

SHOULD PROFIT MARGINS PLAY A MORE DECISIVE ROLE IN MERGER CONTROL? – A REJOINDER TO JORGE PADILLA *

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Key points

- According to empirical research, recent times have seen a significant increase in firms' profit margins.
- Higher profit margins are a reflection of increased pricing power.
- Prospective mergers are more likely to cause competition concerns the higher firms' pricing power is to begin with.

I. INTRODUCTION

In a recent article in this journal,³ Dr Jorge Padilla discusses a speech that one of us had given on the interrelation between merger control and profit margins.⁴ The speech had pointed out that, according to empirical research, recent decades have been characterized by a secular trend towards higher profit margins, in particular in the U.S. From an economic perspective, increased pricing power implies that future horizontal mergers involving firms with high margins are more likely to be problematic than would otherwise be the case. Merger control should therefore be more vigilant when

* The views expressed in this paper are those of the authors and do not necessarily reflect the views of DG Competition or the European Commission.

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³ J Padilla, 'Should Profit Margins Play a More Decisive Role in Horizontal Merger Control?', *Journal of European Competition Law & Practice* (in press).

⁴ T Valletti, 'Concentration Trends in Europe', CRA Annual Brussels Conference (December 2017).

facing an expansion of profit margins in specific sectors or in the economy at large.

In his paper, Dr Padilla questions these conclusions. Although he acknowledges that profit margins have a useful role to play in merger analysis, he argues that mergers involving firms with high margins should not be viewed more critically than other transactions. According to his paper, subjecting mergers in industries with high margins to stricter controls would lead to systematic enforcement errors and cannot be justified economically.

We welcome the opportunity to continue discussing this important topic and, in this rejoinder, we respond to his arguments. Section II first summarizes the economic implications of increased profit margins for merger enforcement. Section III then responds to Dr Padilla's criticism and the arguments he puts forward to support a cautious application of margin analysis in merger control. Section IV, finally, concludes.

II. PROFIT MARGINS AND MERGER CONTROL

In order to illustrate the economic relationship between margins and merger effects, it is useful to begin by recalling the reason why horizontal mergers can sometimes be harmful to the competitive process. Acquisitions of competitors can lead to anticompetitive effects because they induce merging firms to take into account the impact that their actions have on each other's profits. In particular, if pre-merger firm A is competing through lower prices or better products, then this is also taking away business from merging partner B (and vice versa). Hence, once firms A and B are in the same boat, their motivation to compete may be muted in order to attenuate such mutual cannibalization. To the extent that A and B are direct rivals, a merger can therefore effectively act like a "tax on competing" (the magnitude of which is given by the significance of this cannibalization).⁵

Once one realizes that the internalization of competitive cannibalization is the key driver behind potential anticompetitive outcomes, it is easy to see why competition authorities regularly assess factors such as the following in mergers involving firms that offer differentiated products:

- Concentration (e.g., as indicated by the merging firms' market shares);
- Closeness of competition (e.g., as indicated by diversion ratios between the merging firms);

⁵ J Farrell & C Shapiro, 'Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition' (2010) B.E. Journal of Theoretical Economics, 10, 1-39.

- Pricing power (e.g., as indicated by the merging firms' profit margins).⁶

For instance, if the market shares of the merging firms are high, then cannibalization between them is likely to be more significant, because a larger proportion of the consumers over which firms compete will be customers of the respective merging partner. For this reason, mergers between firms with high market shares are more likely to cause competitive harm than would otherwise be the case. Similarly, if closeness of competition between the merging parties is particularly significant, then cannibalization is more likely to be appreciable, because customers are going to be more prone to switch from one merging firm to the other in response to differences in price. Mergers between close competitors are therefore likely to cause greater competitive effects than would otherwise be the case.

