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MARGIN SQUEEZE: AN ABOVE-COST PREDATORY PRICING APPROACH*

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ABSTRACT

We provide a new legal perspective for the antitrust analysis of margin squeeze conducts. Building on recent economic analysis, we explain why margin squeeze conducts should solely be evaluated under adjusted predatory pricing standards. The adjustment corresponds to an increase in the cost benchmark used in the predatory pricing test by including opportunity costs due to missed upstream sales. This can reduce both the risks of false-positives and false-negatives in margin squeeze cases. We justify this approach by explaining why classic arguments against above-cost predatory pricing typically do not hold in vertical structures where margin squeezes take place and by presenting case law evidence supporting this adjustment. Our approach can help to reconcile the divergent US and EU antitrust stances on margin squeeze.

JEL: K21; L12; L43.

Keywords: Margin squeeze; Predatory pricing; Price-cost test; Abuse of dominance.

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I. INTRODUCTION

During the last decade, margin squeeze (or price squeeze)¹ allegations have featured high in the enforcement practice of regulatory and competition authorities, especially in the telecommunications sector and other newly liberalized network industries such as gas, electricity and postal services.² Case law has also evolved significantly in both the United States (US) and European Union (EU). However, a significant divergence exists between these two jurisdictions with respect to the criteria for assessing a margin squeeze conduct.³ This is reflected in the two different approaches the US and the EU courts have developed for the antitrust analysis of margin squeeze: the regulatory approach and the competition law approach, respectively.⁴

According to the US regulatory approach, margin squeezes that are not caught by refusal to deal or predatory pricing antitrust laws should be dealt with by regulatory authorities only, relying on the economic principles of access pricing.⁵ This view has been adopted by the US Supreme Court in *linkLine*.⁶ In contrast, according to the competition law approach, margin squeeze should qualify as a standalone abuse of dominance by focusing on the spread between

¹ ‘Price squeeze’ is the term most commonly used by courts and commentators in the United States and ‘margin squeeze’ in Europe. The terms will be used interchangeably.

² See, OECD, Margin Squeeze (2009) for a survey of margin squeeze cases in 25 jurisdictions. The most recent example relates to the European Commission imposing a fine of almost 70 million euros on Slovak Telekom and its parent company, Deutsche Telekom, for margin squeeze and refusal to deal between 2005 and 2010 in the Slovak market for broadband services; see European Commission, MEMO/14/590, ‘Antitrust: Commission Decision on Abusive Conduct on Slovak Broadband Markets by Slovak Telekom and Deutsche Telekom - frequently asked questions’, http://europa.eu/rapid/press-release_MEMO-14-590_en.htm (visited June 2015).

³ See George A. Hay and Kathryn McMahon, *The Diverging Approach to Price Squeezes in the United States and Europe*, 8 J. COMPETITION L. & ECON. 259 (2012); John B. Meisel, *The Law and Economics of Margin Squeezes in the US Versus the EU*, 8 (2) EUR. COMPETITION J. 383 (2012).

⁴ See Damien Geradin and Robert O’Donoghue, *The Concurrent Application of Competition Law and Regulation: the Case of Margin Squeeze Abuses in the Telecommunications Sector*, 1 J. COMPETITION L. & ECON. 355 (2005).

⁵ See, J. Gregory Sidak, *Abolishing Price Squeeze as a Theory of Antitrust Liability*, 4(2) J. COMPETITION L. & ECON. 279 (2008). Closely related to the regulatory approach to margin squeeze are expertise-based arguments and the superiority of regulators in addressing competition issues within the areas of their expertise when compared to competition law enforcers; see, Erik N. Hovenkamp and Herbert Hovenkamp, *The Viability of Antitrust Price Squeeze Claims*, 51 ARIZONA L. REV. 273 (2009).

⁶ *Pacific Bell Telephone Company, dba AT&T California, et al v linkLine Communications, Inc., et al.*, 555 US 438, 129 S Ct 1109 (2009) [hereinafter *linkLine*]. The Supreme Court examined independently the lawfulness of the upstream and downstream prices of the incumbent and held that in the absence of an upstream duty to deal on the upstream market and lack of predatory prices at the retail market, the incumbent ‘is certainly not required to price both of these services in a manner that preserves its rivals’ profit margins’, *linkLine*, at 1119. Note that the Supreme Court ruled that the defendant did not have a duty to deal because it had never voluntarily engaged in selling at the wholesale level (absent regulation).

wholesale and retail prices, and not on the lawfulness of each price level.⁷ This position has been embraced by the European Courts,⁸ which have ruled that it is not necessary to establish in addition that either the wholesale or retail price is, independently of the claimed squeeze, excessive.⁹ Under the EU competition law approach, the sole issue that should be determined is whether the spread between the retail prices charged by a dominant undertaking and the wholesale prices it charges its competitors for comparable services is negative or insufficient to cover the product-specific costs of the dominant operator for providing its own retail services in the downstream market.¹⁰ As we shall see, following *TeliaSonera*,¹¹ such insufficient spread could either mean that the competitor could be able ‘to operate at the retail market only at a loss or at artificially reduced levels of profitability’.¹²

Of course, the divergence that exists between the US and the EU with respect to margin squeeze owes much to the institutional differences that exist between these two jurisdictions as well as to political economy considerations.¹³ For example, the forum of US antitrust law is primarily the courts, while EU competition law decisions are taken by administrative agencies. These differences in the institutional structure of antitrust enforcement have some bearing on how courts have regulated the relationship between competition law and regulation. Furthermore, unlike the US, most EU Member states have very strong incumbents in utilities markets, most of which were state-owned. This may explain the inclusion of positive margins by the Court of

⁷ See Alberto Heimler, *Is a Margin Squeeze an Antitrust or a Regulatory Violation*, 6 J. COMPETITION L. & ECON. 879 (2010).

⁸ Judgment of the Court (Second Chamber) of 14 October 2010—*Deutsche Telekom AG v. European Commission, Vodafone D2 GmbH, formerly Vodafone AG & Co. KG, formerly Arcor AG & Co. KG and Others* (Case C-280/08 P), ECR 2010 I-09555 [hereinafter *Deutsche Telekom* 2010]; Judgment of the Court (First Chamber) of 17 February 2011 - *Konkurrensverket v TeliaSonera Sverige AB* (Case C-52/09), ECR 2011 I-00527 [hereinafter *TeliaSonera*]; Judgment of the Court (Fifth Chamber) of 10 July 2014 - *Telefónica and Telefónica de España v Commission* (Case C-295/12 P), not yet published [hereinafter *Telefónica* 2014]. Note that the EU Courts approach contrasts with that of the Common Position of the European Regulators Group and the European Commission on remedies under the new regulatory framework for electronic communications which viewed margin squeeze as an anticompetitive effect that can be the result of different behaviors such as price discrimination upstream and/or predatory pricing downstream; see ERG, ‘Revised ERG Common Position on the Approach to Appropriate Remedies in the ECNS regulatory framework’ (May 2006) ERG (06, 33) 38. Traces of the EU approach to margin squeeze abuses can be found in the US in the *Alcoa* decision of the 2nd Circuit, *United States v Aluminun Co. of America et al*, 148 F.2d 416 (2d Cir. 1945) [hereinafter *Alcoa*].

⁹ See e.g. *Deutsche Telekom* 2010, *supra* note 8, ¶ 183; *TeliaSonera*, *supra* note 8, ¶ 34, 99.

¹⁰ Commission Decision of 21 May 2003 Relating to a Proceeding under Article 82 of the EC Treaty (Case COMP/C-1/37.451, 37.578, 37.579—*Deutsche Telekom AG*), 2003 O.J. (L 263) 9 [hereinafter *Deutsche Telekom* 2003], ¶ 107; Case T-271/03, *Deutsche Telekom v. Commission* (2008) E.C.R. II-477 ¶ 167 [hereinafter *Deutsche Telekom* 2008]; *Deutsche Telekom* 2010, *supra* note 8, ¶ 159.

¹¹ *TeliaSonera*, *supra* note 8.

¹² *Id.* at. ¶ 33.

¹³ See e.g. Daniel A. Crane, *linkLine’s Institutional Suspicions*, CATO SUPREME COURT REV. 111 (2008-2009); John Vickers, *Competition Policy and Property Rights*, 120 ECON. J. 375 (2010).

Justice of the European Union (CJEU) on the grounds that the Court wants to avoid margin squeeze that aims at blocking the expansion of competitors at the retail level.¹⁴ Finally, in the telecommunications sector, the EU competition law approach to margin squeeze seems to complement ex ante regulation, and in particular, by the ‘ladder of investment’ approach applied in Local Loop Unbundling (LLU) regulation.¹⁵ Aiming at balancing static with dynamic efficiency considerations, this approach is based on the idea that the regulator should encourage access to wholesale markets by setting very low access prices for the network elements that are too expensive for the new entrant to duplicate. Regulatory prices are increased as soon as new entrants are able to consolidate their market position and thus able to move up ‘the ladder of investment’. Hence, one may argue that the regulatory approach of the ‘ladder of investment’ underlies the European ‘theory of harm’, in the sense that incumbents engage in margin squeeze conduct to prevent rivals from competing in greater parts of the supply chain. Such ‘dynamic rationale’ is, however, absent in the US. This is because the stringent unbundling rules enacted in the wake of the US Telecommunications Act 1996 so as to facilitate rapid market entry of competitive local exchange carriers (CLECs),¹⁶ have been since 2005 progressively phased out due to concerns raised on their impact on investment incentives.¹⁷ The focus, however, of this paper is on competition policy, and not on the issues that arise in ex ante regulation.¹⁸ Therefore, while we acknowledge the abovementioned institutional and substantive considerations, our aim here is not to explore these further, but to rather highlight the enforcement-related issues that may arise from the abovementioned diverging approaches to margin squeeze.

¹⁴ See Section II.

¹⁵ See, e.g., Martin Cave and Ingo Vogelsang, *How Access Pricing and Entry Interact*, 27 TELECOM. POLICY 717 (2003), and Martin Cave, *Encouraging Infrastructure Competition via the Ladder of Investment*, 30 TELECOM. POLICY 223 (2006). Note, however, that the ‘ladder of investment’ approach has mixed theoretical implications, and led to weak empirical results, as shown, respectively, by Marc Bourreau and Joëffrey Drouard, *Progressive Entry and the Incentives to Invest in Alternative Infrastructures*, 45 J. REGULATORY ECON. 329 (2014), and Maya Bacache, Marc Bourreau, and Germain Gaudin, *Dynamic Entry and Investment in New Infrastructures: Empirical Evidence from the Fixed Broadband Industry*, 44 REV. IND. ORGAN. 179 (2014).

