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The system of merger control in the EU
How old is it ?

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*The views expressed are my own and do not necessarily reflect those of DG COMP or the European Commission

Introduction

- 20 years of enforcement
- Notice on market definition (1997), Horizontal (2004) and Non Horizontal guidelines (2007)
- Review in 2004, adoption of the “substantial impediment to effective competition” test
- Has the merger regulation and its enforcement aged well ? In light of current developments (Review of horizontal merger guidelines in the US and UK)

Outline

- Theories of harm
  - Unilateral effects and market definition
  - Coordinated effects
  - Vertical and conglomerate effects
- Conclusion
  - Efficiencies, innovation, failing firm defence,...
  - Has the 2004 reform changed enforcement ?

Unilateral effects and market definition

Role of market definition in the EU

- “The Commission's assessment of mergers normally entails:
  - (a) definition of the relevant product and geographic markets;
  - (b) competitive assessment of the merger.
- The main purpose of market definition is to identify in a systematic way the immediate competitive constraints facing the merged entity.
- Various considerations leading to the delineation of the relevant markets may also be of importance for the competitive assessment of the merger.
- Market definition can be left open
- But some jurisprudence (Kali & Saltz) : “the relevant market is a necessary precondition for any assessment of the effect of a concentration on competition” – However in the context of a discussion of (collective) dominance

Market definition and unilateral effect

- Market definition as a discrete approximation to a continuous problem
- US Guidelines (2010)
- An “accurate" implementation of the HMT involves the same sort of analysis as the assessment of unilateral effects (except that instead of the two merging firms one looks at different set of candidate products being owned by an hypothetical monopolist).
  - The hypothetical monopolist’s incentive to raise the price on any one product under its control depends on the recapture percentage associated with that product and on the margins it receives on the sales recaptured by the other products it owns
  - The higher the pre-merger margin, the smaller the recapture percentage necessary for the candidate market to satisfy the hypothetical monopolist test.

Role of market definition notice in the EU ?

- Market definition for merger and for antitrust case differ
- Competitive constraints exercised on the merged entity (so that the HMT test refers to prices increases above the current level”
- In abuse of dominance case, concern that observed prices reflect the exercise of market power (so the HMT refers to price increases above a competitive level)
- Techniques which attempt to estimate whether a price increase would be profitable under a particular counterfactual in terms of ownership/control (either a merger or a hypothetical monopolist) are less directly informative
- An abuse may be about the exclusion of a product that acts as a competitive constraint, not about its control (and the internalization of the constraint).
- In the same way that market definition and the analysis of unilateral effects can be integrated, the analysis of dominance and the abuse can be integrated

Implementation

- Some important technicalities on the monopolist test
  - Profit maximizing vs. assumed (baseline) prices
  - Single product vs Uniform price increases
  - Profit maximizing cartels
  - Multiplicity
  - Targeted consumers and discrimination
- Techniques to evaluate unilateral effects
  - GUPPI
  - Merger simulation

