I. Introduction

In December 2023, the Department of Justice (DOJ) and the Federal Trade Commission (FTC) jointly released the 2023 Merger Guidelines (MG).² The MGs are improved relative to the July 2023 Draft Merger Guidelines (DMG), and we have found things to like in the MG. However, many elements have not changed, and several of these worry us.³ In particular, as economists, we are concerned that the MG at times appear to substitute hardline rules and subjective priors for economic evidence.

In this chapter, we focus on the economics of three topics covered by the MG: market definition, non-horizontal mergers, and efficiencies. For each topic, we discuss the MG’s approach as compared with prior versions of the Merger Guidelines and discuss what the approach gets right – and wrong – from an economic perspective using examples drawn from recently litigated matters.

II. Market definition

As others have observed, the role of market definition in antitrust matters is to identify the area of competition most likely to be affected by a merger (or other conduct).⁴ Since, as the Supreme Court put it, “[e]very manufacturer is the sole producer of the particular commodity it makes but control [over price] depends upon the availability of alternative commodities for buyers,”⁵ courts and agencies have found it useful to identify alternatives that are reasonably close substitutes for the products at issue, while excluding more distant substitutes. Market definition thus depends on demand-side substitution, with products that many consumers view as substitutes included in the market and those seen as more distant substitutes excluded.

To concretize this concept, courts and agencies have for decades relied upon the hypothetical monopolist test (HMT) to define markets, with the HMT first appearing in the 1982 DOJ Merger Guidelines. A proposed market passes the HMT if a monopolist controlling all products in the market would be incentivized to increase price on at least one product and fails if competition from outside the

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³ Since the DMG were published, 1,600 separate comments were posted to the docket, with another 3,300 comments received. See https://www.regulations.gov/docket/FTC-2023-0043.


market would disincentivize such a price increase. Application of the HMT often involves empirical measurement of demand substitution, but it is fundamentally an algorithm that can be applied consistently across contexts in an effort to understand consumers’ preferences.

Consistent with this view of the HMT, courts and practitioners sometimes additionally turn to qualitative evidence on demand substitution patterns in applying it. When qualitative evidence is incorporated into the HMT, it often is analyzed through the lens of several “practical indicia” enumerated by the Supreme Court in its Brown Shoe decision, such as industry recognition of a market. In our experience, Brown Shoe factors are most productively considered in the service of the HMT, i.e., to provide additional evidence as to whether a monopolist would increase prices, as opposed to serving as some form of standalone test.

To their credit, the MG largely keep the 2010 Guidelines’ description of the HMT and its quantitative underpinnings. The draft also adds helpful additional explanation on applying the test to targeted customer markets, to cluster markets, and to markets involving bundles.

Beyond expanding the discussion of the HMT, the MG also add a more explicit discussion of other potential sources of evidence on market definition, including “direct evidence of substantial competition between the merging parties”, “direct evidence of the exercise of market power”, and Brown Shoe indicia. This section discusses these additional sources of evidence and their relationship to the HMT.

First, “direct evidence of substantial competition between the merging parties” can be read as subordinating the market definition exercise to a competitive effects analysis. If analyses that do not depend on market definition indicate that consumers are likely to be harmed by lost competition between merging parties, we would agree that market definition may offer little incremental value over competitive effects analysis. Consequently, it may be appropriate to demote market definition in importance. Moreover, in our experience, the FTC and DOJ do (appropriately) give primacy to competitive effects analyses over market definition (particularly during their internal evaluations). Thus, this change may accurately and helpfully reflect their practice.

Second, it is less clear what “direct evidence of the exercise of market power” adds, or under which circumstances such evidence could alleviate the need for market definition. In our experience, the term “market power” lacks a consistent definition, and—in large part because the term is ill-defined—it can be challenging to credibly establish market power by methods other than defining a market and demonstrating large shares in that market (and this too may be subject to legitimate critiques). Nonetheless, given the well-known “cellophane fallacy,” commonly-applied market definition techniques may break down when a firm faces few close competitors and has already increased its price to reflect

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6 The HMT is described in greater detail in Section 4.3 of the MG.
8 For instance, the FTC argued to the DC Circuit in Whole Foods/Wild Oats that market definition is unnecessary in merger cases, stating that market definition is but one way of measuring market power, and thus a means to an end, and not an end in itself. While the DC Circuit rejected this reasoning by saying that “the FTC itself made market definition key” in its complaint and briefs to the district court, it agreed that “market definition will [not] always be crucial” to merger cases. See DC Circuit opinion, available at https://www.cadc.uscourts.gov/internet/opinions.nsf/D7E40F1331EE35CF8525780000523CE4/$file/07-5276-1130155.pdf, at 10-12.
the lack of competition. In such circumstances, it may indeed be appropriate to deemphasize market definition in favor of competitive effects analyses. If the “exercise of market power” language is applied to address such situations, then it could prove a useful addition. However, it remains to be seen just what the agencies intended with this new language.

Third, language referencing the Brown Shoe indicia as relevant for market definition last appeared in the 1982 and 1984 DOJ Merger Guidelines. In those documents, the context was in regards to their use as “circumstantial evidence” of product substitutability, including “buyers’ perceptions that the products are or are not substitutes” and “similarities or differences between the products in customary usage, design, physical composition, and other technical characteristics.” The 1982 and 1984 Guidelines explained that qualitative indicia of substitutability were to be applied in support of the HMT, which those Guidelines established as the “general” benchmark for market definition. In other words, the Brown Shoe factors could be relevant because they could help answer the HMT, not because they offered clear guidance as to the appropriate contours of the relevant market outside of the HMT framework.