¹⁶ The Telecommunications Act constitutes one of the numerous amendments to the Communications Act 1934, the governing statute for the regulation of all sectors of the telecommunications industry in the US. The mandatory unbundling provisions are enshrined in Section 251(d) of the US Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56, codified at 47 U.S.C. §§151 et. Seq. and were implemented by FCC’s order on: ‘Implementation of the Local Competition Provisions in the Telecommunications Act of 1996’, First Report and Order, 11 F.C.C.R. 15499, 4 Comm. Reg. (P &F) 844-9 (1996)’.

¹⁷ See, e.g., Jerry A Hausman and J. Gregory Sidak, *Did Mandatory Unbundling Achieve its Purpose? Empirical Evidence from Five Countries*, 1 J. COMPETITION L. & ECON. 173 (2005).

¹⁸ For an analysis of ex ante treatment of margin squeeze by European regulatory authorities, see Germain Gaudin and Claudia Saavedra, *Ex ante margin squeeze tests in the telecommunications industry: What is a reasonably efficient operator?* 38 TELECOM. POLICY 157 (2014).

Both approaches raise potentially problematic issues. On the one hand, the regulatory approach may give rise to false negative errors (under-deterrence), as it invites the question whether a margin squeeze which harms competition through prices that, nonetheless, respect the standard Courts' definitions of predatory pricing and refusal to deal could still be punished by Courts as anticompetitive conduct.¹⁹ On the other hand, the competition law approach may give rise to false positive errors (over-deterrence) because of its broad definition of margin squeeze, which may also include situations where the competitor's downstream costs do not exceed the difference between downstream and upstream prices. As a result, dominant firms could be prevented from engaging in pro-competitive conducts that lower consumer price and increase total surplus. Indeed, because of the so-called 'umbrella effect',²⁰ a dominant firm would face a *de facto* price floor at the retail level once the wholesale price is set, if squeeze is too broadly defined and punished by law.

In this paper, we suggest a different approach in order to overcome the abovementioned shortcomings. This approach consists of evaluating margin squeeze conducts solely under adjusted predatory pricing standards. By adjusted predatory standards we mean: (i) the inclusion of opportunity costs in a price-cost comparison test that are easily identifiable in the case of vertically related markets, and (ii) an assessment of an exclusionary strategy. The argument is structured as follows. First, we explain why in markets where there is an upstream duty to deal enforced by Courts,²¹ a variation of standard Courts' definition of predatory pricing by way of

¹⁹ To this effect see Nicholas Economides, *Vertical Leverage and the Sacrifice Principle: Why the Supreme Court Got Trinko Wrong*, 61(3) NYU ANNUAL SURVEY OF AMERICAN LAW 379 (2005) (arguing inter alia that the examination of each price level separately for evidence of a discrete abuse fails to take into account of the dominant firm's ability to engage in vertical leveraging). See also, Heimler, *supra* note 7.

²⁰ See Dennis W. Carlton, *Should "Price Squeeze" be a Recognized Form of Anticompetitive Conduct?* 4(2) J. COMPETITION L. & ECON. 271 (2008), and Sidak, *supra* note 5.

²¹ While the classic US duty to deal doctrine was established in the *United States v. Colgate & Company*, 250 U.S. 300 (1919) subsequent Supreme Court decisions have in *Aspen Skiing Co. v. Aspen Highlands Ski Corporation*, 472 U.S. 585 (1985) [hereinafter *Aspen Skiing*] and *Verizon Communications v. Law Offices of Curtis v. Trinko*, 540 U.S. 398 (2004) [hereinafter *Trinko*] significantly reduced the circumstances where a duty to deal will be established under Section 2 of the Sherman Act, particularly in regulated industries and/or where there has been no prior course of dealing. In *Aspen Skiing*, the Court ruled that a monopoly firm has a duty not to exclude rivals by a refusal to deal unless there are 'valid business reasons for the refusal', at 597. The monopolist, Aspen Skiing, voluntarily sold the product and then stopped selling it and discriminated against rivals. This fact was treated by the Court as a basis for inferring anticompetitive intent (the discontinuation by Aspen Skiing 'suggested a willingness to forsake short-term profits to achieve an anticompetitive end' at 409). The Supreme Court in *Trinko* reconceived *Aspen* as an exception to the broader rule that monopoly firms may unilaterally refuse to deal with competitors. The Court distinguished *Trinko* from *Aspen Skiing* as, unlike the latter case, the monopolist Verizon did not voluntarily sell the product (i.e. the leased UNEs) and then ceased selling them or discriminated against rivals. Instead, the market for leased UNEs was created by regulation. This led the Supreme Court to assert that *Aspen Skiing* was already 'at or near the outer boundary of Section 2 liability', at 409. In the EU, a regulatory duty to deal can be enforced under competition laws

including opportunity costs in the price-cost comparison test would suffice to identify any margin squeeze. Then, we build on recent economic analyses of margin squeeze conducts in order to identify their different effects. In doing so, we explain why margin squeezes which may harm competition resemble predatory pricing strategies, and why other types of margin squeeze typically would harm competitors, but not competition. We show why classic arguments against the use of above-cost predatory pricing test typically do not hold in vertically-related markets where margin squeeze takes place. Finally, building on the case law, we also provide groundings for the Courts to use this approach. We believe that this novel approach to margin squeeze could reconcile the two opposing transatlantic views on the conduct.

Relying on adjusted-predatory pricing standards to evaluate margin squeeze conducts presents three main benefits. The first one is that it furnishes a simple, reliable price-cost test to identify margin squeeze conducts as anticompetitive or monopolizing. This, in turn, improves legal certainty. Furthermore, it presents the advantage of implementation in both the US and the EU. The second one relates to the fact that the suggested approach allows for the detection of monopolizing margin squeeze conducts which would pass a standard predatory pricing test, where opportunity costs are omitted. It does so while avoiding classic problems related to above-cost predatory pricing standards (e.g., administrability and predictability of the rule), because it restricts the use of such standards to vertically related markets. This, in turn, reduces the risk of under-deterrence. Finally, the suggested approach relies on the predatory pricing requirement that the alleged conduct should lead to the actual or likely exclusion or marginalisation of competitors from the market.²² Hence, it provides a safe harbor for margin squeezes which harm competitors, by reducing their profits, but not competition (because competitors remain in the market) and which lower prices for consumers. This, in turn, reduces the risk of over-deterrence.

Before proceeding, an important caveat should be noted here. There is a long-standing academic and policy debate - especially in the EU context - on whether margin squeeze should be recognised as a distinct, stand-alone category of abuse of dominance or whether it should be treated in an 'equivalent fashion' to other established forms of abuse, such as refusal to deal and

by competition authorities and courts, as the presence of ex-ante regulation does not prevent the application of an ex post duty to deal, see *Deutsche Telekom* 2003 and *Deutsche Telekom* 2010.

²² See Judgment of the Court (Grand Chamber) of 27 March 2012 - *Post Danmark A/S v Konkurrencerådet* (Case C-209/10) (2012) ECR I-0000 [hereinafter *Post Danmark*], 'Competition on the merits may, by definition, lead to the departure from the market or the marginalisation of competitors that are less efficient and so less attractive to consumers from the point of view of, among other things, price, choice, quality or innovation', ¶22.

predatory pricing.²³ Mindful of the controversy surrounding the nature and treatment of margin squeeze abuse, our aim here is not to engage in a normative discussion on this issue. We are, therefore, not concerned with whether margin squeeze should be treated in an analogous fashion to refusal to deal²⁴ (which would, amongst others, entail relying on an anticompetitive foreclosure test) or to predatory pricing (which would entail relying on a profit sacrifice test). On the contrary, we take a positive approach to the issue, as our suggested test builds on the prevailing treatment of margin squeeze in the US and the EU. In light of the above, our ambition is much narrower and critical: to argue that margin squeeze cases should face the abovementioned two-fold test.

The remainder of this paper is organised as follows. In Section II, we summarise the current state of antitrust analysis of both predatory pricing and margin squeeze in the US and the EU. In Section III, we propose an above-cost predatory pricing approach to antitrust analysis of margin squeeze, and in Section IV we discuss this approach in light of the literature and case law on above-cost predatory pricing. Section V concludes.

II. PREDATORY PRICING AND MARGIN SQUEEZE: WHERE DO WE STAND?

This section provides a brief account of current antitrust approaches to predatory pricing and margin squeeze in the US and the EU. We consider both types of abuses because our proposed approach to margin squeeze, detailed in Section III below, builds on current US and EU approaches to predatory pricing. Our aim is to highlight the flaws of the existing antitrust treatment of margin squeeze and to demonstrate that the structural transatlantic differences are larger in the case of margin squeeze than in that of predatory pricing.

²³ The literature on the issue is vast. In the US context see Heimler, *supra* note 7; Carlton, *supra* note 20. In the EU context see Liam Colley and Sebastian Burnside, *Margin Squeeze Abuse*, 2 EUR. COMPETITION J. 185 (2006); Alison Jones, *Identifying an Identifying an Unlawful Margin Squeeze: The Recent Judgments of the Court of Justice in Deutsche Telekom and TeliaSonera*, 13 CYELS 161 (2010). See further OECD, *supra* note 2 and David Spector, *Some Economics of Margin Squeeze* 1 REVUE CONCURRENCES 21 (2008).

²⁴ The European Commission for example in its Guidance on Article 102 document appears to establish a parallel between the margin squeeze doctrine and that of refusal to deal, see European Commission, *Guidance on the Commission's Enforcement Priorities in Applying Article 82 [Article 102] of the EC Treaty to Abusive Exclusionary Conduct by Dominant Undertakings*, 2009 O.J. (C 45) 7, (EC) [hereinafter *Guidance on Article 102*], ¶ 69.

A. PREDATORY PRICING

Predatory pricing is inherently a *dynamic* strategy typically taking place in a single market, whereby a firm incurs a *sacrifice* in the short run to *exclude* competitors, in order to acquire a dominant position allowing it to *recoup* its losses and earn supra-competitive profits in the long run.²⁵ This pattern of sacrifice-then-recoupment is found in the case law as well.

