

# The Proposed Merger Guidelines and Tech Acquisitions\*

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The Draft Merger Guidelines (DMGs)<sup>1</sup> released by the US Department of Justice (DOJ) and the Federal Trade Commission (FTC) on July 19, 2023 feature many significant changes from earlier Merger Guidelines.<sup>2</sup> Of the 13 guidelines highlighted in the DMGs, two are particularly new and important for tech acquisitions. One is Guideline #4, which states that “mergers should not eliminate a *potential* entrant in a concentrated market” and the other is Guideline #9, stating that “when a merger is part of a *series* of multiple acquisitions, the agencies may examine the whole series” (emphases added).

While the DMGs provide hardly any details on #9, they do offer a list of evidence that the agencies would consider in support of #4. For example, the DMGs state that a firm’s “sufficient size and resources to enter,” expansion “into other markets in the past,” current participation “in adjacent or related markets,” being considered by industry participants as

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<sup>1</sup>[https://www.justice.gov/d9/2023-07/2023-draft-merger-guidelines\\_0.pdf](https://www.justice.gov/d9/2023-07/2023-draft-merger-guidelines_0.pdf).

<sup>2</sup>See a summary by Froeb et al., “Cost-Benefit Analysis Without the Benefits or the Analysis: How Not to Draft Merger Guidelines” available at: [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4537425](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4537425) and another summary by Werden, “Two Bridges Too Far: First Take on the Draft Merger Guidelines”, CPI Column, September 5, 2023, available at [https://www.pymnts.com/cpi\\_posts/two-bridges-too-far-first-take-on-the-draft-merger-guidelines/](https://www.pymnts.com/cpi_posts/two-bridges-too-far-first-take-on-the-draft-merger-guidelines/).

“a potential entrant,” as well as “subjective evidence that the company considered entering absent the merger” can all constitute evidence for the firm’s reasonable probability of entry. More importantly, a reasonable probability of entry is *presumed* to result in deconcentration or other significant benefits for competition, unless there is substantial direct evidence that the competitive effect would be *de minimis*. Simply put, a merger that is deemed to reduce a reasonable probability of entry is presumed to harm market competition.

Guideline #4 appears to hinge on the implicit assumption that, but for mergers and acquisitions (M&A), *all* entities with a reasonable probability of entry would likely enter the market, vigorously compete with each other, and significantly promote market competition in the absence of M&A. To avoid a linguistic debate on “reasonable,” “likely” and “significant,” it may be worthwhile to examine this assumption in a simple illustrative example.

### **A Stylized Example**

Suppose a large incumbent A and a small startup B are currently the only two firms competing in a given ‘focal’ market. Let us assume B is at some competitive disadvantage because A is more efficient in business functions such as marketing, finance, management, and customer acquisition; as a result, A has a dominant market share. Outside the market, there are three types of entities: Company C is a team of founders who may enter the focal market if the founders anticipate sufficient future returns from the potential entry. Company D is an incumbent operating in an adjacent or related market—for example, as a customer of or a supplier to A or B. Company E is an incumbent in an unrelated market but is large and resourceful. According to Guideline #4 in the DMGs, incumbents such as C, D and E are all potential entrants with a reasonable probability to enter the concentrated focal market.

Given that A and B are the currently the only competitors, if A proposes to acquire B, it will create a monopoly in the focal market, at least temporarily, as it takes time and luck for C, D, and E to potentially enter, survive, and effectively compete with A. But that is not what Guideline #4 is about; rather, Guideline #4 challenges such M&A deals as A acquiring C, D acquiring B, D acquiring C, E acquiring B, E acquiring C, or even B acquiring C.