Consistent with this view, the 1992, 1997, and 2010 Guidelines do not emphasize Brown Shoe criteria. Indeed, the 1992 Guidelines dropped references to qualitative indicia of substitutability, specifically linking the relevant market to the HMT. For instance, the 1992 Guidelines deleted prior Guidelines’ appeals to “buyers’ perceptions” in favor of evidence on actual or considered substitution; they also dropped references to “similarities or differences” between products in favor of criteria that were likely to be more objectively measurable. The 2010 Guidelines downgraded the importance of market definition relative to that of competitive effects analyses, while maintaining the primacy of the HMT as a market definition tool.

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9 While the cellophane fallacy more commonly arises in matters involving single-firm conduct, it can also implicate market definition in merger matters. By way of example, suppose that a dominant seller of a product proposed to acquire a fringe supplier or an importer of the product. It may be that a hypothetical monopolist seller of the product would not increase price by very much above the price charged by the dominant seller, who may be constrained mainly by alternative product types. It is unclear why the legality of such a merger should depend on the ability of a hypothetical monopolist to increase prices by some fixed amount, and thus market definition may not meaningfully add to analyses of the merger.


11 Ibid.

12 Federal Trade Commission and Department of Justice, 1992 Merger Guidelines, available at https://www.justice.gov/archives/atr/1992-merger-guidelines (Section 1.11, “Absent price discrimination, the Agency will delineate the product market to be a product or group of products such that a hypothetical profit-maximizing firm that was the only present and future seller of those products (“monopolist”) likely would impose at least a small but significant and nontransitory increase in price”). This language was repeated verbatim in the 1997 Guidelines.

13 Federal Trade Commission and Department of Justice, 2010 Horizontal Merger Guidelines, available at https://www.justice.gov/atr/horizontal-merger-guidelines-08192010. (See Section 4, stating “The Agencies’ analysis need not start with market definition. Some of the analytical tools used by the Agencies to assess competitive effects do not rely on market definition.”)

14 Ibid, (See Section 4.1.1, “The Agencies employ the hypothetical monopolist test to evaluate whether groups of products in candidate markets are sufficiently broad to constitute relevant antitrust markets.”)
In contrast to the 1982-2010 Guidelines, the MG characterize the HMT as but one of several tools used to define markets, with the Agencies able to “rely on any one or more” of the tools to “demonstrate the validity of a candidate relevant antitrust market,” including *Brown Shoe* qualitative indicia. The MG do not provide guidance as to the circumstances under which the Agencies may place relatively greater or lesser weight on either *Brown Shoe* indicia or on the HMT. Nor do they indicate that *Brown Shoe* indicia will be used in support of the HMT, as did the 1982 and 1984 Merger Guidelines.

While the Brown Shoe indicia have been excised from the last several iterations of the Guidelines, in our experience they can be important inputs into market definition, both in practice at the Agencies and as a matter of legal necessity in litigation. In particular, in matters in which quantitative evidence of actual or likely substitution patterns is unavailable, *Brown Shoe* factors may comprise the best available evidence on demand substitution, and thus market definition. Thus, their return to the Guidelines may reflect Agency thinking, and therefore be useful guidance.

In our experience, however, qualitative indicia are generally less reliable indicators of demand substitution than are the quantitative measurements that an HMT using data on customer substitution patterns provides. This is particularly true in the common scenario in which *Brown Shoe* indicia may produce ambiguous results or rely on subjective characterizations of evidence that may point in different directions. Qualitative factors are even less likely to be persuasive if untethered from the motivating question that underlies the HMT. How can an analyst know the importance of some similarities unless explicitly linked to tangible outcomes.

In short, we believe *Brown Shoe* indicia are most likely to be useful as inputs into, or complements for, the HMT, and not – as seemingly posited for the first time in over 40 years by US merger guidelines – as alternatives to the HMT.

In the remainder of this section, we consider the relationship between *Brown Shoe* indicia and the HMT, with examples drawn from recent Agency enforcement. In our view, these examples illustrate the value of quantitative implementations of the HMT as both a complement to and substitute for *Brown Shoe* indicia. While *Brown Shoe* indicia may in some cases strengthen the conclusions of a quantitative HMT, or stand in for quantitative evidence when such evidence is unavailable, the indicia would be poor replacements for the HMT itself as a general matter.

**Illumina-PacBio (2019) and Illumina-Grail (2021):** In seeking to block this merger, the FTC alleged a “Next Generation Sequencing” or “NGS” product market including both the “short-read” technology used by Illumina systems and the “long-read” technology used by PacBio systems. While the FTC’s complaint cited “some instances” in which switching between the parties occurred, it did not allege significant substitution between the parties. Indeed, the complaint alleged that long-read NGS systems like PacBio’s had only recently become a closer substitute for Illumina’s short-read technology, and then only “for some customers in some projects” (with more substitution alleged to come in the future).

In support of an NGS product market, the FTC relied entirely on *Brown Shoe* factors as evidence of demand substitution, by referencing “internal documents [in which] both Illumina and PacBio routinely

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recognize the existence of an NGS market” and the recognition of “other market participants” of an NGS market.\textsuperscript{17} The FTC also stated that “PacBio’s long-read systems have characteristics and uses similar to those of Illumina’s short-read systems.”\textsuperscript{18}

The FTC’s case would doubtlessly have been stronger had there been robust quantitative evidence on actual customer substitution between the merging parties. However, the absence of such information may be expected for newer products, or for evolving products for which past substitution patterns may not be good indicators of future substitution. In our view, the absence of quantitative evidence need not be gating, and in such matters Brown Shoe indicia can be helpful in assessing demand substitution and thus in establishing an antitrust market, especially if supported by testimony or other qualitative evidence on likely demand substitution.