According to the same logic, also the size of the merging firms' margins is bound to have an impact on the likely competitive effects of a merger. Specifically, the loss of profits of cannibalized sales that firm A captures from its prospective partner B is larger for B the more significant the profit margin B would have earned on those sales (and vice versa). All else equal, a merger between firms with high margins will therefore cause greater anticompetitive effects, because it permits the merging firms to avoid more severe competitive damage through cannibalized sales.⁷

In addition to this impact of high margins on incremental merger effects, merger control is also likely to be concerned about high margins in their own right. E.g., if one of the merging parties is a strong incumbent with correspondingly large mark-ups, then its acquisition of a smaller challenger may cause competition concerns even if the immediate price effect of the transaction is relatively small. After all, such a merger might eliminate what little competition there still exists in the market.

As the above discussion illustrates, the interaction of profit margins and merger effects is a two-way relationship. Not only can anticompetitive

⁶ It is sometimes argued that high margins are not a sensible indicator of market power, for instance because firms may have high margins for benign reasons, because high margins are needed to cover fixed costs, or because economic margins are not equal to accounting margins. We find much of this argument semantic and unnecessarily confusing. Pricing power is commonly defined as the ability of firms to charge prices that substantially exceed incremental costs. Such pricing power is regularly acquired through legitimate means, such as offering better products or producing at lower cost than competitors. Moreover, some degree of pricing power is typically needed for firms to cover their fixed cost of operation. Accordingly, the mere possession of pricing power is in no way unlawful. Yet, none of this alters the fact that it is pricing power. Here, and in what follows, we therefore use the term *pricing power* to denote firms' ability to charge prices that substantially exceed incremental cost and thus permit earning a high profit margin.

⁷ This mechanism is illustrated by Dr Padilla with reference to the GUPPI index. See Padilla, *op. cit.*, supra note 3 at 4.

mergers cause higher profit margins *ex post*, but higher profit margins *ex ante* can also make prospective mergers more anticompetitive. It is therefore not surprising that margins have often played a significant role in EU merger assessments.⁸ Indeed, already the Horizontal Merger Guidelines from 2004 explained that, all else equal, price increases resulting from a merger are more likely when the merging firms' margins are significant already prior to the transaction.⁹

Against this background, it is important to realize that margins in western economies have not remained stable over time.¹⁰ Indeed, empirical research has shown that recent decades have been characterized by a secular trend towards increasing profit margins. For instance, over the course of the last 25 years, net profit margins of U.S. firms in the S&P500 have roughly doubled (from around 4.5% to around 9.0% of revenues).¹¹ In line with this development, also economic margins have increased considerably according to recent research by Jan de Loecker and Jan Eeckhout.¹² To illustrate, Figure 1 shows their empirical estimation of mark-ups over cost of U.S. companies. While the average firm charged prices of around 25% above incremental cost in the 1980s, by 2014 the average mark-up had increased to 67%. This implies that the average economic margin approximately doubled during this time period (from around 20% to around 40%).¹³ As the figure indicates, this strong upward trend was only briefly interrupted by the global financial crisis and soon after began to follow its previous path again.¹⁴

⁸ E.g., see Case M.7932 *Dow/DuPont*, Case M.7278 *General Electric/Alstom*, M.7018 *Telefónica Deutschland/E-Plus*, Case M.6992 *Hutchison 3G UK/Telefónica Ireland*, Case M.6905 *INEOS/Solvay/JV*, Case M.7881 *AB InBev/SABMiller*, Case M.6471 *Outokumpu/Inoxum*, Case M.8547 *Celanese/Blackstone*.

⁹ European Commission, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03), para. 28.

¹⁰ Since data availability is significantly better for the U.S., we report U.S. figures below, which have been the focus of the academic literature so far. There are some preliminary indications that long-term profitability trends in Europe might be broadly consistent with the U.S. experience (see Valletti, *op. cit.*, supra note 4). Having said this, researchers have only recently started exploring longer time series on European margin developments. Note that due to globalization many of the more significant cases in European merger control also deal with U.S. companies in any event, which therefore makes available data for the U.S. directly relevant for Europe, too.

