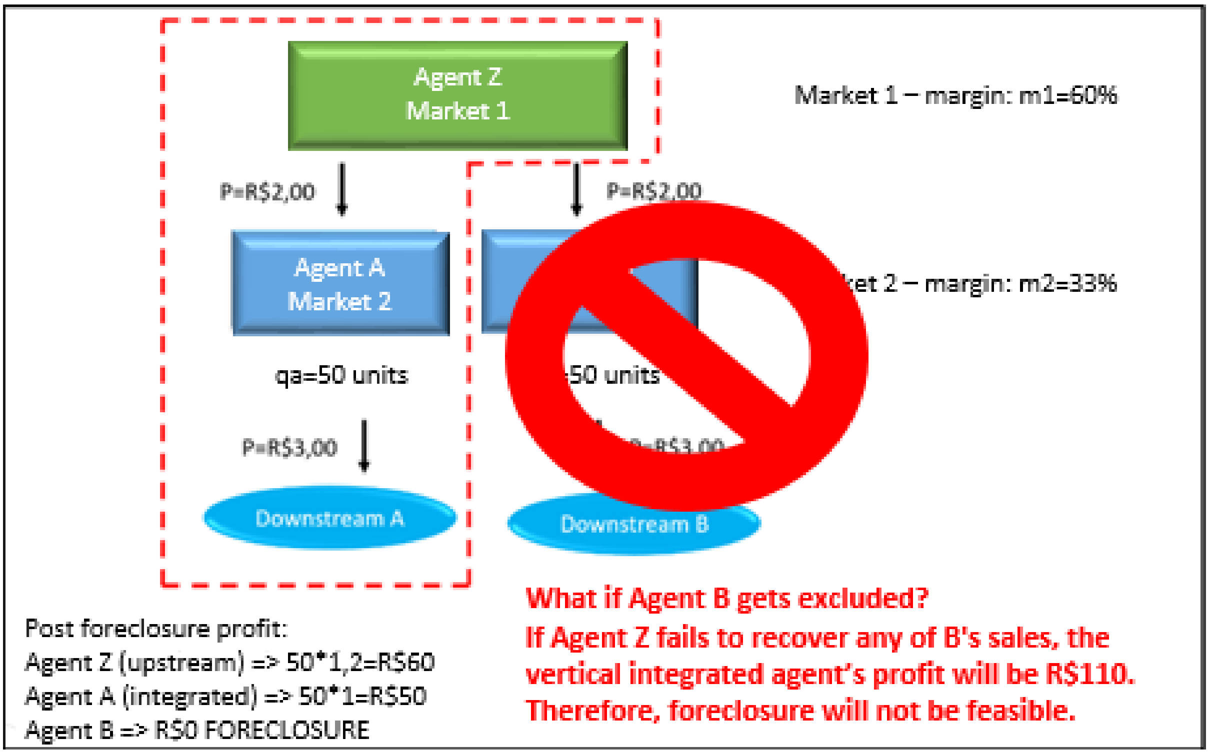
Image 24: Example of vertical integration: profit after integration without foreclosure



Source: GT Vertical Integrations elaboration.

However, if agent Z excludes agent B (non-integrated), and fails to recover B's sales, it will have losses compared to the pre-integration scenario, since the integrated agent's profit will be reduced to R$110.00.

Image 25: Example of vertical integration: post-integration profit without foreclosure.