In a similar vein, the Fifth Circuit recently found that the FTC “was not required to use the hypothetical monopolist test to define the relevant product market” when assessing the proposed merger between Illumina and Grail, one of several companies developing cancer detection products using Illumina’s platform.\textsuperscript{19} In reaching this conclusion, the court noted that “requiring such hard metrics to prove the bounds of a market where only one product has been commercialized but there is indisputably ongoing competition to bring additional products to market would, in effect, prevent research-and-development markets from ever being realized for antitrust purposes.”\textsuperscript{20} We agree with the court that a quantitative implementation of the HMT would have been effectively impossible in this matter. In lieu of such quantitative analyses, the court not unreasonably turned to Brown Shoe indicia to define a product market around cancer detection products like Grail’s.

**Whole Foods/Wild Oats (2007):** In seeking to block this merger, the FTC alleged a product market consisting of “premium natural organic supermarkets” (PNOS). The FTC defined PNOS as distinct from other retailers in that PNOS offer “more amenities”, “promote a lifestyle of health and ecological sustainability”, and set higher prices reflecting “a lifestyle to which their customers aspire.”\textsuperscript{21} To support its definition, the FTC relied in part on party documents describing Whole Food’s focus on “high quality perishables” and its “superior store experience” and indicating that conventional supermarkets had not taken share from Whole Foods even as they added organic food items.\textsuperscript{22} In arguing for a market encompassing a broader array of retailers, Whole Foods produced documents indicating that it tracks a broad array of retailers for the purposes of setting prices and choosing locations, that conventional supermarkets had shifted towards offering more organic items, and that most products that Whole Foods sells are not organic.\textsuperscript{23}

The district court found that the sum of the qualitative evidence indicated that “other supermarkets, including Safeway, Wegmans and Delhaize, compete today for the food purchases of customers who shop at Whole Foods and Wild Oats,” and that Whole Foods did not uniquely compete with Wild Oats.\textsuperscript{24}

\textsuperscript{17} Ibid.
\textsuperscript{18} Ibid.
\textsuperscript{20} Ibid.
\textsuperscript{22} Ibid.
\textsuperscript{23} The Kavanaugh dissent summarizes evidence produced by the defendants, e.g., at 7.
\textsuperscript{24} District court decision, at 28-29.
In part based on this qualitative evidence, the district court concluded that “the relevant product market in this case is [...] at least all supermarkets.”

In our view, this matter nicely illustrates the limitations of qualitative *Brown Shoe* evidence. Such evidence in this matter was contradictory and ambiguous, with the litigants able to find support in the qualitative evidence for both a narrow market and a broader market. In our experience, this is often the case in matters involving differentiated products that compete to varying extents with a wide range of other products. In such markets, *Brown Shoe* criteria may be of limited value, with courts and agencies appropriately placing greater emphasis on quantitative implementations of the HMT backed by data on customer substitution patterns. In fact, both the district court and the DC Circuit on appeal extensively discussed quantitative arguments put forward by both the FTC and Whole Foods, with the District Court finding that Whole Foods’ critical loss analysis indicated that a price increase to PNOS customers would be unprofitable, and the D.C. Circuit finding that the district court erred in interpreting the econometric evidence by giving too much weight to marginal as opposed to core customers.

While the litigants’ quantitative analyses ostensibly produced contradictory quantitative evidence, such evidence can be traced back to assumptions and basic measurements, which often can be tested and either accepted or rejected. In contrast, qualitative evidence produced by party documents does not easily lend itself to such testing. Thus, while *Brown Shoe* factors can be helpful in matters involving differentiated products, we think there is considerable value in looking beyond such factors to quantitative evidence on customer substitution. When, as here, the qualitative indicia appear to be inconclusive, a quantitative implementation of the HMT should receive greater weight than qualitative factors.

**Peabody/Arch (2020):** Peabody and Arch own the two largest coal mines in the South Powder River Basin (“SPRB”). The FTC sued to block their proposed joint venture, arguing that SPRB coal was a market unto itself, despite some competition with coal derived from other basins and alternative sources of energy like natural gas. The FTC’s complaint highlighted qualitative factors distinguishing SPRB coal from other types of coal (e.g., as compared to other coals, SPRB coal contains more heat and less sulfur and sodium) and stated that “industry and public recognition” confirmed the distinction. The complaint also made quantitative claims, namely that shipping costs made coal from other basins uneconomical for many power plants, and that the cost of converting a plant to use alternative fuels was prohibitive.

In finding for the FTC, the district court devoted 35 pages to product market definition, considering both quantitative and qualitative evidence. The court concluded that “[b]oth sides have argued persuasively that certain *Brown Shoe* factors support the Court’s use of their preferred market.” In particular, the court found persuasive both defendants’ evidence of there being “robust industry and public recognition of interfuel competition and that the prices for SPRB coal are affected by the prices of other fuels” and

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25 District court decision, at 31.
26 District court decision, at 16.
27 See D.C. Circuit opinion, note 84, supra.
28 See the FTC’s complaint, available at https://www.ftc.gov/system/files/documents/cases/d09391_peabody_energy-arch_coal_administrative_complaint_0.pdf.
29 Ibid.
30 See the district court opinion, at 36.
the FTC’s evidence of there being both public recognition of an SPRB coal market and SPRB coal having distinct customers, characteristics, and production facilities as compared to other fuel sources.

While the court found that the FTC established “that the SPRB coal market has the ‘practical indicia’ of a relevant product market,” the opinion led with an extensive review of quantitative evidence and the litigants’ application of the HMT. The FTC used various data sets to estimate the elasticity of demand for SPRB coal, and argued that under any estimate a price increase would be jointly profitable for SPRB coal producers. Defendants argued that a coal price increase would trigger the conversion of power plants to alternative fuel sources, and that econometric estimates indicated that this dynamic effect (which it said the FTC did not fully account for) would render unprofitable an increase in the price of SPRB coal. Both sides put forward econometric estimates of switching from SPRB coal, with the FTC examining variation in the price of coal caused by a 2020 tax increase, and defendants examining variation in the price of coal relative to that of natural gas. The court found the FTC’s quantitative assessments more credible, and noted the “HMT’s usefulness as an analytical tool for determining how to define the relevant product market.”