¹¹ See, e.g., E Jardeni & J. Abbott, *S&P500 Sectors & Industries Profit Margins* (2018) at 3.

¹² J De Loecker & J Eeckhout, 'The Rise of Market Power and the Macroeconomic Implications' (Working Paper, 2017) at 9.

¹³ Denoting price by p and cost by c , profit margins are defined as $m = (p - c)/p$, whereas mark-ups are defined as $\mu = (p - c)/c$. Simple algebra implies $m = \mu/(1 + \mu)$. Setting $\mu_1 = 0.25$ and $\mu_2 = 0.67$ thus yields $m_1 = 0.2$ and $m_2 = 0.4$.

¹⁴ European firms appear to differ from their U.S. counterparts in the sense that the catch-up from crisis lows, especially of small European firms, seems to have proceeded with a lag relative to the U.S. See Valletti, *op. cit.*, supra note 4, and JP Weche & A Wambach, 'The Fall and Rise of Market Power in Europe' (Working Paper, 2018).

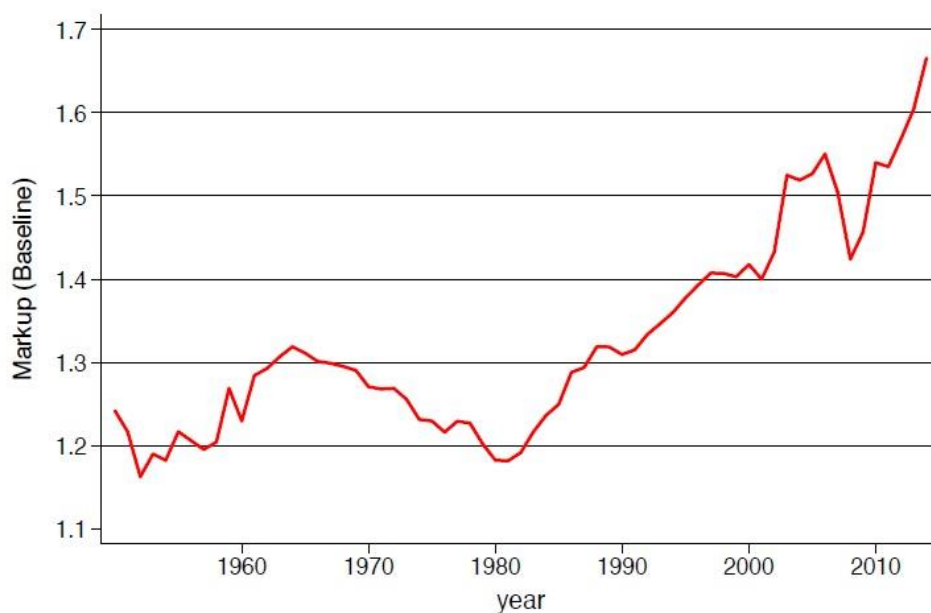


Figure 1: Economic mark-ups in the U.S. over time. The figure is obtained using firm-level data from Compustat; see J De Loecker & J Eeckhout, *op. cit.*, supra note 12

Similar evidence for a structural increase in profitability over recent decades has been presented by Simcha Barkai.¹⁵ In the public policy debate, perhaps the starkest implications from this development have been drawn in the context of discussions surrounding redistributive politics. Indeed, the secular increase in profitability that is evidenced in Figure 1 has coincided with a substantial decline in the labour share of output (i.e., the proportion of GDP captured by wage earners).¹⁶ It is thus not surprising that the increase in corporate earnings has been linked with an increase in economic inequality.¹⁷ To draw a line from there to the recent surge of populist politicians and events such as Brexit, then, does not require much of a mental leap anymore.

But what are the implications of a secular increase in profit margins for merger control? Perhaps most obviously, it signals that competition authorities must be vigilant in reviewing prospective industrial concentrations. As noted above, higher profit margins signify—for better or for worse—an increase in firms' pre-merger pricing power. As a result, future mergers involving firms with high margins are more likely to raise competition concerns than would otherwise be the case. Indeed, as we explain in more detail in Section III below, standard models of price competition in differentiated products markets predict that, all else equal, structural

¹⁵ S Barkai, 'Declining Labor and Capital Shares' (Working Paper, 2017).