According to Guideline #4, all of the aforementioned potential acquisitions would harm competition in the focal market, as compared to the implicit scenario where C, D, and E will all enter organically and all five firms (A/B/C/D/E) will exert significant competitive pressure on each other. Unfortunately, this hopeful scenario is generally unlikely in light of the following five facts demonstrated by existing research:

**Fact 1: Firm R&D has been shifting from large mature corporations to VC-funded ventures.** Since the 1970s, large US corporations such as AT&T, Xerox, IBM, and DuPont have gradually moved away from scientific research and towards commercial development, although investment in science has increased substantially in terms of public funding, the number of high-degree workers, and research articles published.<sup>3</sup> The growing gap between basic research and commercial applications is in part filled by venture capital (VC) funded ventures.

Since Guidelines #4 and #9 appear largely motivated by tech innovations and related acquisitions, especially those made by the five largest tech companies — Google/Alphabet, Amazon, Apple, Facebook/Meta, and Microsoft (collectively also known as GAFAM)<sup>4</sup> — we should first seek to understand the size and importance of tech, tech ventures, and venture capital in R&D.

According to the National Center for Science and Engineering Statistics (NCSES), R&D performed in the US has reached \$717 billion in 2020, of which 76% came from the business

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<sup>3</sup>Ashish Arora, Sharon Belenzon, Andrea Pataconi, and Jungkyu Suh (2020), “The changing structure of American innovation: Some cautionary remarks for economic growth,” *Innovation Policy and the Economy*, Volume 20, Number 1, pages 39-93, 2020, available at <https://www.journals.uchicago.edu/doi/full/10.1086/705638>. Yasin Ozcan and Shane Greenstein (2016), “Technological leadership (de)concentration: Causes in ICTE (Technical report).” *National Bureau of Economic Research Working Paper Series #22631*, available at [https://www.nber.org/system/files/working\\_papers/w22631/w22631.pdf](https://www.nber.org/system/files/working_papers/w22631/w22631.pdf). Shane Greenstein (2015), *How the internet became commercial: Innovation, privatization, and the birth of a new network*. The Kauffman Foundation Series on Innovation and Entrepreneurship. Princeton, NJ: Princeton University Press.

<sup>4</sup>For example, a recently released Federal Trade Commission (FTC) study describes features of GAFAM’s M&A activities such as the pace of their transactions and the distributions of their transaction sizes in dollar terms, as well as the ages of the acquired firms. See “Non-HSR Reported Acquisitions by Select Technology Platforms, 2010-2019: An FTC Study” at <https://www.ftc.gov/reports/non-hsr-reported-acquisitions-select-technology-platforms-2010-2019-ftc-study>. A shortcoming of the FTC’s study is its exclusive focus on GAFAM, without comparing the overall attributes (such as the size, type, pace, and volume, among other characteristics) of GAFAM’s acquisitions with other leading acquirers of technology companies.

sector.<sup>5</sup> As shown by a 2017 Report by the Information Technology & Innovation Foundation (ITIF)<sup>6</sup>, the tech sector accounted for 79.1% of business R&D investment and 58.7% of R&D jobs between 2007 and 2017, where the report defines “tech” as a set of industries with sufficiently large R&D-to-sales ratio and a share of STEM workers that is twice the national average.<sup>7</sup> Other researchers show that tech or non-tech business startups contribute about 20% of US gross job creation (Decker, Haltiwanger, Jarmin and Miranda 2014)<sup>8</sup>, and high growth startups account for as many as 50% of gross jobs created annually (Kauffman Foundation 2016).<sup>9</sup>

As for the role of venture capital, the 2023 National Venture Capital Association (NCVA) Yearbook<sup>10</sup> indicates that total assets under VC management have reached \$1.12 trillion in 2022, almost five times of that in 2008 (\$224.3 billion); in 2021 alone, \$345 billion of venture capital was invested into 18,521 deals. Admittedly, not all VC investments are in R&D or tech, but software as a category is the largest recipient of VC investment. In 2022, software accounts for roughly 40% of all VC-backed deals in the US, followed by healthcare (20%), commercial products & services (15%), and consumer goods & services (14%).<sup>11</sup> As of the end of 2022, VC-backed companies account for the seven largest publicly traded companies by market capitalization in the US, namely Apple, Microsoft, Alphabet, Amazon, Tesla, Meta, and NVIDIA.<sup>12</sup> Out of these seven companies, five are ranked by Fortune in the top

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<sup>5</sup>NSF 23-320 (2023) “U.S. R&D Increased by \$51 Billion in 2020 to \$717 Billion; Estimate for 2021 Indicates Further Increase to \$792 Billion,” January 4, 2023, available at <https://nces.nsf.gov/pubs/nsf23320>.