In our view, this example illustrates two principles. First, the court attempted to trace differing interpretations of quantitative evidence on back to differences in modelling or assumptions, and to understand which approaches were more credible. The opinion appears to pinpoint modelling differences and to explain why the court found the FTC’s modelling more persuasive. Second, market definition is most probative when qualitative and quantitative factors point in the same direction. In this matter, Brown Shoe indicia appeared to complement HMT analyses, strengthening the court’s conclusions.

Ultimately, we believe that both Brown Shoe indicia and quantitative evidence can be useful tools for defining markets and explaining competitive dynamics within those markets. However, as the case studies we have provided illustrate, an HMT based on quantitative evidence of customer switching provides more objective evidence that is appropriately preferred to Brown Shoe indicia when available. When data on switching are unavailable, as may be the case with mergers involving new or rapidly-evolving products, it is appropriate to increase the weight placed on Brown Shoe factors. However, we believe they are more impactful if testimony or other qualitative evidence clearly supports their connection to the HMT. While the Draft Guidelines do not indicate when the agencies will give greater emphasis to one or the other source of evidence for market definition, we view courts as likely to consider Brown Shoe factors but to continue to prefer rigorous implementations of the HMT when available.

III. Non-horizontal mergers

Most merger-related litigation concerns horizontal transactions, which combine firms that provide (or are at least alleged to provide) the same type(s) of product to the same type(s) of customer. However,

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31 Ibid., at 36.
32 Ibid., at 26.
33 Ibid., at 27-28.
34 Ibid., at 34.
35 Ibid., at 31.
36 Ibid., at 35.
mergers can also be non-horizontal in nature when they involve products that are not directly substitutable.

One type of non-horizontal transaction is known as a “vertical” merger. Vertical mergers integrate a buyer and seller of a given product. For example, a manufacturer acquiring a retailer of its products would represent a vertical merger. Clearly, the manufacturer and the retailer are not directly competing. But they interact with each other as the retailer purchases products from the manufacturer to sell to final consumers.

Another form of non-horizontal transaction that may give rise to competition effects is a “conglomerate” merger, whereby the merging parties sell complementary products that are sometimes consumed with each other or are otherwise “related.” An example of a transaction combining complements would be the merger of a computer hardware maker and a software publisher. The hardware and software firms do not directly compete with each other. However, demand for software and hardware is related since computer hardware is more valuable when paired with high quality software and vice versa.

Although vertical and conglomerate transactions often are discussed separately, their underlying economics are quite similar. That is because a vertical relationship is simply a specific form of complementarity. Whether the different products are part of the same production chain, and thus vertically related, as opposed to being sold separately but often consumed in combination, and thus categorized as conglomerate, is not important for the economic assessment of incentives.

Guideline 5 in the MG describes how the Agencies assess both vertical and conglomerate transactions “non-horizontal” transactions. Guideline 5 is focused on complementary transactions of all kinds and mandates that “mergers can violate the law when they create a firm that may limit access to products or service that its rivals use to compete.” For Guideline 5, the underlying concern is that when

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38 Other examples of products that have been lumped into discussions of “conglomerate” mergers include products that only sometimes (or even rarely) are consumed together by end consumers but are purchased together by intermediaries, such as grocery products that are not strong complements or substitutes but would be purchased together by grocery retailers after their merger, or pharmaceuticals that are rarely purchased together by end consumers but potentially share positions on health plan formularies. Theories of harm related to such products still are developing but most likely would stem from relationships between the products for intermediaries as opposed to end consumers.


40 However, there may be important differences between vertical and conglomerate transactions insofar as there may be variation in the combined firm’s practical ability to accomplish certain strategies depending on whether one party’s product is a direct input into others’ or is simply a complement.
complementary products are combined inside the same firm there may be an incentive for the merged firm to change how it treats unaffiliated rivals that ultimately harms consumers.

The economic basis for Guideline 5 is mixed, at best. On the one hand, in some cases, the ultimate impact on consumers from the internalization by the merging parties of the impact of their respective products’ prices (or characteristics) on the profits of those of the merger partner may be harmful. Thus, there is a basis for scrutinizing whether a given non-horizontal transaction will result from some form of raising rivals’ costs. However, the MG ignore that this same process of internalization also creates procompetitive incentives. Below, we briefly discuss how non-horizontal transactions give rise to these contrasting impulses.

The intuition for how and why non-horizontal transactions may be anticompetitive is straightforward. For example, a vertical merger may cause an upstream firm to realize that its downstream merger party would benefit if the upstream firm charged a higher wholesale price to the downstream firm’s rivals (or cut them off entirely). Such price increases would be expected to cause the downstream rivals to raise their prices to cover their higher costs, which in turn could lead some final customers to decide to switch to the downstream merger partner’s product. In either circumstance, affected final consumers would be worse off relative to the pre-merger world.

Analogously, a conglomerate transaction could lead the combined firm to increase the price of one of its products when it would be used in conjunction with those of rival firms (or render its products entirely incompatible with those of rivals). Once more, the antitrust concern would be that the combined firm’s action would weaken competition as rivals’ products would be at a disadvantage relative to the pre-merger world. That is because consumers would have to pay extra for the merged firm’s products when used with rivals (if the option remained available at all).

The basic logic for why integrating complements can have important pro-competitive effects is similar. When demand for two products is correlated and both products face downward sloping demand curves, meaning that the seller earns a margin on each sale, the end price to consumers will be lower if the same firm controls both products. This is because lowering the price of one of the goods encourages consumption of both products, a benefit that financial integration encourages that separate ownership does not. The incentive to lower the final price is often characterized in the economic literature as stemming from the “elimination of double marginalization” (EDM). In addition to benefits stemming from EDM, economic theory and evidence shows that non-horizontal transactions may also be associated with other benefits, such as reductions in transactions costs and/or increased investment in quality improvements.