¹⁶ E.g., see L Karabarbounis & B Neiman, 'The Global Decline of the Labor Share' (2014) *Quarterly Journal of Economics*, 129, 61-103.

¹⁷ E.g., see T Piketty, *Capital in the Twenty-First Century* (2014); AB Atkinson, *Inequality: What Can Be Done?* (2015).

increases in margins of the kind observed in the empirical literature may well cause merger effects that are up to twice as large as would otherwise be the case (even while market shares remain the same).

III. SHOULD PROFIT MARGINS PLAY A MORE DECISIVE ROLE?

In principle, Dr Padilla acknowledges the price-increasing effect of high margins on mergers: "*The reason why margins matter is straightforward: When margins are higher, the recapture of the diverted sales from a price rise will be more valuable and thus the merger is more likely to make a price increase profitable.*"¹⁸ This notwithstanding, he argues that mergers involving firms with high margins should not be viewed more critically than other mergers: "*there is no justification for the adoption of a policy that targets high-margin markets or high margin firms specifically.*"¹⁹ To draw this conclusion, he puts forward a number of arguments. We will consider these in turn.

A. Profit Margins and Concentration

Dr Padilla begins his call for caution by discussing the economic impact of market concentration on profit margins.²⁰ Recall from the discussion in the previous section that mergers and margins are related in two ways, *ex ante* and *ex post*. Here we look at the *ex post* direction that asks whether mergers should be expected to cause increases in pricing power (i.e., margins).

While Dr Padilla agrees that there is generally a positive association between concentration and margins, he argues that it is weak in the data and can be ambiguous in theoretical models. Specifically, he points to the so-called *structure-conduct-performance* literature, a series of studies undertaken mostly between the 1950s and 1970s. This literature tended to find a positive (if moderate) relation between concentration and profitability across industries.

It is true that in these early inter-industry studies (which compared firms in different sectors) the measured relation between market shares and profitability was often modest. It would be wrong, however, to infer from this that also mergers *within the same industry* should be expected to lack systematic impact. Moreover, merger control tends to focus on markets exhibiting considerable concentration to begin with. Inter-industry studies of concentration, instead, often included markets with low levels of

¹⁸ Padilla, *op. cit.*, supra note 3 at 4.

¹⁹ Padilla, *op. cit.*, supra note 3 at 7.

²⁰ Padilla, *op. cit.*, supra note 3, Section II.

concentration, which practitioners would have considered innocuous and which therefore would not be typical of an in-depth merger assessment.

In the decades that followed the studies cited by Dr Padilla, empirical researchers have thus turned their attention to more directly testing the competitive impact of mergers in concrete industries. In doing so, they typically focused on so-called "marginal mergers" (i.e., mergers of potential interest for enforcement action). These newer studies have thus abandoned the prior approach of trying to draw inferences on merger effects from comparisons of unrelated markets (including ones with obvious lack of antitrust relevance).

Modern research in industrial organization has evolved in this way largely in response to the limitations of the cross-industry approach. The new wave of research set out to understand instead the institutional details of particular industries and to estimate models that can be used for counterfactual analysis, such as what would happen following a merger.²¹

Since its inception, this literature has produced a body of empirical evidence which shows that mergers in concentrated industries can cause substantial increases in prices.²² Indeed, the findings of this literature are in no way weak or ambiguous. On the contrary, a recent survey of merger retrospectives concludes: "*The empirical evidence that mergers can cause economically significant increases in price is overwhelming. Of the 49 studies surveyed, 36 find evidence of merger-induced price increases.*"²³ Other surveys have drawn similar conclusions. For instance, a more U.S.-focused review of empirical studies notes: "*First and perhaps most noteworthy is the fact that three-fourths of all these transactions, and a higher percentage of mergers, are found to result in price increases.*"²⁴

These findings accord well with the predictions of economic theory, with authorities' enforcement experience, and—not least of all—with common

²¹ L Einav and J Levin, 'Empirical Industrial organization: A Progress Report' (2010) *Journal of Economic Perspectives*, 24, 145-162.