Unilever/Sarah Lee : deodorants

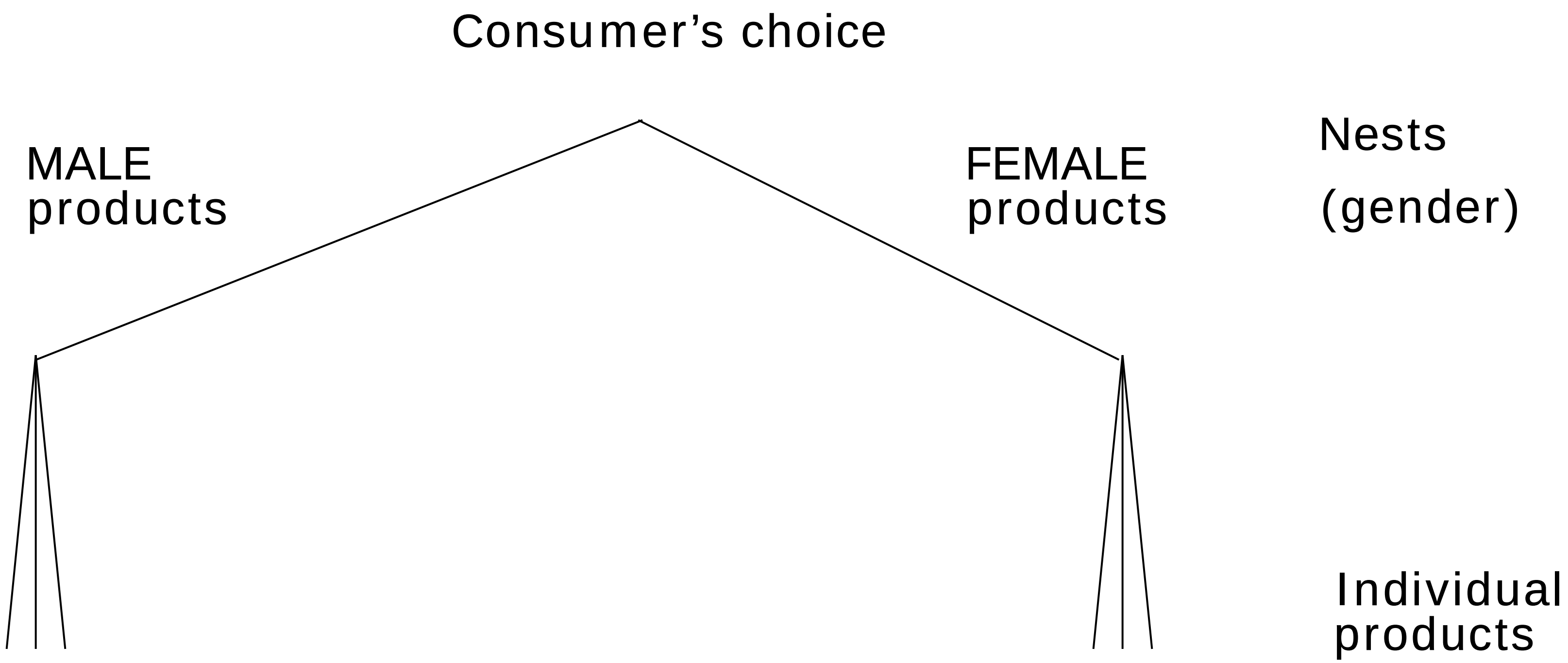
- Differentiated product
  - Format (stick, roll-on, aerosol)
  - Gender (male, female, unisex)
- National markets

- Serious doubts in 8 countries
- Combined shares in [> 50], overlap [ ] to [> 12]%
- 4-5 remaining competitors, PL generally very small
- Some parties' brands interacting strongly

Unilever/Sarah Lee

- External market research
- Internal documents (strategy and transaction related)
- Complaint from distributors/competitors
- Estimation of demand and merger simulation
  - Nested logit with alternative nest structures (more flexibility than simple logit, less than random coefficient - BLP)
  - Weekly retail scanner data (06-09) on values, volumes, units, promotions at the stock keeping unit
  - Product characteristics : male/female/unisex, format, size, brand, flagrance, efficacy, skin friendly, white marks,…
  - IV estimation (with extensive tests of the instruments)

One-level nested logit model



Unilever/Sarah Lee

- Merger simulation (Bertrand competition)
- Comparison of derived marginal costs with proxies for actual marginal cost
- Monte Carlo simulation for price effects of the merger to generate confidence intervals
- Significant price effect; what is significant ?
- Missing elements (buyer power, brand repositioning, entry)
- Remedies : no brand split across countries/segment !
- Interaction with the parties : best practice on the submission and evaluation of economic evidence