42 The essence of this insight dates back to Cournot, Antoine Augustin, 1838. Researches into the Mathematical Principles of the Theory of Wealth.

In general, non-horizontal transactions will simultaneously give rise to both types of incentive, the procompetitive and the anticompetitive. In other words, there will be some incentive for the merged firm to use their control of products used by or in conjunction with the products of rivals to reduce the competitiveness of those rivals’ products. Simultaneously, there will downward pressure on the price of the bundle of the combined firm’s products or (in the case of a vertical merger) on the price of the final good (in addition to possibly other beneficial effects). These contrasting impulses, in turn, will interact with each other, leading to an overall impact on competition and consumers that is theoretically ambiguous and deeply dependent on the specific nature of competition in a given market.44 Further compounding the complexity is the fact that standard economics shows that the types of situation that can give rise to raising rivals’ costs concerns often also are associated with the greatest scope for price reductions. For example, when an upstream firm earns a very sizable margin, it may have the ability to increase prices to downstream rivals of its merger partner. However, the same circumstances would be expected to give rise to a large EDM effect, so the merger may benefit consumers on balance because any raising rivals cost effects are outweighed by EDM (or other benefits).45 Consistent with this theoretical ambiguity, an expanding empirical literature underscores that there is no clear argument that non-horizontal transactions are typically on net harmful to consumers.46 The MG de-emphasize this nuance, by consigning EDM to a footnote describing EDM as “a common rebuttal argument” subject to the processes described in Section 3.3. of the MG for the analysis of efficiencies.47 To understand how both anticompetitive and procompetitive effects may arise in the context of a non-horizontal transaction, as well as the importance of a detailed, fact-specific interrogation of which effect dominates, it is useful to think about these issues in the context of a specific case. Consider the 2017

44 Salop, S. C., 2018, Invigorating Vertical Merger Enforcement, Yale Law Journal, 127(7), pp. 1962-1994 (at 1974: “In short, in the real world of imperfectly competitive markets, the direction of the net competitive effect is a question of fact, not theory. While vertical mergers in oligopoly markets should not be subject to near-per se illegality, they also are not entitled to near-per se legality. Both of these per se rules would lead to unacceptable errors. Instead, competitive-effects analysis, enforcement, and law should be balanced and fact-based”). However, at least with linear demand, the result is generally to the benefit of final consumers. See, e.g., Salinger, M. A., 2021. The Complicated Simple Economics of Vertical Mergers. Available at SSRN: https://ssrn.com/abstract=3799273.
45 O’Brien, D. P., 2022. Tethering Vertical Merger Analysis. CPI Antitrust Chronicle. Available at https://ssrn.com/abstract=4061410. That fact patterns seemingly consistent with an ability to foreclose may also imply strong incentives to act in pro-competitive ways makes the MG’s assertion that vertical mergers involving an upstream firm with a 50% or larger market share are presumptively anticompetitive especially concerning from an economic point of view (MG, fn. 30).
47 Defenders of the MG may claim that EDM is indeed like any other potential cost-saving efficiency, and should be scrutinized as such under 3.3. We disagree. As discussed in the body of this chapter, the procompetitive incentives that arise from non-horizontal mergers stem from the same internalization of effects on product demand as potentially give rise to anti-competitive effects. In other words, they involve no alterations to the nature of the combined firm or other aspects of the market. As such, we do not see how it makes sense to impose a seemingly different evidentiary standard – as suggested by Section 3.3 – for EDM and other procompetitive impulses than the MG appear to require for anticompetitive ones.
challenge by the DOJ of AT&T’s proposed acquisition of Time Warner (TW). At the time, AT&T/TW was notable as the first litigation of a non-horizontal transaction in decades. Since that time, however, non-horizontal merger challenges have become more common, including United Healthcare/Change, Meta/Within, Microsoft/Activision, Amgen/Horizon, and IQVIA/Propel Media.

AT&T/TW was a vertical transaction in the sense that TW content is an input into TV packages offered by providers such as AT&T’s DirecTV, Comcast, and Cox. The DOJ’s central theory of harm was that the merger would lead to cable providers paying higher prices for TW content, which ultimately would result in consumers paying higher quality-adjusted prices for their cable packages. The prices paid by cable companies like DirecTV or Comcast to content providers like TW generally are set via bargaining wherein all aspects of the transaction are subject to negotiation. This stands in contrast with how business is conducted in many consumer-facing industries where firms “post” their prices and then consumers buy – or don’t buy – as much as they want at that price.

The economics of bargaining can be thorny. While there may be broad agreement on some core tenets – e.g., neither party accepts terms that leave it worse off than not transacting and parties do not leave available surplus unclaimed – the ways that mergers affect outcomes when prices are negotiated can be particularly dependent on factors that are difficult to measure. For example, a key element may be what each party earns should they fail to reach agreement. These “disagreement” payoffs – and how they impact prices – were at the core of AT&T/TW.

The government specifically attributed predicted price increases to a change in the leverage that TW would possess in its negotiations with cable providers. The DOJ alleged that when TW became integrated with AT&T, which owned DirecTV, it would have less to lose from a breakdown in negotiations over the price of TW content. A breakdown that led to TW content not being on a cable provider at all could cause some customers of Comcast (or other cable providers) to switch to DirecTV so they could continue consuming TW content, and this switching would allow AT&T to recoup some of the profits lost by TW when negotiations broke down. It should be noted that the DOJ did not dispute that the combined firm would suffer from the loss of revenue from Comcast (or other cable providers) if agreement could not be reached, but argued that the shift in relative outcomes would lead to an increase in negotiated rates. In other words, because disagreement would not be quite so bad for TW as previously, the would be able to extract a higher fee.