While the US and the EU courts seem to agree on the abovementioned mechanism that leads to predation, they nonetheless disagree on the formulation of the legal rule that should be applied. Hence, the legal rules adopted respectively in the US and the EU for the assessment of predation differ substantially. Briefly, in the EU the test for predation requires an assessment of (i) the dominant firm's ex ante perspective of whether the conduct is likely to lead to a sacrifice and (ii) whether this is likely to lead to actual or likely anticompetitive foreclosure. In the US, the antitrust plaintiff must demonstrate both sacrifice (in the sense of sales below cost) and a market structure conducive to recoupment. In the words of the US Supreme Court in the *Brooke Group*²⁶ case – the landmark case on predatory pricing – the successful plaintiff should prove that there is a ‘dangerous probability’ that the predator would recoup its investment in below cost prices.²⁷ In sharp contrast to the US approach, the EU Courts do not require recoupment as a prerequisite in predatory pricing cases.²⁸ However, this does not mean that the likelihood of recoupment is completely irrelevant. Rather, it seems implicit in the notion of dominant position; in other words

²⁵ There are several existing theories of predation which explain how the dominant firm could earn its position allowing for recoupment by forcing competitors to exit the market; e.g., signal jamming, financial predation with imperfect financial markets, reputation. See e.g. MASSIMO MOTTA, *COMPETITION POLICY; THEORY AND PRACTICE* (CUP 2004) 415-422. However, the European Commission notes that a dominant position can be acquired without exclusion of competitors, if the sacrifice phase led to disciplining the market; see Guidance on Article 102, *supra* note 24, ¶ 69.

²⁶ *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209 (1993) [hereinafter *Brooke Group*].

²⁷ *Id.* The Supreme Court confirmed this position in the *linkLine* case and in *Weyerhaeuser Co. v. Ross-Simmons Hardwood Lumber Co., Inc.*, 549 U.S. 312 (2007). See also *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 US 574, 590-591 (1986). For a discussion of the difficulties associated with recoupment see HERBERT HOVENKAMP, *FEDERAL ANTITRUST POLICY: THE LAW OF COMPETITION AND ITS PRACTICE* (West Group 2005) 370.

²⁸ For the most recent pronouncement on recoupment see Judgment of the Court (First Chamber) of 2 April 2009 - *France Télécom SA v. Commission* (Case C-202/07 P), (2009) ECR I-2369. For a criticism of the EU approach to recoupment see Michal Gal, *Below-Cost Price Alignment: Meeting or Beating Competition? The France Télécom Case*, 28(6) ECLR 382 (2007). Advocate General Fennelly and Mazák have argued in favor of incorporating recoupment in the legal test for predation. In *Compagnie Maritime Belge*, AG Fennelly suggested that some form of recoupment ‘should be part of the test for abusive low pricing by dominant undertakings’, see Opinion of AG Fennelly in Joined Cases C-395/96P and 396/96P, *Compagnie Maritime Belge NV and Dafna Lines v. Commission* (1998) ECR I-1365 ¶ 136. See also Opinion of AG Mazák in Case C-202/07 P, *France Télécom SA v. Commission* [2008] ECR I-02369 ¶ 59-60. For the opposite view see Cyril Ritter, *Does the Law of Predatory Pricing and Cross-Subsidization Need a Radical Rethink?*, 27(4) WORLD COMPETITION 613 (2004).

that a dominant firm having disciplined or excluded its rivals from the market, will be able to raise prices and recoup losses made during the predatory period and harm consumers.²⁹ The Commission in its 2005 Discussion Paper came to a similar conclusion noting that ‘as dominance is already established this normally means that entry barriers are sufficiently high to presume the possibility to recoup’.³⁰ However, a degree of caution should be applied to such a statement, because dominance can be defined according to different thresholds of market shares, which, in turn, may affect the ability of the dominant firm to recoup its losses.

Despite the abovementioned differences, both in the US and the EU, the Areeda-Turner rule has proved extremely influential on assessing the sacrifice requirement.³¹ Areeda and Turner sought to formulate a cost-based price test as a workable test for distinguishing between predatory pricing and competitive pricing. They proposed to consider predatory a price that falls below short run marginal cost and argued that such a simple test would capture conduct that was likely to exclude equally efficient firms from the market. However, acknowledging the difficulties associated with calculating marginal cost, they suggested relying instead on average variable cost (AVC) as a convenient proxy for enforcement.³² Hence, under the Areeda-Turner rule prices are presumed unlawful when they are set below AVC.

The case law supports the Areeda-Turner approach of a price-cost test to assess sacrifice. In the US, the Supreme Court in *Brooke Group*³³ established that a successful plaintiff must prove that the alleged prices fell below an appropriate measure of cost. The Court, however, declined to ‘resolve the conflict among the lower courts over the appropriate measure of costs’,³⁴ despite the fact that the parties had relied on the AVC as the relevant measure of cost. Nonetheless, subsequent case law confirms that AVC is generally considered to be the appropriate standard.³⁵

²⁹ To this effect see John Temple Lang and Robert O’Donoghue, *Defining Legitimate Competition: How to Clarify Pricing Abuses under Article 82EC*, 26 (2) FORDHAM INT’L L. J. 83 (2002).

³⁰ European Commission, Discussion Paper on the Application of Article 82 of the Treaty to Exclusionary Abuses, 2005, Brussels, ¶ 122.

³¹ See Phillip Areeda and Donald F. Turner, *Predatory Pricing and Related Practices under Section 2 of the Sherman Act*, 88 HARVARD L. REV. 697 (1975).

³² *Id.* at pp. 716-718.

³³ *Brooke Group*, *supra* note 26.

³⁴ *Id.* at 222.

³⁵ Herbert Hovenkamp, *The Areeda-Turner Test for Exclusionary Pricing: A Critical Journal*, 46 REV. IND. ORGAN. 209 (2015), noting that ‘every federal circuit except the Eleventh has embraced some variation of the test that Areeda and Turner proposed’.

In the EU, Courts have considered the Areeda-Turner test as a starting point, but they have introduced some important modifications. Hence, the legal test established in the *AKZO*³⁶ case and refined in *Tetra Pak II*³⁷ defines as anticompetitive (i) prices below AVC, and also (ii) prices above AVC, but below average total cost (ATC) ‘if they are determined as part of a plan for eliminating a competitor’.³⁸ In the former case, foreclosure is implied by the dominant firm’s pricing strategy, which would typically prove irrational if it were not for excluding competitors. In other words, the *AKZO* ruling sets out a presumption that there is no profit-maximizing reason for pricing below costs.³⁹ In the latter case, however, establishing anticompetitive foreclosure becomes important. As the Commission puts it, a dominant undertaking engages in predatory pricing ‘so as to foreclose or be likely to foreclose one or more of its actual or potential competitors’.⁴⁰ Therefore, the notion of foreclosure is central to predatory pricing strategies, and this is clearly shown in the case law.⁴¹ In this regard, predatory pricing antitrust cases typically involve exclusion (or likelihood of) *actual* competitors or foreclosure of potential competitors, which could serve the market if they were to enter. In economic theory, however, a distinction exists between the use of low pricing strategies to exclude competitors (predatory pricing) and to deter entry of rivals (‘limit pricing’, whereby a dominant firm charges less than its short run profit-maximising price in order to deter entry).

B. MARGIN SQUEEZE

In contrast to predatory pricing, margin squeeze is a conduct that can only arise in vertically related markets, where a vertically integrated firm, dominant at the upstream level, faces competition in the downstream segment from competitors who rely on its upstream input. According to the EU Courts and authorities,⁴² a margin squeeze occurs when the spread between

³⁶ Case C-62/86, *AKZO Chemie BV v Commission* (1991), ECR-I-3359 [hereinafter *AKZO*].

³⁷ Case T-83/91, *Tetra Pak International SA v Commission* (1994), ECR II-755, affirmed in C-333/94 P, *Tetra Pak International SA v. Commission* (1996) ECR I-5951.

³⁸ *AKZO*, *supra* note 36, ¶ 72. Note that the *AKZO* requirements for lawful pricing are thus stricter than the Areeda-Turner test, as under the *AKZO* test there can be predation when prices are above AVC.

³⁹ However, prices below AVC may be part of a pricing plan for new products or can occur in two-sided markets; see Guidance on Article 102, *supra* note 24 ¶ 26 fn. 3. In this regard, *AKZO* only sets out a presumption of anticompetitive conduct. Circumstances such as these referred to in the Guidance paper could thus be recognized and the presumption rebutted.

⁴⁰ See Guidance on Article 102, ¶ 63.

⁴¹ See e.g. *AKZO*, ¶ 41-42; Judgment of the Court of First Instance (Fifth Chamber) – *France Télécom SA v. Commission* France (Case T-340/03) (2007) ECR II-117, ¶130.

⁴² *Deutsche Telekom* 2003, ¶ 102, 140; *Deutsche Telekom* 2008, ¶ 237; *Deutsche Telekom* 2010, ¶ 177 and Summary of Commission Decision of 4 July 2007 Relating to a Proceeding under Article 82 of the EC Treaty (Case

the price charged to competitors upstream and the price charged to the dominant undertaking's own customers downstream is either negative or insufficient for competitors as efficient as the dominant undertaking to cover its specific downstream costs. Hence, a margin squeeze occurs when the as-efficient competitor (AEC) test fails. This test compares the integrated firm's retail price, p , to its upstream price, a , and its own downstream costs, c , and is satisfied when $p \geq a + c$.⁴³

Such an approach is consistent with general welfare considerations (in so far as it protects competition in the form of *as* or *more* efficient competitors as opposed to less efficient ones) and is also consistent with the principle of legal certainty, as it is based on the integrated firm's own prices and costs.⁴⁴ Hence, in the EU, margin squeeze is recognized as a freestanding violation of Article 102 TFEU subjected to the as-efficient competitor test.⁴⁵ In the *TeliaSonera* judgement, the CJEU clarified that the *Oscar Bronner* requirements do not need to be satisfied in order to establish margin squeeze liability.⁴⁶ Refusal to supply and margin squeeze are thus treated as two distinct infringements, with the latter requiring a less demanding test. The Court, instead, held that when a dominant firm fixes the 'terms of trade' with its downstream competitors, it might be found to abuse its dominant position, when the terms of dealing are 'disadvantageous' for the

COMP/38.784– *Wanadoo España v Telefónica*), 2008 O.J. (C 83) 6, ¶ 312; and *Telefónica* 2014, ¶ 75. See also the Commission's adoption of interim measures in the *Napier Brown v British Sugar*, Case No IV/30.178 *Napier Brown/British Sugar* (1988) OJ L284/41, 19.10.1988 [hereinafter *Napier Brown* 1988], the Commission explicitly held that the existence of a margin squeeze should be tested on the basis of the dominant firm's charges and costs and that it is necessary to show that the margin is 'insufficient to reflect the dominant company's own costs and transformation...with the result that competition in the derived product is restricted', ¶ 66. See also Case T-5/97, *Industrie des Poudres Sphériques SA v Commission* (2000) ECR II-3755, ¶ 179. The most authoritative discussion of the appropriate test for margin squeeze stems from the CJEU's preliminary ruling in *TeliaSonera*. The CJEU acknowledges that in principle the test should be whether the dominant firm 'would have been sufficiently efficient to offer its retail services to end users otherwise than at a loss if it had first been obliged to pay wholesale prices for the intermediary services' that is whether the margin passes the AEC test, see ¶ 32, 41, 42. The Court however did not clearly reject the Reasonably Efficient Competitor (REC) test and established three scenarios where it might be relevant to apply it, see ¶ 45.