Coordinated effects

On the definition of coordinated effects

- Collusive effects of mergers in narrow oligopolies ("dominant position by one or more undertakings") *Nestlé/Perrier*(1992), K*ali+Salz/MDK/Treuhand (1993), Gencor/Lonrho (1996)*
- Substantial evolution: CFI ruling on *Airtours v. Commission (2002)*
  - Definition of coordinated effects in terms of the prospect for coordination
  - Clear reference to the framework of coordination in repeated games (deviation, punishment,..)
  - Discussion of factors conducive to coordination but rejection of routine application of checklist
  - Definition of three cumulative conditions (transparency, sustainability, stability)

Standard further refined in Sony/Bmg

- Difficult to rely on hard evidence
  "likely to emerge if competitors can easily arrive at a common perception as to how the coordination should work"
- Sustainability over time
  "temptation which may exist for each participant in a tacit coordination to depart from it in order to increase its short-term profit"
- Monitoring and deterrence
  "coordinating undertakings must be able to monitor to a sufficient degree whether the terms of the coordination are being adhered to [...] discipline requires that there be some form of credible deterrent mechanism"
- Limited reaction by outsiders
  "reactions of outsiders, such as current or future competitors, and also, the reactions of customers, should not be such as to jeopardize the results expected"
- Prospected effects of the merger
  "the alteration [...] that the transaction would entail, significantly impedes effective competition by making coordination easier, more stable or more effective [...] by making the coordination more robust or by permitting firms to coordinate on even higher prices"
- Overall, need for a coherent narrative of coordination

ABG/GBI

- Yeast is an essential product in the production of bread
- Three separate product markets: liquid, compressed, dry
- But the focus of the investigation was only compressed
- the investigation confirmed that the markets were national in scope
- Spain Lesaffre 40-50% ABF 30-40% GBI 10-20%
- Portugal GBI 40-50% ABF 20-30 Lesaffre 20-30%

ABF/GBI : assessment

- Identification of number of structural market conditions likely to facilitate the emergence and sustainability of tacit coordination both in the Spanish and Portuguese

- for each relevant market, identification of possible terms of coordination, the monitoring of deviations, deterrence of deviations among Lesaffre, ABF, and GBI and reasons why outsiders have no ability to destabilize

- Identification of the merger effects

ABF/GBI : market conditions

- Small number of active competitors (essentially three being reduced to two post-merger)
- High frequency of repeated interaction of these competitors with no large and bulky orders
- Yeast market is relatively stable or slightly declining
- Low likelihood of leap-frog innovation
- Qualitative indicators suggest that demand elasticity is comparatively low
- Product is relatively homogenous
- High degree of market transparency in volume, prices and capacity
- Markets protected from outside reactions or the expansion of fringe competitors
- Limited countervailing buyer power, typically small local distributors of bakery products for artisan bakers
- Extensive multi-market contacts meeting in a number of neighbouring product and geographic markets

ABF/GBI : coordination mechanism

- Price increases were found to be the core focal point of the likely (tacit) collusion between the Lesaffre and the merging parties
- Significant excess capacity: ability of all three main players to react in timely fashion to punish deviations
- Distributors played an important and decisive role in ensuring the sustainability
- Interpersonal relationship between the distributors and their customers (small artisan bakers, served on a continuous basis)
- Yeast producers and distributors were very “loyal” to one another, Very binding contracts and many dating back many years or even decades, so that Distributors, either de facto or de jure, exclusive for one supplier and for a set “attributed” region
- Distribution system a relatively simple one, with few changes possible since all of the relevant producers are already “locked-in” in all of the regions in both Portugal and Spain.
- Collected information for the suppliers on any switching
- Carefully designed contractual incentives, distributors would regularly report information back