Meanwhile, the merging parties emphasized the scope for lower prices through the internalization of the complementarity between TW and DirecTV leading to procompetitive effects through via EDM. Pre-merger, when TW negotiated with DirecTV, the two entities did not recognize that a lower cost of TW content as part of a package would lead to greater utilization of DirecTV. However, post-merger, this relationship would be recognized. Thus, while DirecTV would continue to pay a “transfer” fee to TW for its content, the merger would incentivize TW and DirecTV to set the transfer price to maximize corporate-wide profits, rather than the profits of TW in isolation, as TW did before the merger. Because any transfer price from DirecTV to TW does not directly affect corporate-wide profits (just where those profits are booked), while a lower transfer price makes DirecTV more competitive with its rivals, economic theory predicts that the combined company should optimally lower the transfer price all the way down to TW’s cost, “selling” the content at zero margin to DirecTV. This lower cost would increase

48 Analogously, lower DirecTV prices could lead to more subscribers that would result in higher payments to TW.
DirecTV’s margin, incentivizing it to increase sales, by lowering price. Ultimately, the elimination of the TW margin benefits not only DirecTV, but its consumers.

In some ways, AT&T/TW provided the framework for subsequent non-horizontal transactions. The antitrust authorities focused on the scope for raising rivals’ costs, and the merging parties emphasized benefits from the internalization of multiple margins. However, in other ways, the case stands apart. That is because in contrast to subsequent challenges, there was broad agreement between the litigants over the underlying economics. For example, the government’s expert, Dr. Carl Shapiro, acknowledged that the transaction would lead to an incentive to lower DirecTV’s costs, which would benefit consumers. However, he opined that this effect would not dominate the price increasing effects that the transaction also would give rise to. Meanwhile, the defendants disputed the materiality of the marginal change in disagreement payoffs identified by Dr. Shapiro and the DOJ. In short, they focused on whether the evidence supported the government’s argument that if failing to reach agreement with Comcast shifted from being awful to slightly less awful for TW then TW would be able to extract meaningfully higher payments.

In other words, both the DOJ and the parties recognized that non-horizontal transactions are complex, involving incentives to boost, as well as hinder, competition. They just disagreed with how best to think about the net effect of these contrasting impulses.

Ultimately, the parties prevailed in convincing Judge Leon of the DC District Court that the transaction would not violate the antitrust laws. It is difficult to pin down precisely why, but a number of factors appear in Judge Leon’s opinion as influential. First, the fact that there had never been a breakdown in negotiations between TW and a cable provider meant that there was no data for the DOJ to leverage as to just how important TW content was to subscribers, which would affect their propensity to switch to DirecTV. This necessitated the use of survey data, which ultimately proved unsatisfying.

Second, the defense was able to point to a number of instances of vertical integration which had not led to price increases. Although the DOJ noted that these past instances also involved antitrust or regulatory interventions that may have been instrumental in forestalling effects, the defense was able to point to the fact that they had committed themselves to “baseball-style arbitration” in the event of disagreements. This voluntary resolution resembled the regulatory interventions to the past transactions. Thus, the defense was able to argue that past experience showed that the instant transaction would not result in harm to consumers or competition.

Third, TW had long-term contracts with several cable companies. The fact that these contracts would continue to be in force for some time implied that any consumer harms would not occur for some time.

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49 See, e.g., Section 10 of “Expert Report of Carl Shapiro” available at https://www.justice.gov/atr/case-document/file/1081336/download. (“The proposed merger may also create an incentive for DTV to lower its price to subscribers if that lower price would benefit Turner by expanding the number of viewers with access to Turner Content. Prior to the merger, DTV does not account for this potentially positive effect on Turner’s profits when setting its price. After the merger, if the resulting expansion of DTV subscribers benefits Turner, then the combined DTV and Turner would find it profitable to decrease price to some degree.”)

50 District court decision, at 123-129.

51 District court decision, at 99-108.
In contrast, the potential benefits from internalizing the presence of two margins would be immediate. The parties argued that Dr. Shapiro did not account for this temporal aspect.\(^\text{52}\)

Fourth, Judge Leon appears not to have been convinced by the DOJ’s arguments about how modest variation in disagreement payoffs as a result of the merger would lead to material differences in negotiated outcomes. In particular, in footnote 36, he notes as particularly persuasive the TW CEO’s comment that the threat of a 950lb weight falling on one’s head may be perceived as quite similar to the threat of a 1000lb weight.\(^\text{53}\) In other words, a blackout wherein TW’s content was not available on a cable provider would remain catastrophic for both sides after the merger. Therefore, in Judge Leon’s view, the integration with DirecTV provided no incremental leverage that could be used in actual negotiations.\(^\text{54}\)

Reasonable minds may disagree with the outcome of AT&T/TW – as they may on many litigations.\(^\text{55}\) But it seems hard to dispute that Judge Leon’s 172-page opinion engaged seriously with the record evidence and addressed a general view of competition that was agreed to by all sides. That seems like a procedural outcome that all participants in the antitrust ecosystem should cheer. Given their predominantly one-sided portrayal of non-horizontal transactions, we fear that non-horizontal cases brought as guided by the MG will involve less substantive debate than was observed in AT&T/TW, as well as possibly cause the Agencies to focus investigations on factors other than those that are likely to be at issue in litigation.