⁴³ The AEC test is also referred to as the 'imputation test'.

⁴⁴ See *Deutsche Telekom* 2008, ¶ 167-168, 192, 200-203, *TeliaSonera*, ¶ 41-48, and *Telefónica* 2014, ¶ 124.

⁴⁵ See *supra* note 9.

⁴⁶ *TeliaSonera*, ¶ 54-58. In *Oscar Bronner*, the CJEU spelled out three conditions that must be met before a refusal to supply an input by the dominant firm can be considered abusive: (i) the refusal must be likely to eliminate all competition in the secondary market on the part of the person requesting access; (ii) there is no objective justification for the refusal; and (iii) the service in itself is indispensable to carrying on that person's business, inasmuch as there is no actual or potential substitute in existence; see Case C-7/97, *Oscar Bronner GmbH & co. KG v. MediaprintZeitungs –und Zeitschriftenverlag GmbH & Co. KG* (1998) ECR I-7791, ¶ 41). See also Guidance on Article 102, *supra* note 24, ¶ 80, where the conditions that must be met for the establishment of a refusal to deal or margin squeeze set out by the Commission are essentially identical to those established by the CJEU in *Bronner*.

new entrants.⁴⁷ Indispensability of the wholesale input is not, therefore, required for liability, although it ‘might be relevant’ when assessing the effects of the margin squeeze.⁴⁸ In the absence of the abovementioned conditions, however, it is necessary to demonstrate that the existence of the squeeze makes market penetration more difficult for competitors.⁴⁹

An important remark is that, under EU laws, there is no direct need to prove competitor foreclosure in order to substantiate a margin squeeze claim, as long as one shows potential anticompetitive effects of the pricing conduct; as these effects are necessary in order to qualify the pricing practice as an abuse of dominant position within the meaning of Article 102 TFEU.⁵⁰ As further explained in *TeliaSonera*, a squeeze exists when an AEC operates in the market ‘at a loss or at artificially reduced levels of profitability’.⁵¹ While the potentially exclusionary effect of the pricing practice is ‘probable’⁵² in the case of a negative margin (i.e. when the wholesale price is higher than the dominant firm’s retail price), in the case of a positive margin it must be demonstrated that the conduct is ‘likely to have the consequence that it would be at least more difficult for the operators concerned to trade on the market concerned’.⁵³ This can be put in perspective with the two-fold *AKZO* standard for predatory pricing mentioned above, whereby prices below AVC are presumed predatory, and prices between AVC and ATC are punished only if they form part of an exclusionary strategy. As will be shown in Section III B, the assessment of the exclusionary effect of a price squeeze with positive margin is necessary in order to distinguish between sub-categories of margin squeeze, which have different effects on competition and consumer welfare.

⁴⁷ *TeliaSonera*, ¶ 54. The Court diverged from the opinion of Advocate General Mazák who had argued that absent a duty to deal, either imposed by sector specific regulation or because the *Oscar Bronner* conditions were satisfied, there is ‘no independent competitive harm caused by the margin squeeze above and beyond the harm which would result from a duty to deal violation at the wholesale level. See Opinion of AG Mazák in Case C-52/09 *Konkurrensverket v. TeliaSonera AB*, ¶ 11-20. See also Damien Geradin, *Refusal to Supply and Margin Squeeze: A Discussion of Why The ‘Telefonica Exemptions are Wrong*, (Tilc Discussion Paper No. 2011-009, 2011).

⁴⁸ *TeliaSonera*, ¶ 69 and 70-71 (‘when access to the wholesale input is indispensable potential anticompetitive effects are probable’). For a criticism of this approach see Hendrik Auf’mkolk, *The ‘Feedback Effect’ of Applying EU Competition Law to Regulated Industries: Doctrinal Contamination in the Case of Margin Squeeze*, 1 J. EUR. COMP L & PRACTICE 1 (2012).

⁴⁹ *Deutsche Telekom* 2010.

⁵⁰ See *TeliaSonera*, ¶ 27, 61.

⁵¹ *Id.*, ¶ 33.

⁵² *Id.*, ¶ 73.

⁵³ *Id.*, ¶ 74. See Nicola Petit, *Price Squeezes with Positive Margins in EU Competition Law: Anatomy of an Economic and Legal Zombie*, 2 REVUE DU DROIT DES INDUSTRIES DE RESEAU 123 (2014), on the inconsistency between anticompetitiveness of a positive margin squeeze as in the *TeliaSonera* judgement and the subsequent *PostDanmark* judgment.

In stark contrast, in the US margin squeeze does not constitute a standalone violation of Section 2 of the Sherman Act. The Supreme Court’s decision in *linkLine* has eliminated the possibility – that existed since the *Alcoa* decision⁵⁴ – of maintaining an independent margin squeeze action, if there is no antitrust duty to deal. The primary reason for rejecting the pricing spread concept appears to be administrative concerns.⁵⁵ Margin squeezing behavior must instead be assessed as a constructive refusal to deal⁵⁶ or as an instance of predatory pricing.⁵⁷ An unfair or inadequate margin itself is not illegal. It important to stress, however, that the US Supreme Court has yet to rule on margin squeeze, when there exists a duty to deal enforced under antitrust laws; precisely the case we study in this paper.⁵⁸

Finally, in the case of margin squeezes that arise in regulated sectors, in the EU the presence of sector-specific regulation does not prevent the application of competition law and the margin squeeze concept, provided that the vertically integrated firm retained some scope to avoid the squeeze even if it can only do so by raising retail prices.⁵⁹ By contrast, in the US, the presence of sector-specific regulation excludes the application of antitrust to the price levels that comprise the squeeze.⁶⁰

While margin squeeze conducts are assessed in different ways in the US and the EU, this section showed that alleged predatory pricing conducts are evaluated according to more similar approaches. In other words, they both follow the sacrifice-then-recoupment framework elaborated in the economics literature, even though some differences remain in practice. With this in mind, the following section will provide an alternative approach to the antitrust assessment of margin squeeze – the above-cost predatory pricing standard for margin squeeze conduct – which may reconcile the transatlantic differences with respect to this conduct.

⁵⁴ *Alcoa*, *supra* note 8.

⁵⁵ The Court ruled that ‘[i]nstitutional concerns’ counsel against adopting a stand-alone price squeeze theory, at *linkLine* 1120-1121. The Court emphasized in particular the difficulty that exists of administering a rule that would require judges ‘to police’ both retail and wholesale prices and ensure that the ‘interaction’ between them does not ‘squeeze’ rival firms, and the elusiveness in trying to apply a requirement that a monopolist leave its rivals a ‘fair’ or ‘adequate’ margin; *linkLine* at 1120-1121.

⁵⁶ Under the standards developed in *Trinko*.

⁵⁷ Under the standards developed in *Brooke Group*.

⁵⁸ See also Heimler, *supra* note 7.

⁵⁹ *Deutsche Telekom* 2010, ¶ 181-182.

⁶⁰ See *linkLine*.

III. AN ABOVE-COST PREDATORY PRICING APPROACH TO MARGIN SQUEEZE

Prior to introducing our approach to assessing margin squeeze conduct, it is important to note that we focus on conducts that arise in industries where the integrated firm faces a duty to deal⁶¹ which is enforced by courts. That is, either an antitrust or a regulatory duty to deal in Europe⁶² or an antitrust duty to deal in the US.⁶³ This allows us to consider cases in which both the EU and the US Courts could potentially intervene.

A. NEW STANDARD FOR MARGIN SQUEEZE CONDUCTS

Our approach is summarized in an above-cost predatory pricing standard for margin squeeze conducts. Such a standard builds on the assessments of predatory pricing conducts, while taking into account the specificities of the vertical structure in which a margin squeeze takes place. Its goal is to reduce both risks of under- and over-deterrence as compared to current approaches, while being administrable.

Our standard requires the following:

- 1) A comparative test of the dominant firm's prices and costs, including opportunity costs of missed upstream sales;
- 2) An assessment of an exclusionary strategy, as in the case of predatory pricing.

Our suggested standard to margin squeeze conduct may reduce the risks of under-deterrence under US laws⁶⁴ and over-deterrence under EU laws. With respect to the former, taking into account the opportunity costs of missed upstream sales when assessing whether prices

⁶¹ The duty to deal might be either a non-excessive price or a rule prescribing the integrated firm to supply its rivals or not discriminate against its rivals. See e.g. *Aspen Skiing*, *supra* note 21, where the defendant refused to sell at duopoly prices to a competitor.

⁶² See e.g. *Deutsche Telekom* 2010. See also *Napier Brown* 1988, where both an abusive refusal to supply and a margin squeeze were found. See further *Industrie des Poudres Sphériques*, which confirmed the Commission's non-infringement decision as alternative sources of supply were available and the alleged margin squeeze was rejected.