ABF/GBI : effect of the merger

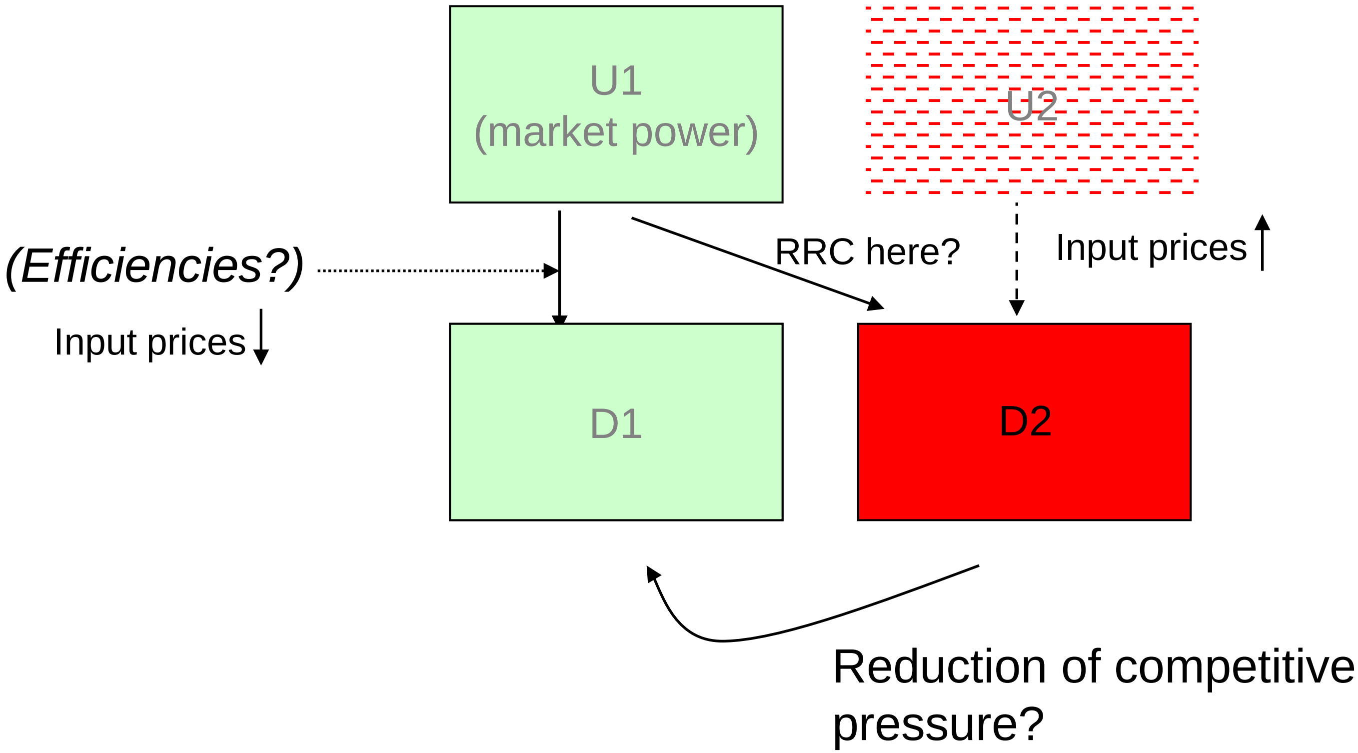
- The merger would make the coordination more effective and more:
  - only be one competitor (tacitly) to agree on the terms of coordination
  - enhanced transparency, easy to monitor one competitor and discovering deviation
  - reduction of the incentives to deviate (less to gain from deviation)
  - GBI was different in costs (production in Italy) and not present in liquid and dry
  - Post-merger symmetry on capacity between Lesaffre and merger entity in the Iberian peninsula

Vertical and conglomerate effects

Non horizontal effects

- Non-horizontal mergers raise different concerns than horizontal mergers
  - No loss of direct competition between the merging parties
  - Involves complements rather than substitutes
  - Potentially significant efficiencies (removal of double marginalization, alignment of incentives, lower transaction costs)
- However, non-horizontal mergers may change the ability and incentive to compete on the part of the merging company and the competitors in ways that cause harm to consumers : input and customer foreclosure

Input foreclosure (RRC)