²² See, for instance, J Kwoka, 'The Structural Presumption and the Safe Harbor in Merger Review: False Positives, or Unwarranted Concerns?' (forthcoming) *Antitrust Law Journal*; O Ashenfelter, D Hosken & M Weinberg, 'Did Bork Understate the Competitive Impact of Mergers? Evidence from Consummated Mergers' (2014) *Journal of Law & Economics*, 57, S67-S100; O Ashenfelter & D Hosken, 'The Effect of Mergers on Consumer Prices: Evidence From Five Mergers on the Enforcement Margin' (2010) *Journal of Law & Economics*, 53, 417-466; BA Blonigen & JR Pierce, 'Evidence for the Effects of Mergers on Market Power and Efficiency' (Working Paper, 2016). For a meta-analysis of peer-reviewed merger retrospectives, see J Kwoka, *Mergers, Merger Control, and Remedies* (2015). For a critical review, see M Vita & FD Osinski, 'John Kwoka's Mergers, Merger Control, and Remedies: A Critical Review' (forthcoming) *Antitrust Law Journal* and the response in J Kwoka, 'Mergers, Merger Control, and Remedies: A Response to the FTC Critique' (forthcoming) *Antitrust Law Journal*.

²³ O Ashenfelter, D Hosken & M Weinberg, *op. cit.*, supra note 22 at S78.

²⁴ J Kwoka, 'Does Merger Control Work? A Retrospective on U.S. Enforcement Actions and Merger Outcomes' (2013), *Antitrust Law Journal*, 619-650, at 634.

sense. When firms possess significant market power, then a further removal of independent competitors through a merger entails an appreciable risk of damaging competitive rivalry.

B. Incremental Merger Effects

Next, Dr Padilla goes on to discuss the impact of high margins on prospective merger effects.²⁵ (Note that this is the alternative direction of the effect discussed in the previous section; now we look at margins *ex ante*, prior to a proposed merger.) Dr Padilla acknowledges that higher margins will lead to more pronounced merger effects, all else equal. However, he notes that in any given merger, all else may not in fact be equal. Specifically, mergers involving firms with high margins may nonetheless be benign for competition because

- a) closeness of competition between the merging parties may be small,
- b) the merger may generate countervailing efficiencies (e.g., a more efficient allocation of production or closures across the combined plants), or
- c) the merger may facilitate future entry of new competitors.

In principle, we agree both with the possibility and the potential significance of such effects.²⁶ Obviously, assessing one factor that may materially affect mergers (margins) does not imply that other factors should be ignored (e.g., concentration or closeness of competition). Naturally, there can be mergers involving firms with high margins which cause no concerns of any kind (e.g., because the parties are not close competitors). Conversely, there can be mergers involving firms with low margins which cause significant concerns (e.g., because concentration in the industry is already very high and/or the parties are close and significant competitors).

Even so, we would want to avoid the impression that structurally high margins are merely one more factor next to a multitude of other factors, whose overall direction is difficult to predict. On the contrary, high margins have a significant impact on predicted merger effects in workhorse models of price competition in differentiated products markets. For instance, in the GUPPI formulas presented by Dr Padilla, the estimated competitive effect

²⁵ Padilla, *op. cit.*, supra note 3, Section III.