As has been described elsewhere, the myopic view of non-horizontal mergers articulated in the MG seems predicated on the belief that nuance unduly favors the merging parties.\(^\text{56}\) Based on the agencies’ track record in their vertical challenges since AT&T/TW, wherein the agencies have generally dismissed the procompetitive rationales for and implications of non-horizontal transactions, we think that acknowledging only a fraction of the effects that economics predicts is not the route to more successful enforcement. In our experience, courts do not lack for common sense. This matters as common sense as well as basic economic principles point to the potential for material benefits from integrating complements. Consequently, we anticipate that courts will be loath to dismiss these without firmer showing that they are outweighed by anticompetitive effects, which will generally involve a forthright grappling with the fact that non-horizontal transactions may benefit as well as harm competition.

\(\text{52}\) District court decision, at 146-148.
\(\text{53}\) District court opinion, at footnote 36.
\(\text{54}\) District court opinion, at 111-117.

Electronic copy available at: https://ssrn.com/abstract=4678561
IV. Efficiencies

Economists long have recognized that improvements in economic efficiency often can be a natural outcome of mergers. Most basically, merging firms can take advantage of each other’s strengths in ways they cannot when operating as independent entities. Consistent with this, the different Merger Guidelines have historically recognized merger efficiencies, both implicitly and explicitly. The MG move the line on both implicit and explicit recognition of merger efficiencies in a direction that would give efficiencies less credit in merger investigations. In our view, the new standard lacks a clear empirical foundation.

Implicit recognition of merger efficiencies is evident from the fact that neither antitrust authorities nor courts advocate that every merger be blocked. That is, in the case of horizontal mergers, absent efficiencies, as a matter of basic economics every merger reduces competition and causes upward price pressure. And, in the case of vertical mergers, absent EDM and other procompetitive benefits, nearly every merger raises foreclosure concerns. Hence, Merger Guidelines’ establishment of market concentration thresholds above which a merger raises competitive concerns could be interpreted as an implicit recognition of merger efficiencies.

Merger efficiency benefits also explicitly have been recognized in Merger Guidelines. That is, although Guidelines have expressed varying degrees of skepticism about merging parties’ efficiency claims, recognition that merger benefits are possible explicitly has been written in Merger Guidelines, including the MG. However, the MG show greater reluctance to recognize merger efficiencies than previous versions in at least two ways.

First, the MG have reduced the measures of market concentration and changes in market concentration that create a “presumption” that a merger may substantially reduce competition. Specifically, the MG move the thresholds for post-merger HHI and change in HHI for such significant concern down from 2500/200 in the 2010 HMG to 1800/100. The MG also add a new threshold for the merging parties’ combined market share following a horizontal merger of 30%, that “presents an undue threat of undue concentration,” regardless of whether post-merger market concentration is less than 1800. Hence, a merger between 2 of 6 equally sized firms that would not have triggered a structural presumption in the 2010 Guidelines is condemned by the MG. As described above, this movement of the structural thresholds implicitly gives less credit to merger efficiencies.

57 See, also, Warren-Boulton, F. R., 1985. Merger Policy and Enforcement at the Antitrust Division: The Economist's View. Antitrust Law Journal 54(1), pp. 109-116 (at 112: I should preface this discussion by saying that the very existence of “safe harbor” Herfindahls in the Guidelines already implies a “standard deduction” for efficiencies. Such a standard deduction is implicit in a policy that allows mergers that increase concentration to some extent, even without a showing of any efficiency gains").

58 In a November 2010 speech as Deputy Assistant Attorney General, Carl Shapiro made this recognition more explicit, suggesting a 5% “safe harbor” for gross upward pricing pressure, noting “[t]he “safe harbor” outlined here does not indicate any tolerance for anti-competitive price increases; rather, it reflects the fact that a small amount of upward pricing pressure is unlikely, at the end of the day, to correspond to any actual post-merger price increase.” (Available at https://www.justice.gov/atr/file/518246/download pp, 24-25.)

59 2010 Guidelines, § V; MG, § II.1.

60 MG, § II.1. FN 30 of the MG also appears to create a structural threshold for vertical mergers of a “50 percent” “foreclosure share.” It is unclear to us what exactly this means and thus we do not consider its importance in the assessment of merger efficiencies.
Second, the MG sets burdens of proof for explicit merger efficiency claims that generally are more challenging to meet than in previous Guidelines.

Agency doubts about merging parties’ efficiency claims are not new. Merging parties have incentives to make self-serving efficiency claims, and thus it is reasonable for the agencies to be wary of such claims. Moreover, it often is more difficult for the agencies to gain information on likely merger efficiencies than it is to gain information on likely competitive effects. Hence, the MG are not the first iteration of the Guidelines to treat merger efficiencies with a healthy dose of skepticism.

That said, the MG have added some new challenges to merger efficiency claims. First, although previous Guidelines have required efficiencies to be merger-specific, which in our experience meant that the efficiencies are a direct outcome of the merger, the MG have added language that shift the merger-specific requirement more toward “merger-required.” For example, the MG characterize merger-specificity as achieving procompetitive benefits that “could not be achieved” without the merger, as compared to the 2010 Guidelines characterization of efficiencies that are “unlikely to be accomplished” in the absence of the merger.61 The MG list out potential alternative means to achieving merger efficiencies as including: “organic growth of one of the merging firms, contracts between them, mergers with others, or a partial merger involving only those assets that give rise to the procompetitive efficiencies.”62 The MG also remove a sentence from the 1997 and 2010 Guidelines that stated that the Agencies do not “insist upon a less restrictive alternative that is merely theoretical.”63

Second, while previous Guidelines required merging parties to substantiate efficiency claims so that “the Agencies can verify by reasonable means the likelihood and magnitude of each asserted efficiency,”64 the MG introduce language appears to shift the burden and requires greater certainty in the evaluation of efficiency claims, i.e., that efficiency claims “have been verified, using reliable methodology not dependent on the subjective predictions of the merging parties.”65 The MG further introduce a novel claim that “[p]rocompetitive efficiencies are often speculative” and remove a sentence from previous Guidelines stating that “efficiency claims substantiated by analogous past experience are those most likely to be credible.”66

Third, the MG impose new dimensions on which merger efficiencies must be demonstrated to be “not anticompetitive.”67 These requirements are written:

Any benefits claimed by the merging parties are cognizable only if they do not result from the anticompetitive worsening of terms for the merged firm’s trading partners.68

There is a footnote to this requirement noting that “[t]he Agencies will not credit efficiencies if they reflect or require a decrease in competition in a separate market. For example, if input costs are

61 MG, § 3.3; 2010 Guidelines, § 10.
62 MG, § 3.3.
64 See, e.g., 2010 Guidelines, § 10.
65 MG, § 3.3.
66 Ibid.
67 Ibid.
68 Ibid.
expected to decrease, the cost savings will not be treated as an efficiency if they reflect an increase in monopsony power.”