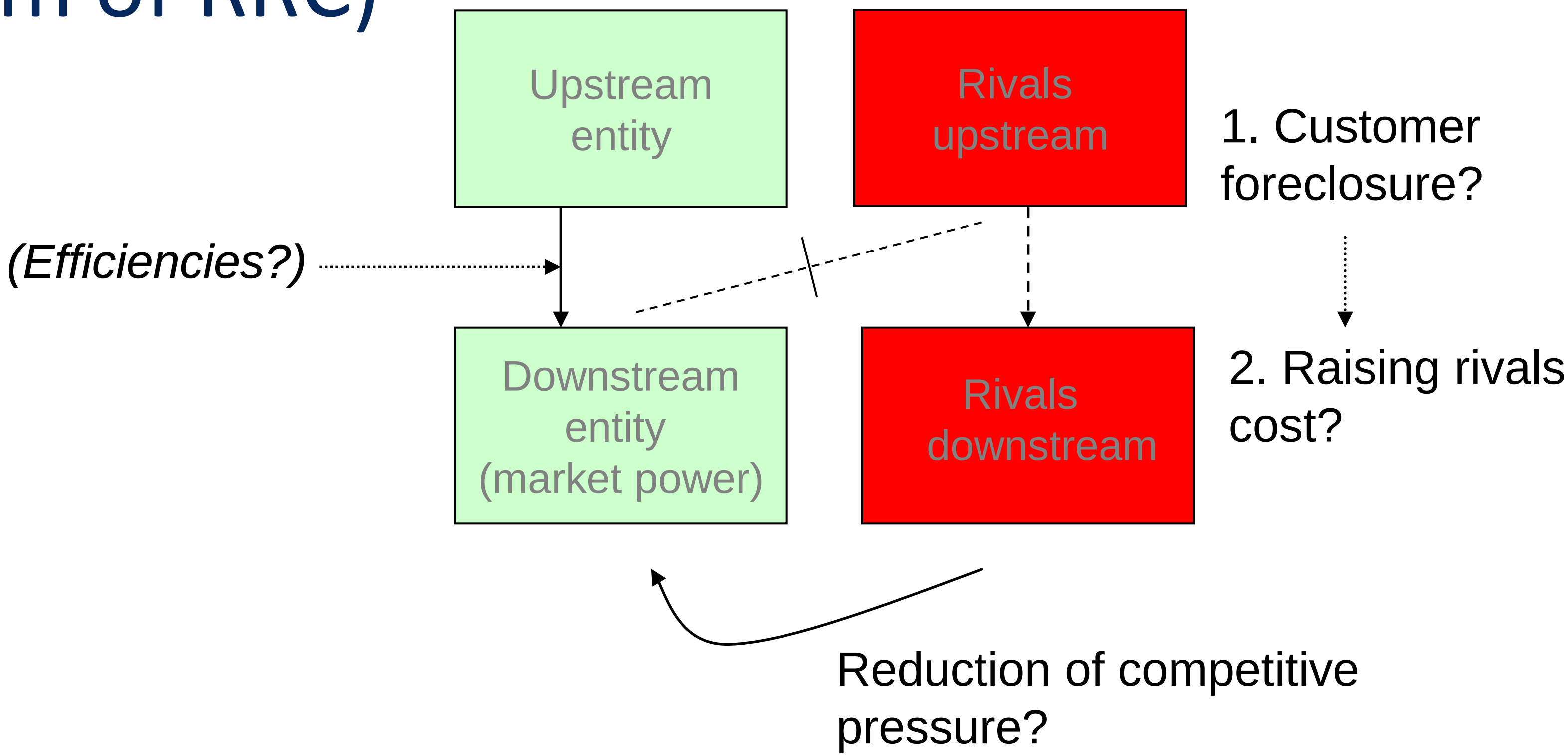


➔ *Net effect on consumers ?*

Input foreclosure (RRC)

- When the merged entity has the **ability** to raise rivals cost
  - Input must be important
  - Merged entity must have significant market power in the input market
- Has the **incentive** to do so
  - Downstream profits should be significant
  - Higher upstream prices should translate into higher downstream prices
  - The rival should be a close competitor
- The **impact** on downstream consumers would be significant
  - The rivals whose cost are raised should constitute an important competitive force
  - The effect on entry barriers should be significant

Customer Foreclosure (just another form of RRC)



➔ *Net effect on consumers ?*

An ex-post commitment problem?