²⁶ That being said, we would caution that some of the more specific mechanisms Dr Padilla points to can be tenuous in practice. For instance, while in industries with capacity competition mergers may permit rationalizing output across the combined facilities, economic research shows that this effect alone is typically too weak to overturn restrictive effects on competition. (J Farrell & C Shapiro, 'Horizontal Mergers: An Equilibrium Analysis' (1990) *American Economic Review*, 80, 107-126.) Similarly, economic research suggests that profitable mergers should not normally be expected to create sufficient entry to overturn anticompetitive effects. (GJ Werden & LM Froeb, 'The Entry-Inducing Effects of Horizontal Mergers: An Exploratory Analysis' (1998) *Journal of Industrial Economics*, 46, 525-543.)

resulting from a merger increases *one-for-one* with the level of the merging firms' profit margins. In other words, when profit margins double, so does the upward pricing pressure of otherwise identical transactions.²⁷

In the Annex to this paper, we provide a numerical example which shows that this effect can have significant repercussions on merger effects. Specifically, the example illustrates that, once one considers an increase in margins of the kind observed by De Loecker and Eeckhout, the competitive effects of a 5-to-4 merger today may well be comparable to the competitive effects caused by an otherwise identical 4-to-3 merger before the increase in mark-ups.

In our mind, it would be wrong to brush aside effects of this potential order of magnitude and solely rely on the possibility that there may be countervailing factors in individual cases. Our own takeaway, in any event, is a different one: First, recent times appear to have experienced an unprecedented increase in margins. Second, higher margins are a reflection of increased pricing power. Third, a significant increase in pricing power tends to affect the likelihood of adverse merger effects considerably.

C. Measuring Profit Margins

Dr Padilla then turns to the case-by-case assessment of margins in merger control practice.²⁸ Specifically, he argues that identifying and measuring the right margin can be difficult in individual cases. His conclusions are the following:

- a) One should be careful with identification, since the right margin to consider will not always be the short-run contribution margin;
- b) One should be careful with measurement and perform sensitivity checks, since otherwise one runs a risk of drawing wrong conclusions;
- c) Comparing margins across industries is complicated, and hence a specific targeting of high margin industries may lead to enforcement errors by identifying the wrong sectors.

We agree with many of these points. Indeed, we have not proposed to specifically “target” certain industries for enforcement action on account of their high margins. As Dr Padilla notes, margin comparisons across different industries can be complex, for instance because different types of margins may be appropriate to best reflect the specific competitive interaction in given

²⁷ This prediction is in line with other measures of competitive effects in differentiated product mergers. E.g., see GJ Werden, 'A Robust Test for Consumer Welfare Enhancing Mergers Among Sellers of Differentiated Products' (1996) *Journal of Industrial Economics*, 44, 409-413 (finding that the compensating marginal cost reduction changes one-for-one with profit margins when measured relative to the level of pre-merger prices).

²⁸ Padilla, *op. cit.*, supra note 3, Section IV.

industries. Moreover, it is well understood that published accounting margins do not generally coincide with economic margins, as they typically do not reflect true economic costs. In applied case work, data analyses must therefore be conducted with care to accurately identify and measure the appropriate parameters.

Such margin assessments in individual markets can sometimes be contested. It is important to emphasize, however, that our conclusions on merger effects do not depend on the way margins are measured in individual cases. In particular, the secular increase in profitability that the empirical literature has pointed to is not a phenomenon affecting one specific type of margin or one specific type of industry, but not others. On the contrary, the phenomenon appears to be a strong pattern across sectors and encompasses all major margin measures we are aware of, including net profit margins, operating margins and economic margins²⁹—so far without discernible reversion to the mean.

D. Is Lax Merger Control the Cause of High Margins?

Finally, Dr Padilla discusses the empirical evidence showing that the labour share of GDP has substantially declined over recent decades to the benefit of the profit share.³⁰ While acknowledging this secular trend, Dr Padilla argues that it must not necessarily have been caused by overly lenient merger enforcement (alone or at all). On the contrary, he argues, there are other factors which may plausibly explain the substantial increase in profitability and heightened income inequality: "*I am not saying that merger control may not have played a role, especially in the USA. Rather I am arguing that the evidence is not so clear cut as to trigger a radical change in merger control policy [...]*".³¹

We agree with this statement. In particular, it is true that there are several other important factors which are unrelated to merger enforcement that may plausibly explain the observed increase in profitability. For instance, both globalization and technological change (such as digitization and automatization) have tended to benefit so-called "superstar firms" by permitting them to efficiently scale up their operations and earn meaningfully higher margins than used to be possible in the past.³² It is

²⁹ With respect to increased net profit margins and economic margins, see the references in Section II above. With respect to increased operating margins, see G Grullon, Y Larkin & R Michaely, *Are US Industries Becoming More Concentrated?* (Working Paper, 2017).