These new requirements present a stark set of conditions that would not necessarily result in competitive outcomes or even allow for the acknowledgment of efficiencies. The following examples illustrate how efficiencies analyses have affected past matters.

**Anthem/Cigna (2017):** In the proposed Anthem/Cigna merger, the merging parties claimed that the merger would create benefits because the combined firm would have increased bargaining leverage in negotiations with healthcare providers through which it would negotiate better terms of service that it could pass on to customers. The DOJ argued that any better terms negotiated by the combined firm should not count as a merger efficiency because they would derive from increased monopsony power.

An economic expert for the parties, Dr. Mark Israel, proposed a three-part test to distinguish procompetitive price reductions from monopsony power. These parts were: (i) decreases in the negotiated price of healthcare services will be passed-through to consumers in the form of lower insurance prices, (ii) output, i.e., the quantity of insurance plans purchased, will not decrease, and (iii) healthcare services prices will remain above the applicable competitive level.

Dr. Israel presented evidence that procurement savings that would occur through the Anthem/Cigna merger would satisfy the three parts of his proposed test and thus would be a merger benefit. Although the Court ruled that efficiencies failed for other reasons (merger-specificity and verifiability), it also expressed skepticism that the claimed lower procurement savings should count as an efficiency because it saw them as deriving from an increase in monopsony power.

The new requirements in the MG are consistent with Dr. Israel’s proposed tests but may be significantly and unduly more burdensome. For instance, part (i) of Dr. Israel’s test resembles the pass-through requirement in the MG and previous Guidelines. Parts (ii) and (iii) coincide with the “not anticompetitive” requirement in the MG and the attached footnote. That is, parts (ii) and (iii) of Dr. Israel’s proposed test would be failed when insurance prices would be pushed below the competitive level or the quantity/quality of insurance plans is reduced. The MG language quoted above may align exactly with Dr. Israel’s test if the “anticompetitive worsening of terms” can be understood to mean prices below the competitive level and/or a reduction in quantity or quality of output. However, the footnote attached to the quoted text goes a step further, suggesting that the agencies will not credit any price decreases that derive from increased bargaining leverage gained through merger. That is, the MG appear to propose that input price reductions that are passed through to consumers and increase output will not be considered if they derive from an increase in the merging parties’ share of purchases in input

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69 Ibid.


72 MG, § 3.3; 2010 Guidelines, § 10.

73 MG, § 3.3.

74 Ibid.
markets. This is not necessarily a new agency position, but it represents a strengthening of the language in the 2010 Merger Guidelines, which expressed skepticism toward but allowed for the possibility of efficiencies from lower input prices.\textsuperscript{75}

**Rite Aid/Eckerd (2007):** In its post-transaction press release, Rite Aid noted that with increased scale it would better be able to compete with its major drug store rivals, as “[w]ith a much larger Rite Aid, we’re confident we will have substantial opportunities to reduce costs...”\textsuperscript{76} Under the MG, such economies of scale, even if resulting in a more competitive combined firm, could be viewed with skepticism given Guideline 7, which expresses concerns about mergers that continue a trend of increased concentration wholly distinct from changes in competition or outcomes for consumers.

Taking Rite Aid’s statements at face value, it was struggling to compete with larger, growing chains, suggesting those chains were able to achieve lower costs through scale economies. However, if it is true that larger retail pharmacy firms are in general more efficient, a merger that is driven by a procompetitive incentive to lower costs and compete more effectively may result in both increased scale and increased concentration.

It is unclear how the agencies would evaluate the Rite Aid/Eckerd situation under the MG. But we worry that the DMG’s statement that efficiencies are not cognizable if they “accelerate a trend toward concentration,” would mean that a primary claimed efficiency of the Rite Aid/Eckerd transaction would not be credited, since such efficiencies by definition result in increased concentration.\textsuperscript{77}

**V. Conclusion**

We see some helpful changes in the MG, both relative to the DMG and relative to past Guidelines. However, in other cases, we worry that they echo the DMG in giving greater weight to qualitative, noneconomic evidence and presumptions than did past Guidelines. In places, this change in emphasis may have the effect of suggesting the reasonableness of substituting qualitative for quantitative evidence, or of downgrading the importance of basic economic principles. We hope the discussion and examples in this paper begin to illustrate the value of quantitative, economic evidence, and its role in the analysis of mergers. For decades, such economic evidence has helped the agencies bring and win cases, including matters in which the qualitative evidence was ambiguous. While a shift to bright-line rules would seem to lower the agencies’ burden in bringing merger challenges, it may also result in the agencies and parties focusing on issues unlikely to be pivotal in litigation, and thus ultimately serve to undermine enforcement.

\textsuperscript{75} 2010 Guidelines, § 10 ("Yet other [cost savings], such as those relating to procurement, management, or capital cost, are less likely to be merger-specific or substantial, or may not be cognizable for other reasons.")

\textsuperscript{76} https://www.sec.gov/Archives/edgar/data/84129/000134100407001770/exhibit99_1.htm

\textsuperscript{77} DMG, at 34.