- Problem with input foreclosure: even though foreclosure would be a profitable strategy for the integrated firm, it still has an incentive to compete in the input market
- Foreclosure can only be supported in a Nash equilibrium when the integrated firm can credibly commit not to deliver to the downstream rival (D2)
- Upstream firms can commit to a technology which makes the input incompatible with the technology of nonintegrated downstream firms
  - The cost of creating incompatibility is much less than the cost of reversing towards compatibility.
- Gain a reputation for RRC in repeated interaction.
- Various (observable) strategies exist to remain a “fat cat” (e.g. scaling down capacity or sales force, reducing expenditure in advertising or R&D, increasing input differentiation etc)

Restoring monopoly power

- A non-integrated upstream monopolist cannot commit to abstain from secretly discounting to any downstream firm thereby expanding its sales, (it faces an ***ex-ante* commitment** problem)
  - This limits its ability to exploit its monopoly power.
  - Note the source of the monopolist's problem is contractual incompleteness (e.g. impossible to enforce exclusivity contracts or contingent on profitability measures)
- Through vertical integration a monopolist acquires a direct stake on downstream profits which allow it to credibly commit not to offer secret discounts to rivals.
- Integration only imperfectly solves this commitment problem because the monopolist cannot commit not to favour its downstream subsidiary
- Note that the merger does not "lessen" competition. It simply allows the merged entity to commit to a strategy.
  - Should this be challenged provided the monopoly was achieved legitimately?
- Across many industries monopolists often find a mechanism to resolve the ex-ante commitment problem (e.g. reputation, exclusivity agreements, asset specific investments).
- Key assumptions are non-linear pricing and contract incompleteness
  - But in practice: the more complex the pricing structure the less incomplete the contract.

Policy relevance of RMP?

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  - ➢ Should this be challenged provided the monopoly was achieved legitimately?
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- Key assumptions are <u>non-linear pricing</u> and <u>contract incompleteness</u>
  - ➢ But in practice: the more complex the pricing structure the less incomplete the contract.
- Other difficulties that affect enforcement policy:
  - ➢ <u>Multiple equilibria</u>. This reduces predictability.
  - ➢ No explanation of how vertical integration might foreclose an equally efficient competitor. This narrows its scope.

Merged company gives up sales upstream…

Tele Atlas

Efficiencies?

… to win sales downstream through increased market share and/or higher prices?

TomTom

NAVTEQ

Increased market power

Foreclosure?

Higher map prices

Mio DigiWalker

MAGELLAN

NAVIGON

MEDION

Pioneer

GARMIN

Result: Higher prices for PND consumers?

Economic Analysis

- Would the merged entity have an incentive to foreclose its downstream competitors?

$\Rightarrow$ Trade-off between the upstream losses and the downstream gains associated with a foreclosure strategy.

- Will there be anticompetitive effects on the downstream market?

$\Rightarrow$ Estimation of impact on downstream prices

Total Foreclosure

- Would the merged entity have an incentive to stop supplying maps to its downstream competitors?

⇒ Simple profit test: Commission calculated the critical price increase by Navteq that would make input foreclosure profitable for the integrated company (econometric estimation of elasticities using a nested logit model)

⇒ Commission found that Navteq would need to increase prices very significantly for Tele Atlas to recoup these losses downstream (small share of the map in PND price, limited cross-price elasticities, Garmin's long-term contract)

Partial Foreclosure

- Would the merged entity increase the price of maps to its downstream competitors, thereby significantly increasing PND prices?