³⁰ Padilla, *op. cit.*, *supra* note 3, Section V.

³¹ Padilla, *op. cit.*, *supra*, note 3 at 7.

³² See, e.g., D Autor, D Dorn, L Katz, C Patterson & J Van Reenen, 'Concentrating on the Fall of the Labor Share' (2017) *American Economic Review: Papers & Proceedings*, 107, 180-185; D Autor, D Dorn, L Katz, C Patterson & J van Reenen, 'The Fall of the Labor Share and the Rise

therefore by no means obvious that past competition enforcement has caused the surge in the share of output accruing to firm profits rather than labour.

This discussion about the causes of increased profitability is interesting and important. Exciting academic efforts are being produced to improve our understanding of these issues, and currently the jury is still out on the relative significance of different candidate explanations. Even so, it is important to stress two points with respect to the potential role of merger enforcement.

First, interesting as this question is, we had not in fact made the claim that past merger enforcement has been causal for the increase in margins that has been documented in the empirical literature. What we had claimed is more modest, but potentially of practical relevance: Whatever the *cause* of the apparent increase in pricing power, its *implication* is that prospective mergers involving firms with high margins are more likely to give rise to competition concerns than would otherwise be the case. Simply put, mergers are more prone to cause anticompetitive effects when the merging parties already possess significant pricing power to begin with.

Second, although this debate is far from settled, there are a number of studies arguing that, at least in the U.S., the observed increase in market power is associated with an increase in concentration and relatively permissive competition enforcement. For instance, Simcha Barkai's study presents evidence that the observed decline in the U.S. labour share is associated with a decrease in competition in U.S. industries.³³ Similarly, Gustavo Grullon and co-authors find a significant increase in concentration in U.S. markets, which resulted in higher profit margins for firms in those industries with the largest increases in concentration.³⁴ Furthermore, German Gutierrez and Thomas Philippon argue that increased concentration in the U.S. is associated with reduced competition and a decline in investment.³⁵ Finally, Bruce Blonigen and Justin Pierce directly test the impact of mergers in U.S. manufacturing on market power and productive efficiency at affected plants.³⁶ They find that mergers were associated with systematic increases in profit margins, but find little evidence for productive efficiencies resulting from those acquisitions. While these studies will unlikely remain the last word on the issue, they should at least give us pause for reflection.

of Superstar Firms' (Working Paper, 2017). See also G Gutierrez and T Philippon, 'Declining Competition and Investment in the US' (Working Paper, 2017) for a contrasting view.

³³ S Barkai, op. cit., supra note 15.

³⁴ Grullon et al., op. cit., supra note 29.

³⁵ G Gutierrez & T Philippon, op. cit., supra note 32.

³⁶ Blonigen & Pierce, op. cit., supra note 22.

IV. CONCLUSION

Historically, economists have argued that merger control should not be reduced to a mechanical calculation of market shares alone. Instead, competition authorities should assess, on a case-by-case basis, the specific commercial context in which firms operate and compete. For instance, effects-based analysis may turn out to reveal that, although market shares in a given transaction may appear high, anticompetitive effects are nonetheless unlikely. Today, such effects-based analysis is part and parcel of the merger control process.

Virtually from its inception, this more-economic approach has been embraced by merging parties and their advisers when it has allowed clearing concentrations in markets with significant market shares. The same observers tend to be less eager in welcoming the inevitable flipside of this approach: the fact that inflexibly applied market share benchmarks can just as well err in the opposite direction. Much as fixed thresholds will tend to overestimate anticompetitive effects when closeness of competition is low or when pre-merger margins are modest, they will tend to underestimate them when the reverse is true.