⁶³ See *supra* note 21. The Court in *Trinko* did not make unilateral refusals to deal legal per se; it held that freedom to deal is paramount and that the facts of *Aspen* must be treated as an exception to this principle. See Howard Shelanski, *The Case for Rebalancing Antitrust and Regulation*, 109 MICHIGAN L. REV. 683 (2011) 698-9 and Eleanor Fox, *Is there Life in Aspen after Trinko? The Silent Revolution of Section 2 of the Sherman Act*, 73 ANTITRUST L. J. 153 (2005-2006) 168.

⁶⁴ Whereas the Supreme Court has yet to state on assessing a margin squeeze conduct when there is an antitrust duty to deal, it explained that the AEC test 'lacks any grounding in [its] antitrust jurisprudence'. See, *linkLine* 1121-1122; and Heimler, *supra* note 7. This leaves the door open to under-deterrence under an antitrust duty to deal in case the Supreme Court does not recognize that a monopolizing strategy can occur with above-cost prices.

are below some measure of costs enables to detect dominant undertakings' anticompetitive or monopolizing conducts in cases where both wholesale and retail prices are set at such levels that escape the refusal to deal or predatory pricing laws respectively. With respect to the latter, the requirement that the conduct is exclusionary (in the sense of impeding an actual competitor who served consumers from doing so and deterring entry of a competitor who would serve consumers) may restrict the scope of potential liability of a margin squeeze under EU laws, as allowed in *TeliaSonera*. The benefit of this narrower definition is that it does not prevent dominant firms from engaging in pro-consumer price-cutting, which would allow more-efficient competitors to remain in the market, albeit making a lower, positive profit.

Overall, our approach only focuses on anticompetitive and monopolizing margin squeeze conducts. We refer to such conducts as those where the incumbent sets a retail price at such levels that do not allow a competitor who is at least as efficient as the incumbent at the retail level and who would serve the retail market absent a squeeze, to earn positive profits.

In the following sections we explain in greater detail the suggested two-prong test of margin squeeze conduct, and why it performs better than current approaches. Finally, we discuss its administrability.

B. OPPORTUNITY COSTS OF MISSED UPSTREAM SALES

As already discussed, a convenient way to detect *all* margin squeezes is the 'as-efficient competitor' (AEC) test. An important observation is that the definition of margin squeeze according to the AEC test includes both refusal to deal and predatory pricing as subcases of margin squeeze conduct, as both *too high* an input price and *too low* (i.e. below cost) a retail price can induce a margin squeeze. However, this definition may also capture some conducts that do not correspond to refusal to deal or to predatory pricing practices, where the vertically integrated firm may earn a positive profit while applying a margin squeeze to monopolize the market.⁶⁵ Therefore, standard Courts' criteria for assessing refusal to deal or predatory pricing practices, which include *inter alia* a below-cost requirement (such that the dominant, integrated firm incurs losses in the short-run) would not encompass this specific case of margin squeeze.

⁶⁵ This type of conduct corresponds to what Herbert Hovenkamp calls 'long-run anticompetitive' pricing strategies, in that it is 'sustainable' in the long-run, as the dominant firm earns a positive profit, see PHILLIP AREEDA AND HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* (2nd edn, Aspen Publishers 2002), ¶ 736.

To illustrate the under-deterrence problem under the current US approach, consider the following example. An incumbent telecommunications firm owns a residential access network, which costs \$5 per month and per consumer line to maintain. It must grant access to the network to a downstream competitor at a (maximum) price of \$10 because of a duty to deal.⁶⁶ The incumbent's retail cost is \$20 per month per consumer, whereas the competitor is more efficient, with a retail cost of \$18. The competitor needs to rent one access line for each of its customers.

Following a standard predatory pricing test, the incumbent is allowed to set its retail price at any level equal to or above \$25 per month; the sum of its upstream and downstream costs. However, the competitor cannot set a price lower than \$28 without making a loss. Therefore, the incumbent may force its competitor to exit the market while respecting standard predatory pricing laws by setting a price between \$25 and \$28, and then benefit from a dominant position (due, e.g., to barriers to entry) downstream and recoup its losses.⁶⁷ In doing so, the incumbent would only earn between \$0 and \$3 per month per consumer in the short run, as compared to \$5 in the case where it would not squeeze its competitor. However, it could then increase its retail price in the long-run to recoup this foregone profit, once the competitor has left the market. Consumers would likely be worse off due to the monopolization, as follows from standard predatory pricing strategies.

This above-cost predatory strategy is not possible when we take into account the opportunity cost of a missed upstream sale in the cost calculations for the predatory pricing test. The opportunity cost is what the incumbent foregoes (one upstream sale) when it decides to serve the retail market itself; in our example, this corresponds to the difference between network access price, and cost, i.e., \$5. This represents the 'sacrifice' the incumbent bears in the short-run when engaging in a margin squeeze. Following our adjusted standard, the incumbent cannot set a retail price below \$30. Therefore, the competitor, who is the most efficient downstream firm, can serve the retail market at a price between \$28 and \$30.

⁶⁶ A wholesale price set through a duty to deal can be above cost if the incumbent has to be compensated, for instance, for investment in Universal Service Obligations; see, e.g., Heimler, *supra* note 7. By contrast, when the upstream price is set at the level of the upstream cost by the duty to deal, i.e., \$5 in our example, then all margin squeeze conducts would be detected by both the classic and adjusted predatory pricing tests, which would be equivalent. See, e.g., Jan Bouckaert and Frank Verboven, *Price Squeezes in a Regulatory Environment*, 26 (3) J. REGULATORY ECON. 321 (2004).

⁶⁷ Several theories of predatory pricing, building on dynamic sacrifice-then-recoupment strategies, provide arguments for why the incumbent could find it more profitable to monopolize the market than to serve its competitor and why the competitor could not sustain a price war when it makes a negative profit. See, e.g., Patrick Bolton and David S. Scharfstein, *A Theory of Predation Based on Agency Problems in Financial Contracting*, 80 AMERICAN ECON. REV. 93 (1990); and MOTTA, *supra* note 25, for a review.

As several scholars have already observed,⁶⁸ including the opportunity cost that the dominant, vertically integrated firm incurs by a missed sale at the upstream level in the (marginal cost based) Areeda-Turner test is equivalent to the AEC test for margin squeeze.⁶⁹ The benefit of presenting this test as one for predatory pricing is that it could be endorsed by US Courts, even after *linkLine*.

Several scholars have argued in favor of including opportunity costs in predation cases.⁷⁰ For instance, Areeda and Hovenkamp support the inclusion of opportunity costs in predatory pricing tests under the following two conditions: first that such opportunity costs are easily identifiable and second that their inclusion does not lead to punishing a firm for a ‘failure to maximize’ its profits in the short run.⁷¹ In the context of a margin squeeze conduct, favoring a downstream sale instead of a short-run profit maximizing upstream sale can usually be said to fall in the range of easily identifiable opportunity costs, as it is defined by the duty to deal.

C. EXCLUSIONARY EFFECTS

In this section we elaborate on the second prong of our test. We show how the assessment of (the likelihood of) foreclosure of competitors in margin squeeze cases could reduce the risk of over-deterrence.

Recent economic analyses of margin squeeze conduct shows that it may have different effects on competition, competitors and consumers. For example, Jullien, Rey and Saavedra,⁷² argue that the definition of margin squeeze in light of the AEC test encompasses two different types of conduct: *exclusionary* and *exploitative* margin squeezes. The first type of conduct, that

⁶⁸ See, e.g., Heimler, *supra* note 7, and Bruno Jullien, Patrick Rey and Claudia Saavedra, *The Economics of Margin Squeeze*, (CEPR Paper No. DP9905, 2014) at <http://ssrn.com/abstract=2444927> (visited June 2015).

⁶⁹ To see why this is the case, consider the (marginal cost based) Areeda-Turner test for a vertically integrated firm with upstream and downstream marginal costs, c_u and c , respectively, which faces a downstream competitor buying its input and selling homogeneous retail products. The integrated firm has to set its retail price p such that: $p \geq c_u + c$. However, by undercutting its competitor’s retail price, it *misses* an upstream sale at price a , and, thus, an upstream profit of $a - c_u$. If we include this *opportunity cost* in the above-mentioned test, it becomes: $p \geq (a - c_u) + c_u + c$, which simplifies into the as-efficient imputation test, $p \geq a + c$.

⁷⁰ It is important to note that the debate over above-cost predatory pricing has always been quite vivid amongst legal scholars and economists. In Section IV below, we review the different arguments on this topic and we explain why the traditional pitfalls of above-cost predatory pricing standards typically do not apply to vertically related markets where margin squeeze conducts take place.

⁷¹ PHILLIP AREEDA AND HERBERT HOVENKAMP, *ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION* (Aspen Publishers 2008) ch. 7C-3; see also Hovenkamp, *The Areeda-Turner Test for Exclusionary Pricing: A Critical Journal*, *supra* note 35 at pp. 13-14. See further WILLIAM J BAUMOL, *Predatory Pricing and the Logic of the Average Variable Cost Test*, 39(1) J. LAW ECON 49 (1996) 50, 69-71

⁷² Jullien, Rey and Saavedra, *supra* note 68.

of an *exclusionary margin squeeze*, occurs when the integrated firm sets both its upstream and downstream prices at such levels that a downstream competitor that is *at least* as efficient as the integrated firm cannot profitably remain in the market. There are several dynamic reasons why an integrated firm would find it profitable to engage in such conduct. First, it may undertake a predatory-like pricing strategy, leading to the exclusion of competitors at a sacrifice in the short-run, in order to benefit from a dominant position at the downstream level in the long-run, thereby allowing for sacrifice recoupment. Several existing theories of predation can explain how the integrated firm could force downstream competitors to exit the market; e.g., signal jamming, financial predation with imperfect financial markets and reputation.⁷³ The second explanation why an integrated firm would find it profitable to engage in an exclusionary margin squeeze conduct is provided by other foreclosure theories, which may hold irrespective of whether a duty to deal exists. Just like predation theories, these foreclosure theories also build on short-run sacrifice and supra-competitive profit (i.e., recoupment) following the exclusion of competitors. One example of such a theory is that of *monopoly maintenance*, whereby the dominant firm forecloses the downstream market in the short-run in order to prevent entry into the upstream market in the long-run.⁷⁴

It is important to highlight that in all the abovementioned economic theories of foreclosure, the notion of sacrifice is similar to that of predatory pricing, as long as the downstream prey is at least as efficient as the integrated firm. In fact, in this latter case, according to the Chicago School argument, the integrated firm would be better off in the short-run when selling only at the upstream level and allowing its more-efficient competitor to resell to final consumers. Therefore, by engaging in an exclusionary conduct, the integrated firm incurs losses or foregoes profits during the squeeze period, as the retail profits earned by serving the retail market alone are smaller than those that it could have obtained by selling at the upstream level.