⇒ Considered several scenarios, including Navteq matching Tele Atlas' price increases

⇒ Found limited impact of an increase in the map price on downstream market (small share of the map in PND price, long-term contracts)

⇒ Considered product degradation unlikely (given Navteq's presence on the upstream market)

Efficiencies

- Elimination of double margins
  - Direct result of profit maximization
  - Merger specificity (likelihood that the double margin would be eliminated through non-linear pricing?)
  - Overall effects of the transaction estimated with very simple linear demand model (taking into account the elimination of double margins) => Small average price decrease for PNDs

- Other efficiencies: “better maps, faster”
  - Merger specificity: likelihood of achieving efficiencies via contract? (investment specificity, incomplete contract)
  - Quantification issues

Conclusion

- On efficiencies
  - Few cases in which efficiencies claims have been made (6 out of 37 phase II cases since 2004, Roeller, 2010). Because legal advisers are concerned that it sends a signal that the parties anticipate that they have a weak case ?
  - Cross market efficiencies ? : In some cases, however, the Agencies in their prosecutorial discretion will consider efficiencies not strictly in the relevant market, but so inextricably linked with it that a partial divestiture or other remedy could not feasibly eliminate the anticompetitive effect in the relevant market without sacrificing the efficiencies in the other market(s)

- On Failing firm
  - [third] it has made unsuccessful good-faith efforts to elicit reasonable alternative offers that would keep its tangible and intangible assets in the relevant market and pose a less severe danger to competition than does the proposed merger
  - Second, there is no less anti-competitive alternative purchase than the notified merger.
  - [no causality] ….where the competitive structure of the market would deteriorate to at least the same extent in the absence of the merger (this is a relative requirement)
  - Third, in the absence of a merger, the assets of the failing firm would inevitably exit the market (this is an absolute requirement)
  - Wider question : why should one acquire a failing firm ? To preempt another buyer ? Or because of efficiencies ?

Conclusion

- Impact of mergers on innovation
  - reduced incentive to continue with an existing product-development effort or reduced incentive to initiate development of new products".
  - Effective competition may be significantly impeded by a merger between two important innovators, for instance between two companies with 'pipeline' products related to a specific product market. Similarly, a firm with a relatively small market share may nevertheless be an important competitive force if it has promising pipeline products
  - US allows for development into new markets (pharma ?)

Conclusion

- Has the 2004 reform made a difference ?
- Has allowed for a conceptual clarification between unilateral and coordinated effects
- Has allowed for a more refined analysis of unilateral effects (in the absence of market shares in excess of 40%)
- Has allowed for the analysis of non horizontal effects (which otherwise would had had rely on the strengthening of dominance)
- Evidence of a change in decision making (Duso et al. 2010 using stock market reactions, Mahlstein 2010 and Szücs 2010, using logit/probit models of outcomes)

Back up slides

Single vs Uniform SSNIP

- Specifically, the test requires that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future seller of those products ("hypothetical monopolist") likely would impose at least a small but significant and non-transitory increase in price ("SSNIP") on <u>**at least one product in the market**</u>, including at least one product sold by one of the merging firms.

- The question to be answered is whether the parties' customers would switch to readily available substitutes or to suppliers located elsewhere in response to a hypothetical small (in the range 5 % to 10 %) but permanent relative price increase <u>in the products and areas being considered</u>.

Profit maximizing and single product

- Farrel and Shapiro argue that a unilateral price increase may often lead to broader markets. They show that "*with symmetric linear demand the profitability of a single-product SSNIP is a sufficient, but not necessary, condition for the profitability of a uniform SSNIP*".
  - The intuition is that "*the catch-up second single-product SSNIP that turns a unilateral SSNIP into a uniform SSNIP is always more profitable for the hypothetical monopolist than was the first unilateral SSNIP. The absolute loss of sales of the product whose price is rising is the same in each, but in the catch-up SSNIP (a) sales recaptured within the market generate a higher margin, and (b) the price increase applies on a larger starting base of unit sales.*

- However the single-product SSNIP test may lead to a narrower market definition than the uniform SSNIP test if the asymmetry between those two products is sufficiently large (Sorgard, 2010)
  - Intuition: if one increases the price on a product with a large market share, only a small fraction of sales is expected to be diverted to a product with a small share (and possibly a relatively lower margin). On the other hand, it is plausible that the large product can recapture a large fraction of lost sales for a product with a small market share (and at a relatively higher margin).
  - There is here a risk that markets would be overly narrow, potentially leading to the products of the merging firms being in separate markets.