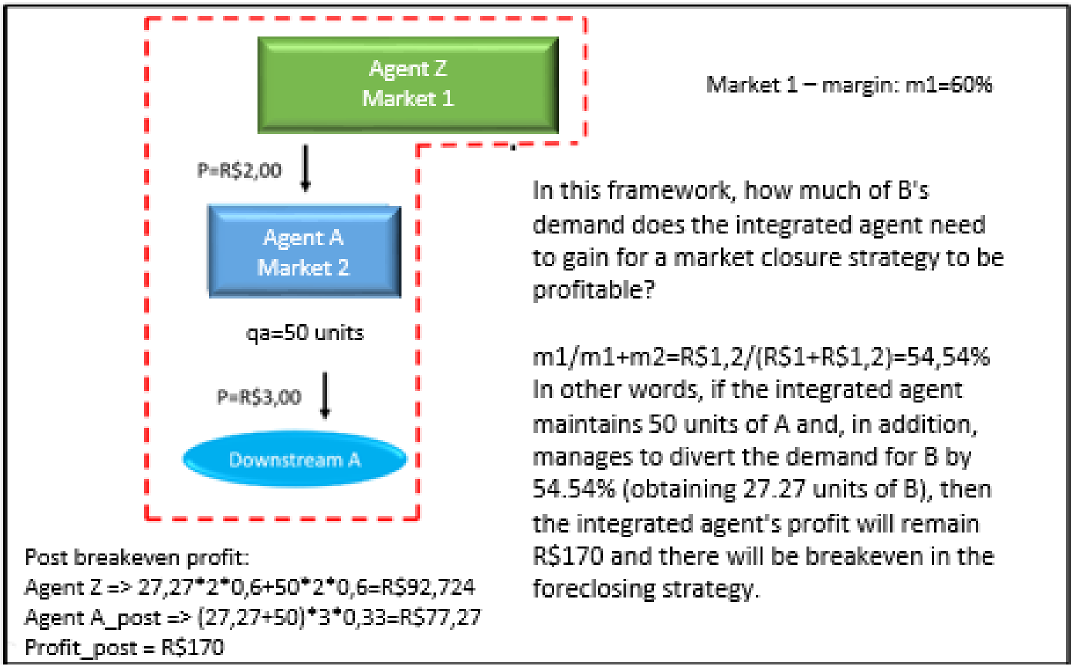


Source: GT Vertical Integrations elaboration.

However, if the agent diverts 54.54% of demand (referring to the formula m1/(m1+m2)) it will be able to maintain the pre-transaction profit, which is why the foreclosure may be feasible, under a breakeven analysis [23], since the profit of R$170.00 prior to the closing will not change after the closing:

[23] In the present context, breakeven corresponds to the point at which there is equality in terms of profits earned between the pre- and post-foreclosure scenarios by the integrated agent.

Image 26: Example of vertical integration with foreclosure input: post-foreclosure breakeven profit



Source: GT Vertical Integrations elaboration.

From a formal standpoint, the test of vertical arithmetic[24] depends on assessing market 1 that would be the origin of an exclusionary conduct, and market 2 that would be the target of such exclusionary conduct. Considering that in the origin market there is only one firm and in the target market there are two companies (A and B). Therefore, it is possible to measure the following variables:

M_1: margin in the source market (in this example: upstream)

M_2: margin in the target market (in this example: downstream)

V1_a: Sales from upstream to A that is located downstream (downstream) (vertical firm)

[24] See: Steven C. Salop, Stanley M. Besen & E. Jane Murdoch, An Economic Analysis of Primestar's Competitive Behavior and Incentives, FCC Submission (Jan. 7, 1998); Daniel Rubinfeld, The Primestar Acquisition of the News Corp./MCI Direct Broadcast Satellite Assets, 16 REV. INDUS. ORG. 193 (2000); Steven C. Salop, Carl Shapiro, David Majerus, Serge Moresi & E. Jane Murdoch, News Corporation's Partial Acquisition of DIRECTV: Economic Analysis of Vertical Foreclosures Claims, FCC Submission (July 1, 2003) ; Jonathan B. Baker, Comcast/NBCU: The FCC Provides a Roadmap for Vertical Merger Analysis, 25 Antitrust Magazine 36 (Spring 2011).