⁷³ See MOTTA, *supra* note 25, for a review of predatory pricing theories. In vertically-related markets, these theories of predatory pricing can occur at a price that is above the integrated firm's marginal cost of production; see Gary Biglaiser and Patrick DeGraba, *Downstream integration by a bottleneck input supplier whose regulated wholesale prices are above costs*, 32 (2) RAND J. ECON. 302 (2001), for an example following the *deep-pocket* theory of predatory pricing.

⁷⁴ See, e.g., Dennis W. Carlton and Michael Waldman, *The Strategic Use of Tying to Preserve and Create Market Power in Evolving Industries*, 33(2) RAND J. ECON. 134 (2002), and Yongmin Chen, *Refusal to Deal, Intellectual Property Rights, and Antitrust*, 30 J. L. ECON. AND ORGA. 533 (2014). One could conjecture that, according to a related theory, an exploitative margin squeeze leading to the marginalisation (rather than the exclusion) of competitors may also hamper long-run upstream competition, while maintain downstream competition. We are not aware, however, of any theory work along those lines. Moreover, as explained in the introduction, dynamic efficiency considerations are typically dealt with by regulatory authorities through *ex ante* tools rather than by *ex post* competition policy.

The exclusionary conduct can be profitable because the integrated firm's pricing conduct may be constrained by the upstream duty to deal, hence preventing it from fully extracting surplus introduced by downstream firms and offering it incentives to monopolize the downstream market.⁷⁵

The second type of conduct Jullien, Rey and Saavedra identify, that of an *exploitative margin squeeze*, occurs when the integrated firm sets its prices at such levels that allow it to capture the surplus introduced by a *more efficient* entrant, which remains in the market. In fact, the integrated firm's prices may be set at such levels that impede a hypothetical *as efficient* competitor from earning a positive profit, but allow an existing *more efficient* competitor, with lower costs, to do so. As explained by the Chicago School's 'single monopoly profit theory', the integrated firm has no incentives to exclude a more efficient downstream competitor other than for predatory and foreclosure motives mentioned above, as long as it is able to capture the rent arising from its competitor's superior technology. Nonetheless, even in this case it can still apply a margin squeeze by setting a low retail price its competitor will have to undercut in order to serve the market, hence increasing demand and capturing the profits through its upstream price.⁷⁶ In the case of an exploitative margin squeeze there is no exclusion of the rival from the downstream market. In fact, in the event of the competitor exiting the market, the integrated firm will end up earning a lower profit due to the fact that it will no longer be able to capture its surplus rent.

Therefore, exploitative margin squeezes do not harm competition because the most efficient downstream firm always remains in the market. However, they may not be 'fair' to the competitor. This is because the integrated firm can leverage its – nonetheless constrained by the duty to deal – upstream market power into the downstream market by applying a margin squeeze, hence capturing the rent introduced by its rival's technological advantage (i.e., its lower cost). Therefore, the latter does not fully benefit from its cost-advantage. In other words, exploitative margin squeezes harm the competitor, but not competition, as the most-efficient firm remains in

⁷⁵ As our analysis involves an integrated firm that faces an upstream duty to deal, the result of the Chicago School's Single Monopoly Profit Theory, according to which the integrated firm would have no incentive to force downstream entrants to exit the market, may not apply. This reasoning relates the well-known Bell doctrine; see Paul L. Joskow and Roger G. Noll, *The Bell Doctrine: Applications in Telecommunications, Electricity, and Other Network Industries*, 51 STANFORD L. REV. 1249 (1999).

⁷⁶ In the game where the integrated firm and its competitor sell homogeneous products, there is a continuum of equilibria in which the integrated firm constrains its competitor to profitably serve consumers at a price lower than the sum of the input price and its own downstream cost, $a+c$; see, e.g. Carlton and Waldman, *supra* note 74.

the market. Finally, they benefit consumers by inducing lower retail prices they would not have been in a position to enjoy absent the pricing practice. By contrast, predatory margin squeezes, whereby equally or more efficient downstream competitors are excluded from the market, may harm competition. Overall, from an economic perspective, only margin squeezes that exclude competitors who are at least as efficient as the integrated firm would harm competition and lower total surplus.

The risk of over-deterrence, however, is serious under EU laws, because exploitative margin squeezes can be banned. As explained above, the CJEU has explicitly stated that a margin squeeze occurs when a retail competitor operates ‘at a loss or at artificially reduced levels of profitability’, thereby defining ‘margin squeeze’ as a conduct that could leave a downstream competitor with a positive profit.⁷⁷ This is in stark contrast to predatory pricing, where foreclosure (or likely foreclosure) of ‘actual or potential competitors’⁷⁸ is required to assess the conduct. Assessing (likelihood of) foreclosure of competitors in margin squeeze cases would allow to distinguish between exploitative and exclusionary conducts and thus would reduce the risk of over-deterrence. As a result, an exploitative conduct, which allows the most-efficient downstream competitor to remain in the market and to serve final consumers, should not be prevented by competition laws because it brings larger total and consumer surplus in the form of lower prices.⁷⁹

In order to understand the risk of over-deterrence under EU laws, consider the following example. As above, a telecom network incumbent has upstream and downstream marginal costs of \$5 and \$20, respectively, and faces a duty to deal at a wholesale price of \$10. Its downstream competitor is more efficient, with a marginal cost of \$18, but has to rent one access line per retail customer. As explained above, the competitor must set a price above \$28 in order to make a positive profit. Therefore, the incumbent can set a retail price of \$29 without forcing its competitor to exit the market. The incumbent typically has an incentive to put such pressure on

⁷⁷ See *TeliaSonera*, ¶ 33.

⁷⁸ Guidance on Article 102, ¶ 63.

⁷⁹ Note that in our examples there is a single downstream competitor to the dominant firm. If several firms with different efficiencies compete in a homogenous market, then the distinction between exploitative and exclusionary margin squeeze builds on whether the most-efficient competitor, i.e., the one serving the market, is foreclosed. Similarly, as long as the most-efficient competitor remains in a homogenous product market, a margin squeeze would only deter entry of *potential* competitors. Such potential competitors, however, would not be able to compete with the most-efficient competitor, even though they could be more efficient than the dominant integrated firm at the downstream level.

its competitor's retail price, as this increases market demand and, therefore, its own upstream profits.⁸⁰

However, a strict application of the AEC test, as endorsed by the CJEU in *TeliaSonera*, would set a price floor of \$30 to the incumbent's retail price. An incumbent's retail price of \$29 thus corresponds to an exploitative margin squeeze, and drives the retail market price down while avoiding any exclusionary effect. Therefore, when there is no distinction made between exclusionary and exploitative conducts and all margin squeezes are prohibited, a ban on margin squeeze prevent some pro-consumer effects. This corresponds to the 'umbrella effect'.

By contrast, following our approach, exclusionary effects of the conduct constitute a prerequisite to detect anticompetitive or monopolizing margin squeezes. Because a retail price of \$29 is not exclusionary to the actual competitor, nor to any potential competitor that could serve the retail market *in lieu* of the actual one, it would not be prevented.

All in all, the presence of a notion of exclusion in the assessment of alleged anticompetitive conducts is important in order to distinguish between exclusionary and exploitative margin squeezes. It follows that, authorities and courts should focus only on the former type of margin squeeze, which is potentially anticompetitive in the sense that it hampers competition. Because this notion is not always required in margin squeeze cases, but it does exist in predatory pricing (or a proxy of it), at least under EU laws, we believe this approach would help to prevent over-deterrence of pro-consumer exploitative margin squeezes.

D. ADMINISTRABILITY OF THE RULE

We assess the administrability of our suggested approach against the following three criteria: (1) that it can adapt to current laws in both the US and the EU; (2) that it can provide ex ante legal certainty for the firms; (3) that it is simple to use in the enforcement procedure.

With respect to the first criterion, we argue that our approach can adapt to the current legal framework in the two jurisdictions. Under EU laws, a retail price below AVC is presumed predatory, in the sense that it implies exclusion of competitors and a market structure allowing for recoupment. Similarly, under our approach, a squeeze with a negative margin (i.e., wholesale price above retail price) is *de facto* exclusionary as it prevents any competitor to remain or enter

⁸⁰ From an economic perspective, one may notice that the incumbent's price of \$29 does not correspond to a trembling-hand perfect equilibrium, in this example with homogeneous products and simultaneous timing. This could easily be circumvented by allowing, for instance, the incumbent to commit to its price before the entrant. For a discussion of margin squeeze in differentiated markets, see Jullien, Rey and Saavedra, *supra* note 68, Section 4.

the market. In addition, the assessment of foreclosure effects on the most efficient competitor is important in the case of squeezes with positive margins, in order to punish exclusionary conducts only, and not exploitative ones (under EU laws, recoupment is implied by the post-exclusion market structure and it is not required to be demonstrated). By contrast, under US laws, our approach mimics that of assessing predatory pricing, but with the important difference that the dominant firm's retail price should be set below some measure of costs, which include opportunity costs of missed upstream sales. Hence, relying on adjusted-predatory pricing standards to evaluate margin squeeze does not alter the EU characterisation of margin squeeze as a 'stand-alone' abuse, while it results to margin squeeze being treated as a subcase of predatory pricing in the US.

Furthermore, our suggested price-cost test for margin squeeze is aligned with the treatment of margin squeeze as a price-based exclusionary strategy, in light of the European Commission's classification of price and non-price related exclusionary abuses⁸¹ and the relevant case law.⁸²

With respect to the second criterion, our approach promotes ex ante legal certainty for the firms in the sense that all test parameters – including the opportunity cost that is defined by the duty to deal – are known to the firms. Hence, the suggested test may inform the firms which pricing conducts will be infringement of the law and which will not, before they make their pricing decisions.⁸³

Finally, our approach should be relatively simple to use during the enforcement procedure. It is a straightforward exercise to implement the two prongs of the test and it does not

⁸¹ Guidance on Article 102, ¶ 23-27. A consequence of this classification is the adoption of cost-based tests as filters for antitrust enforcement in the area of price-based exclusionary conducts.