In an environment where at least U.S. firms' ability to charge prices above cost has been continuously increasing for more than 20 years now, old rule of thumb benchmarks do not have the same meaning anymore as they used to. This is not because the approach towards anticompetitive effects should change, but because the underlying facts have changed. Merger control appropriately needs to be more vigilant when pre-merger pricing power is larger than what used to be the norm.

High margins are not bad or illegitimate in themselves. On the contrary, there are important reasons why socially-desirable, pro-competitive conduct like product innovation or cost-based efficiencies are often associated with increases in margins (and possibly concentration). In that respect, the same adage applies to merger control that is well-known in abuse of dominance cases: It is not the existence of market power as such that is objectionable under the antitrust laws, but merely certain types of use to which it can be put.

Concentrations through merger are more problematic when the pricing power of the merging firms is large to begin with. According to the empirical literature, we have experienced a historically unprecedented increase in firms' pricing power over recent decades. Responsible competition authorities cannot, and should not, ignore this.

ANNEX

This annex provides a numerical example illustrating the potential effect of increased margins on market share thresholds in merger control. Consider a horizontally-differentiated industry with n symmetric firms who compete in price. The assumption of pre-merger symmetry allows us to conduct simple comparative statics with respect to the number of firms. Symmetry implies that, in the pre-merger equilibrium, firms exhibit identical prices, costs and market shares. Moreover, pre-merger diversion between firms is also symmetric, so no one firm is a closer substitute than others.

In such symmetric environments, the competitive effect of a merger in terms of its compensating marginal cost reduction has been shown to be equal to

$$\frac{\Delta c}{p} = m \frac{d}{1-d}$$

where $m = (p - c)/p$ denotes the firms' profit margin and d denotes the diversion ratio from one firm to another.³⁷ When firms are symmetric, their diversion ratio can be determined endogenously and has been shown to equal

$$d = \frac{1 - m\varepsilon}{n - 1}$$

where ε denotes the market elasticity of demand.³⁸ Substituting this expression into the previous equation and rearranging, we therefore have:

$$\frac{\Delta c}{p} = \frac{m(1 - m\varepsilon)}{n - 2 + m\varepsilon}$$

Let us now plug some numbers into this equation with the simple purpose to illustrate how increases in the margin m affect the size of n if we hold constant the size of the anticompetitive effect $\Delta c/p$ that is supposed to be prevented. To be concrete, suppose that the absolute value of the market elasticity of demand is constant and given by $\varepsilon = 1/2$, which appears not to be a uncommon value in practice.³⁹ Let us compare two situations: (a) firms' profit margin is given by $m = 0.24$ (the average value in 1990 following De Loecker and Eeckhout), and (b) firms' profit margin is given by $m = 0.4$ (the average value in 2014 following De Loecker and Eeckhout).⁴⁰ If we now set $n = 4$ in situation (a) and $n = 5$ in situation (b), we find that $\Delta c/p$ is approximately equal to 0.1 in both situations. In other words, a 5-to-4

³⁷ See Werden, *op. cit.*, supra note 27 at 411. Note that this formulation of the compensating marginal cost reduction considers the size of the marginal cost reduction Δc relative to price p that would be necessary to keep prices constant post-merger despite decreased competition.

³⁸ S Moresi & H Zenger, *Recapture Ratios in Merger Analysis* (Working Paper, 2018).

³⁹ See KW Clements, 'Price-elasticities of demand are minus one-half' (2008) *Economics Letters*, 99, 490-493.

⁴⁰ See De Loecker & Eeckhout, *op. cit.*, supra note 12.

symmetric merger ($n = 5$) with the average margin of 2014 ($m = 0.4$) is approximately equivalent in competitive effect to an otherwise identical 4-to-3 symmetric merger ($n = 4$) with the lower margin of 1990 ($m = 0.24$).