V1_b: Sales from upstream to B located downstream (downstream) (non-verticalized firm)

δ: percentage of sales lost by B (non-verticalized) recovered by A in the downstream market

According to the aforementioned test, there is a level of loss if there is a market foreclosure (input foreclosure, in this case), since if company 1 in the source market refuses to sell to the non-vertical agent in the target market, it will lose the equivalent of $V1\_b * M_1$. However, the vertically integrated firm will be able to recover part of the loss, regarding customers that were recaptured by the vertically integrated firm, equivalent to $\delta * V1\_b * (M_1 + M_2)$, which includes the upstream (upstream) and downstream (downstream) recapture profit. Therefore:

Foreclosure losses = $V1\_b * M_1$

Foreclosure gains = $\delta V1\_b * (M_1 + M_2)$

For breakeven to occur, losses must equal gains, therefore:

$$V1\_b * M_1 = \delta * V1\_b * (M_1 + M_2)$$

Or rearranging the equation:

$$\boxed{\delta = M_1 / (M_1 + M_2)}$$

Thus, if the diversion rate from company A to company B is greater than $M_1 / (M_1 + M_2)$ foreclosure derived from a vertical integration will be possible and profitable. However, if the diversion ratio is less than $M_1 / (M_1 + M_2)$ foreclosure is neither possible nor profitable.

In situations where margins in the source market (M_1) are very low in relation to the margins in the target market of the exclusionary conduct (M_2), the diversion ratio necessary for the foreclosure to be profitable is also very small, indicating a potentially problematic situation regarding the incentives for foreclosure.

With regard to this diversion ratio (also called the diversion rate), in view of the unavailability of sufficient data to estimate it empirically, in most cases, a principle of proportionality with the market share of companies in the foreclosed market is assumed. In addition, a correction factor is applied to the market recovery rate (REC), in order to consider part of the demand that would leave the market as a result of the impacts of the foreclosure. Thus, the diversion ratio proxy can be expressed as follows:

$$\boxed{RD_{BA} = \frac{S_A}{(1 - S_B)} REC}$$

Where:

A: unit of the integrated firm that operates in the foreclosure market;

B: firm to be foreclosed (a competitor of A in the foreclosure market);

RD_{BA}: diversion ratio from B to A

s: market shares of A and B in the foreclosure market;

REC: market recovery rate (1 minus the percentage of sales lost to an external market or to people who stop consuming the good analyzed)

Thus, as a rule, when $\mathbf{RD_{BA}} > \mathbf{M_1 / (M_1 + M_2)}$, there are incentives for foreclosure.

It should be noted that the details of the methodology formalized above refer to the scenario in which there are positive margins (M_1 and M_2) (scenario 1 in the table below). When there are integrations with negative profit margins, in one or both links of the chain, the existence or not of incentives for foreclosure must be evaluated according to scenarios 2 to 4 of the table below, which summarizes the sets of possible scenarios regarding margin relationships and the existence or not of incentives.

Chart 1: Incentive scenarios for foreclosure under different margin ratios.

Scenario	Margin ratio	Are there incentives for foreclosure?
1	$M_1 > 0$ e $M_2 > 0$	Yes, if RD > M_1 / (M_1 + M2)
2	$M_1 < 0$ e $M_2 < 0$	Yes, if RD < M_1 / (M_1 + M2)
3	$M_1 < 0$ e $M_2 > 0$	Always
4	$M_1 > 0$ e $M_2 < 0$	Never

Source: Prepared by GT Vertical Integrations.

It should be noted that the rationale does not change across the different scenarios. The existence of incentives will always depend on the difference between gains and losses from the foreclosure: if this difference is positive, there will be incentives. Thus, if the margin on the link where there will be a reduction in sales resulting from the foreclosure is negative, and the margin on the link where there could be an increase in sales is positive, there will always be incentives for foreclose (scenario 3). In the opposite scenario, in which only the margin on the link where there will be sales loss is positive, foreclosure will never be profitable (scenario 4).