⁸² *Deutsche Telekom* 2010, 'in order to assess whether the pricing practices of a dominant undertaking are likely to eliminate a competitor contrary to Article 82 EC, it is necessary to adopt a test based on the costs and the strategy of the dominant undertaking itself (...) a dominant undertaking cannot drive from the market undertakings which are perhaps as efficient as the dominant undertaking but which, because of their smaller financial resources, are incapable of withstanding the competition waged against them', ¶ 198-199; *Post Danmark*, 'Thus, Article [102 TFEU] prohibits a dominant undertaking from, among other things, adopting pricing practices that have an exclusionary effect on competitors considered to be as efficient as it is itself and strengthening its dominant position by using methods other than those that are part of competition on the merits. Accordingly, in that light, not all competition by means of price may be regarded as legitimate', ¶ 5; Judgment of the General Court (Seventh Chamber) of 12 June 2014 - *Intel Corp v European Commission* (Case T-286/09) (not yet published) currently under appeal at the Court of Justice C-413/14 P, ¶ 98-99.

⁸³ The incumbent may not know the cost of its downstream competitors. It is, however, unlikely that an incumbent involuntarily excludes an entrant from the downstream market while it was trying to exploit its surplus through an exploitative margin squeeze. Indeed, an incumbent is generally careful not to exclude its competitors when engaging in exploitative margin squeeze conducts, as it benefits from their presence in the downstream market and would earn less if this market was monopolized.

require complex analysis or hypothetical economic assessments regarding the opportunity cost when the integrated firm faces a duty to deal and upstream prices are known to all parties. This is especially the case in the context of regulated industries, where there exists a track record of cases and longstanding experience in dealing with the pricing practices of the incumbent. Probably, the most daunting aspect of our test is that it requires enforcers to take into account opportunity costs ex post, i.e. after the conduct has taken place. This departs from the existing approach in competition proceedings whereby opportunity costs are typically used ex ante in order to evaluate firm's incentives. This could sometimes prove challenging in non-regulated industries where the upstream price – which corresponds to the opportunity cost – is not always clearly defined. This might explain the limited use of opportunity costs so far in abuse cases, including predatory pricing cases, as we shall see in the following section.

IV. FURTHER SUPPORT TO AN ABOVE-COST PREDATORY PRICING APPROACH

In this part we address several possible criticisms to our approach. The first one relates to the antitrust treatment of above-cost predatory pricing strategies. We review the arguments against the use of above-cost predatory pricing tests and we explain why these do not hold in vertically related markets where margin squeezes take place. The second one relates the limited institutional capacity of the adjudicative process to consider opportunity costs. We explain why such an approach could be administered by the courts by reviewing previous case law.

A. ABOVE-COST PREDATORY PRICING STANDARDS IN VERTICALLY-RELATED MARKETS

There is a long-standing debate on whether above-cost price cuts should be punished as predatory under antitrust laws.⁸⁴ The two opposing views generally rely on arguments related to under- and over-deterrence of monopolizing or anticompetitive pricing strategies. The analyses provided by Edlin and Elhauge help to summarize the state of the art of this debate.⁸⁵ Edlin argues in favor of

⁸⁴ See, e.g., Oliver E. Williamson, *Predatory Pricing: A Strategic and Welfare Analysis*, 87 YALE L. J. 284 (1977); William J. Baumol, *Quasi-Permanence of Price Reductions: A Policy for Prevention of Predatory Pricing*, 89 YALE L. J. 1 (1979); William J. Baumol, *Predation and the Logic of the Average Variable Cost Test*, 39 J. L. & ECON. 49 (1996); and Patrick Bolton *et al.*, *Predatory Pricing: Strategic Theory and Legal Policy*, 88 GEO. L. J. 2239 (2000).

⁸⁵ Aaron S. Edlin, *Stopping Above-Cost Predatory Pricing*, 111 YALE L. J. 941 (2002), and Einer Elhauge, *Why Above-Cost Price Cuts To Drive Out Entrants Are Not Predatory –and the Implications for Defining Costs and Market Power*, 122 YALE L. J. 681 (2003).

assessing above-cost price cuts as predatory under some circumstances (e.g., when the dominant firm engages in substantial price cuts right after entry), whereas Elhauge takes the opposing view and argues against such an assessment. Punishing pricing conducts that are above-cost is not a simple task, because, as Elhauge puts it, one should identify such a monopolizing or anticompetitive conduct ‘in a way antitrust law can regulate without having unduly negative effects on other desirable conduct’.⁸⁶ In this section, we attempt to tackle this issue in the specific case where a dominant firm owns an essential wholesale product and faces competition in a downstream market. In particular, we show that classic arguments in favor of a *de facto* lawfulness of above-cost pricing cuts do not hold in vertically related markets.

The first type of arguments in favor of the lawfulness of above-cost pricing reflects administrability concerns. As Carlton puts it, courts have determined ‘that a legal rule that would purport to penalize only predatory above-cost pricing would (1) be difficult to administer; (2) be unpredictable in application and therefore difficult for businesses to follow; and (3) discourage pro-consumer price cutting’.⁸⁷

Whereas we share the administrability concerns as the latter arise in the general context of predatory pricing, our aim here is to show that the vertical structure in which margin squeeze takes place allows overcoming such concerns. This is owing to two reasons. First, above-cost predatory pricing, when including opportunity costs due to missed upstream sales, is not particularly difficult to administer, nor unpredictable. In fact, the opportunity cost is easily identified, as it corresponds to the upstream revenue the dominant firm foregoes when it engages in a margin squeeze and serves the retail market *in lieu* of its competitor. The corresponding costs and upstream prices, over which there is a duty to deal enforced by courts, are known to the dominant firm.

The last point raised by Carlton – that above-cost predatory pricing standards could discourage pro-consumer price cutting – relates to the efficiency of the competitive process. It is also one of Elhauge’s main arguments against above-cost predatory pricing standards. He states that ‘the price floors, where they have bite, will prevent the incumbent from adopting above-cost price cuts that lower prices as much as they otherwise would have’ when competing with more-efficient entrants.⁸⁸ However, as we explained in Section III, pro-consumer price-cutting is

⁸⁶ Elhauge, *supra* note 85, at p. 702.

⁸⁷ Carlton, *supra* note 20 at p. 274.

⁸⁸ Elhauge, *supra* note 85, p. 774.

typically not discouraged when assessing margin squeeze conducts that involve an exclusionary strategy. This relates to Elhauge's argument, according to which only 'variable costs of the alleged predatory increase in output that displaces the rival's output' should be considered.⁸⁹ Indeed, a focus on these costs, which correspond to diverting rival's output (that is to an exclusionary margin squeeze conduct) does not hamper the dominant's firm ability to engage in a pro-consumer exploitative conduct in vertically related markets.

Elhauge also mentions another argument related to efficiency motives when explaining that an above-cost predatory pricing approach could favor entry of less-efficient competitors (p. 766-770). However, according to our approach, these entrants would be undercut by the incumbent in vertically-related markets (or they would be unable to serve the market because of an existing more-efficient competitor), as the price floor set by the AEC test resulting from inclusion of opportunity costs has no bite on less-efficient entrants.⁹⁰

Overall, the specificities of vertically related markets, in which margin squeezes take place, help to address the main issues related to assessing and punishing anticompetitive or monopolizing above-cost predatory pricing conducts.

B. CASE LAW IN SUPPORT

While the equivalence of the Areeda-Turner test and to the AEC test, when one accounts for opportunity costs, is not a new topic,⁹¹ what has been underexplored is whether this approach could be supported from a legal perspective. This section will discuss the cases where EU and US courts and authorities considered opportunity costs.

1. US Perspective

The main case supporting the use of opportunity costs is the US Sixth Circuit's *Spirit* (2005)⁹² decision in the airline industry. In *Spirit*, the defendant (Northwest) had allegedly both lowered its price and shifted additional capacity (aircrafts) into targeted routes the plaintiff (Spirit) had just entered in order to force the latter to exit these routes. The Court considered an incremental

⁸⁹ *Id.* 711-712.

⁹⁰ *Id.* Elhauge himself recognizes this possibility, stating that '[d]epending on market circumstances, it might be that the price floors (...) are below the price an unrestricted incumbent would want to charge post-entry anyway. In those cases, though, the restrictions have no bite', p. 762, fn 219.

⁹¹ See, e.g. Jullien, Rey and Saavedra, *supra* note 68, at p. 20.

⁹² *Spirit Airlines v Northwest Airlines, Inc.*, 431 F.3d 917 (6th Cir 2005).

version of the *Brooke Group* cost test⁹³ and laid down two tests: first a test based on whether total revenues exceeded total variable costs for all flights on a given route and second a test that compared whether the incremental profits that resulted from the addition of capacity (aircraft) to certain routes exceeded the incremental costs of adding this capacity. Similarly, the Tenth Circuit in *US v. American Airlines Case*⁹⁴ (AMR) – a case brought by the Department of Justice pertaining to a similar factual situation with that of the *Spirit* case – also considered an incremental version of the *Brooke Group* test.⁹⁵ The defendant (AMR), which was the dominant carrier with about 70% of the traffic at the Dallas/Fort Worth hub airport, when faced with competition on its routes by new entrants lowered its own prices to match those of the new entrants and increased the number of its own flights on the same routes. When the new carrier abandoned its routes, AMR raised its prices and returned to its pre-entry scheduled flights. In both of these cases the courts considered measures of *opportunity cost* instead of accounting based measures of cost, as part of the incremental costs of expanding output. While the use of such a measure of opportunity cost – i.e. the opportunity costs deriving from the dominant carrier’s strategy to add additional capacity (aircrafts) on the targeted routes, earning less during the predation period – had been rejected by the Court in the *AMR* decision, the *Spirit* Court accepted foregone revenues as part of the incremental costs of expanding output.⁹⁶

It may be argued that the inclusion of concepts such as opportunity costs reduce the administrability of the *Brooke Group* rule. Areeda and Hovenkamp also stress that the use of opportunity cost can in theory send courts on ‘ill defined fishing expeditions in search of hypothetical more profitable investments that a firm might have made’.⁹⁷ However, they clarify that this criticism does not apply in industries, such as airlines, where the shift of capacity in these cases involves identifiable shifts of aircrafts from one market to another, hence making calculation of the opportunity cost of foregone revenues feasible. Likewise, as already discussed (III B), in the case of margin squeeze conduct, favoring a downstream sale instead of short-run

⁹³ *Id.* at 938. (‘Therefore, the assessment of predation compares the revenues (the price) Northwest received from this tactic versus the incremental (or average variable cost) Northwestern incurred from carrying those passengers’).