- Close connection to the unilateral effect but issue of multiplicity and administrability (may draw excessive attention to market definition..)

Hypothetical monopolist

- "the concept of a hypothetical profit-maximizing cartel comprised of the firms (with all their products) that sell the products in the candidate market. This approach is most likely to be appropriate if the merging firms sell products outside the candidate market that significantly affect their pricing incentives for products in the candidate market".
  - With complements, the incentive to raise price will be less and markets will be broader
  - With substitutes, markets will be narrower

- Smallest market principle is "softened"
  - One may not be able to identify the "next best substitute" at each stage in the algorithm, but the outcome of the iterative algorithm can be sensitive to this determination.
  - …the Agencies may evaluate a merger in any relevant market satisfying the test, guided by the overarching principle that the purpose of defining the market and measuring market shares is to illuminate the evaluation of competitive effects…
  - According the notice on MD, "if under conceivable alternative market definition, the operation in question does not raise competition concerns, the question of market definition will be left open"
  - Also when the operation raises concern ?

Hypothetical monopolist

- Targeted Customers and Price Discrimination:
  - Focus on differential pricing and arbitrage
  - In EU notice on MD no reference to customers segments as a relevant dimension - but implicit recognition that customers that have difficulties in switching may be harmed even if others are not (e.g. buyers that used to dual source from the merging parties)
- Geographic market definition
  - Geographic market definition based on the location of suppliers : relevant when customers buy directly from the supplier.

    Sales made by the suppliers in the relevant market are counted, regardless of the location of the customer making the purchase ?
  - Geographic market definition based on the location of targeted consumers : relevant when the supplier delivers to the customer

    Geographic markets encompass the region into which sales are made.
  - Distinction to be introduced in the MD notice (which is relatively terse on geographic market definition and emphasized homogenous conditions of competition) ?

On coordinated Effects

- A merger also can enhance market power by increasing the risk of coordinated, accommodating, or interdependent behavior among rivals. Adverse competitive effects arising in this manner are referred to as "coordinated effects." In any given case, either or both types of effects may be present, and the distinction between them may be blurred.
- Coordinated interaction includes a range of conduct.
- the explicit negotiation of a common understanding of how firms will compete or refrain from competing.
- also can involve a similar common understanding that is not explicitly negotiated but would be enforced by the detection and punishment of deviations that would undermine the coordinated interaction.
- can involve parallel accommodating conduct not pursuant to a prior understanding. Parallel accommodating conduct includes situations in which each rival's response to competitive moves made by others is individually rational, and not motivated by retaliation or deterrence nor intended to sustain an agreed-upon market outcome, but nevertheless emboldens price increases and weakens competitive incentives to reduce prices or offer customers better terms.

- (an HM may SIEC) by changing the nature of competition in such a way that firms that previously were not coordinating their behaviour, are now significantly more likely to coordinate and raise prices or otherwise harm effective competition. A merger may also make coordination easier, more stable or more effective for firms which were coordinating prior to the merger (coordinated effects).
- Coordination is more likely to emerge in markets where it is relatively simple to reach a common understanding on the terms of coordination.
- In addition, three conditions are necessary for coordination to be sustainable. First, the coordinating firms must be able to monitor to a sufficient degree whether the terms of coordination are being adhered to. Second, discipline requires that there is some form of credible deterrent mechanism that can be activated if deviation is detected. Third, the reactions of outsiders, such as current and future competitors not participating in the coordination, as well as customers, should not be able to jeopardise the results expected from the coordination
- The Commission examines whether it would be possible to reach terms of coordination and whether the coordination is likely to be sustainable. In this respect, the Commission considers the changes that the merger brings about.