⁹⁴ 335 F.3d 1109 (10th Cir. 2003).

⁹⁵ Aaron S. Edlin and Joseph Farrell, ‘The American Airlines Case: A Chance to Clarify Predation Policy’, in *THE ANTITRUST REVOLUTION: ECONOMICS, COMPETITION AND POLICY* (John E. Kwoka and Lawrence J. White eds., 4th edn, OUP 2001) 502-527.

⁹⁶ AREEDA AND HOVENKAMP, *supra* note 65 (2006 Supp) at pp. 304-11.

⁹⁷ *Id.* at p. 309.

profit maximizing upstream sale typically falls in the range of easily identifiable opportunity costs.

2. EU Perspective

In the EU, there has not yet been a judgment discussing the possible inclusion of opportunity costs. The Commission's 2009 Guidance document, however, does not seem to exclude such a possibility. The Commission does not link the concept of sacrifice to a particular cost benchmark.⁹⁸ It relies on the average avoidable cost (AAC) as the starting point and refuses to compare the 'actual conduct with hypothetical or theoretical alternatives' which, 'taking into account the market conditions and business realities facing the dominant undertaking can realistically be expected to be more profitable'.⁹⁹ This paragraph could be interpreted as allowing the consideration of opportunity costs, but not in a way that would punish firms for failure to maximize their profits.

While the inclusion of opportunity cost analysis remains quite embryonic in the EU case law, a small number of European Commission decisions have already taken opportunity costs into account. First, in the parallel *Scandlines* and *Sundbusserne* decisions concerning allegedly exploitative pricing, the Commission, for the first time, elaborated on its own method of assessment of unfairly high pricing, which included opportunity costs.¹⁰⁰ There, the Commission dismissed complaints brought by ferry companies (*Scandlines Sverige* and *Sundbusserne*) of excessive and discriminatory port fees charged by the Port of Helsingborg (HHAB). In particular, the ferry companies claimed that HHAB was levying excessive and discriminatory charges for services provided to ferry operators by treating the port as a single economic and operational unit and that HHAB's charges were not cost-based. To determine the abuse, the Commission had to evaluate the twofold *United Brands*¹⁰¹ test: (i) whether the price-cost margin was excessive (i.e. whether the HHAB's port fees were excessive compares to the costs incurred by the port in providing services and facilities to ferry operators on the Helsingborg-Elsinore route); and (ii)

⁹⁸ Guidance on Article 102, ¶¶ 63-64.

⁹⁹ *Id.* ¶ 65.

¹⁰⁰ See Case COMP/A.36.568/D3, *Scandlines Sverige AB v Port of Helsingborg* (Brussels, 23 July 2004) at http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_36568 (visited June 2015) and Case COMP/A.36.570/D3, *Sundbusserne v Port of Helsingborg* (Brussels, 23 July 2004) at http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=1_36570 (visited June 2015). The first case was challenged before the General Court in case T-399/04, *Scandlines Sverige AB v Commission* [2005] OJ C6/40, and was subsequently closed.

¹⁰¹ Case 27/76, *United Brands Co. v Commission of the European Communities*, 1978 ECR 207,

whether the price imposed was ‘either unfair in itself or when compared to competing products’.¹⁰² The Commission, however, did not establish whether HHAB’s price-cost margin was excessive, because in assessing the fairness of the price the Commission investigated whether the price charged had a reasonable relation to the ‘economic value’ of the service supplied.¹⁰³ In doing so, the Commission considered it necessary to take into account not only the costs incurred by the port in providing its services, but also additional costs, such as sunk costs and opportunity costs incurred by the city of Helsingborg, if it had used the land of the port for different purposes.¹⁰⁴

Second, the Commission discussed opportunity costs in its decision on the Deutsche Börse/NYSE Euronext merger.¹⁰⁵ The EC prohibited the proposed merger between the two companies – operating the two largest exchanges for financial derivatives in the world – because of its harmful effects on the sub-market for European financial derivatives. The Commission found that the companies held a significant market share on this sub-market. Hence, the proposed merger was blocked on the grounds that it would create a quasi-monopoly in European financial derivatives traded globally on exchanges that would, in turn, lead to significant harm to derivative users and the European economy. The case largely turned on the issue of market definition, and in particular whether over-the-counter (OTC) derivatives (made directly between two investors) and exchange-traded derivatives (ETDs) were part of the same market. The Commission disagreed with the assertion of the notifying parties that OTCs and ETDs belonged in the same market and found that they do not compete with each other. It concluded that ETDs typically amount to around €100,000 per trade and are standardised whereas OTC derivatives amount to around €200m and are customised to meet buyer and seller requirements. The Commission thus focused its analysis on the ETDs markets where parties found to have a combined market share of 90%.

The opportunity costs were considered in several stages of the reasoning process. First, in the course of the market definition of ETDs. In calculating the trading cost of ETDs the

¹⁰² *Id.* ¶ 250-252.

¹⁰³ On this point see the criticism of Pinar Akman and Luke Garrod, *When are Excessive Prices Unfair?* (2011) 7(2) J. COMPETITION L. & ECON. 403, 425.

¹⁰⁴ *Scandlines*, ¶ 209, 234-235, and *Sundbusserne*, ¶ 185, 209-210. This was rejected in subsequent costs calculations, not because this was inaccurate, but because the costs for the city should not be taken into account as costs for the port authority HHAB; *Scandlines*, ¶ 211, and *Sundbusserne*, ¶ 187.

¹⁰⁵ Case COMP/M. 6166 [2011], *Deutsche Börse/NYSE Euronext merger* (Brussels, 1 February 2012) at http://ec.europa.eu/competition/mergers/cases/decisions/m6166_20120201_20610_2711467_EN.pdf (visited June 2015).

Commission did not only refer to the explicit elements of such a transaction (i.e. membership fees as well as per transaction clearing and trading fees) but also to the implicit elements such as the realised bid-ask spread, the market impact and the opportunity cost of posting collateral (¶ 229 and 501). Also, in establishing whether a link exists between trading and clearing services (¶ 237-243). Finally, in the assessment stage of the parties' proposed remedies addressing the Commission's concerns. One of the efficiency claims put forward by the notifying parties to the transaction related to the collateral savings that would arise in the case the proposed merger was approved. The Commission argued that such savings do not represent actual efficiencies for clearing members. This is because the relevant metric in quantifying efficiency as a cost saving is the opportunity cost. The Commission argued that it 'is not the collateral savings but the opportunity cost of holding cash or securities posted as collateral which is the relevant measure of actual cost savings from lower collateral requirements'.¹⁰⁶ Grouping together collateral cost savings estimates with other cost savings such as IT and user access cost savings, as the parties did, was found inappropriate, as the opportunity cost of holding cash or collateral, rather than collateral savings as such determine the actual cost savings for the customers.¹⁰⁷

Finally, in the *Telefónica* decision,¹⁰⁸ issued against the Spanish telecommunications incumbent for alleged margin squeeze between its national and regional wholesale charges to its broadband network and its retail prices for broadband access, the Commission took into account opportunity costs when defining the relevant wholesale markets. In particular, the Commission resorted to the opportunity cost analysis in order to assess the substitutability between the regional wholesale offer and the national wholesale offers. It argued that, contrary to Telefónica's submissions regarding the substitutability of these two offers, switching from a regional to a national wholesale offer would make little economic sense. This is because operators that had already invested in the roll-out of a regional network to connect with the different access points would be unlikely to 'bear the opportunity cost of not using their network and use a national wholesale offer which does not allow them the same possibilities in terms of control over the quality of service of the retail product as the regional wholesale offer'.¹⁰⁹

¹⁰⁶ *Id* ¶ 1190.

¹⁰⁷ *Id* ¶ 1190-1192.

¹⁰⁸ See *supra* note 42.

¹⁰⁹ *Id* ¶ 187.

IV. CONCLUSION

In this article we have presented a novel legal approach to the assessment of margin squeeze conduct. We showed that assessing margin squeeze conducts through an above-cost predatory pricing standard, which (i) includes opportunity-costs due to missed upstream sales in the price-cost test and (ii) requires the margin squeeze conduct to be exclusionary, could minimise both the risks of over- and under-deterrence. This could, in turn, reduce the gap between current US and EU antitrust stances on this issue. We have also explained why the intrinsic specificities of vertically related markets in which margin squeezes take place overcome classic concerns about antitrust assessment of above-costs predation. Finally, we have provided a discussion of the relevant case law and decision practice supporting our approach.

One could possibly consider further extensions to our approach. For instance, our analysis focuses on cases where there is a duty to deal that is enforced by courts. This includes a regulatory duty to deal in the EU, but not in the US. A natural extension of our analysis would thus be to consider the case of margin squeeze when there is no such duty to deal enforced by the Courts.¹¹⁰ Furthermore, our economic analysis builds on the case of homogeneous markets. In differentiated markets, the evaluation of the opportunity costs deriving from a margin squeeze strategy would imply calculating firms' products diversion ratios. This task, for instance, is undertaken by competition authorities in merger analysis.¹¹¹ A full characterization of margin squeeze in differentiated markets would then provide useful in such circumstances. Finally, including opportunity costs in the assessment of a margin squeeze conduct, while it is relatively simple when the dominant firm is vertically integrated (as in our analysis), it may still invite the broader question of which cost measure and base should be analysed under antitrust laws.

¹¹⁰ See Steven C. Salop, *Refusals to Deal and Price Squeezes by an Unregulated, Vertically Integrated Monopolist*, 76 (3) ANTITRUST L. J. 709 (2010) and Bouckaert and Verboven, *supra* note 66, for a presentation of the relevant issues in this setting.

¹¹¹ See, e.g., Michael L. Katz and Carl Shapiro, *Critical Loss: Let's Tell the Whole Story*, 17 ANTITRUST MAGAZINE 49 (2003); see Jullien, Rey and Saavedra, *supra* note 68, p. 30 for a discussion of the AEC test including the diversion ratio.