<sup>6</sup>John Wu and Robert D. Atkinson (2017) “How Technology-based Start-ups Support U.S. Economic Growth,” available at <https://itif.org/publications/2017/11/28/how-technology-based-start-ups-support-us-economic-growth/>.

<sup>7</sup>This definition eventually results in the following list of NAICS codes: 3254, 333295, 334, 3344, 3364, 3391, 5112, 518, 5415, 54171.

<sup>8</sup>Ryan Decker, John Haltiwanger, Ron Jarmin and Javier Miranda (2014), “The Role of Entrepreneurship in US Job Creation and Economic Dynamism” *Journal of Economic Perspectives*, Volume 28, Number 3, pages 3-24, Summer 2014, available at <https://www.aeaweb.org/articles?id=10.1257/jep.28.3.3>

<sup>9</sup>Kauffman Foundation (2016), “The Economic Impact of High-Growth Startups,” January 7, 2016. Available at [https://www.kauffman.org/-/media/kauffman\\_org/resources/2016/entrepreneurship-policy-digest/pd\\_highgrowth060716.pdf](https://www.kauffman.org/-/media/kauffman_org/resources/2016/entrepreneurship-policy-digest/pd_highgrowth060716.pdf)

<sup>10</sup>[https://nvca.org/wp-content/uploads/2023/03/NVCA-2023-Yearbook\\_FINALFINAL.pdf](https://nvca.org/wp-content/uploads/2023/03/NVCA-2023-Yearbook_FINALFINAL.pdf).

<sup>11</sup>*Supra* note 10.

<sup>12</sup>*Supra* note 10.

20 of America’s Most Innovative Companies in 2023.<sup>13</sup> In a more systematic study, Gornall and Strebulaev (2021) find that VC-backed publicly-traded companies account for 41% of total US market capitalization and 62% of R&D spending by publicly-traded companies.<sup>14</sup>

In short, while it is true that VC investments cannot be compared apples-to-apples in relation to total R&D activities in the US, it is demonstrable that VC-backed ventures, especially tech ventures, play a substantial and crucial role in driving forward innovation, job creation, and overall economic growth.

**Fact 2: M&A is one of the most important forms of capital liquidity, driving the funding, creation and growth of VC-funded tech ventures.** For VC-backed ventures, initial public offering (IPO) and M&A are the two most common means of successful exits. A survey conducted in 2020<sup>15</sup> finds that 58% of US startups view being acquired as the long-term goal, 17% aspire for IPO, and 14% plan to remain private. According to the 2023 NCVA yearbook, 991 (or 22%) of the 4,460 US IPOs from 2012 to 2022 were VC-backed. During the same period, the number of US VC-backed M&A is 12 times that of VC-backed IPOs (11,895 in total). These numbers suggest that, for aspiring entrepreneurs and their investors, M&A is an important, if not the most important means to reach capital liquidity.

**Fact 3. Tech M&As are not concentrated among a handful of firms or in a single sector.** Our own peer-reviewed research (Jin, Lecesce and Wagman 2023a<sup>16</sup> , 2023b<sup>17</sup>) demonstrates that technology companies are acquired by a wide spectrum of public companies across the economy. In particular, among all public firms listed in North American stock

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<sup>13</sup><https://fortune.com/ranking/americas-most-innovative-companies/2023/search/>.

<sup>14</sup>Gornall, Will and Strebulaev, Ilya A. (2021), “The Economic Impact of Venture Capital: Evidence from Public Companies”, June 2021, *SSRN Working Paper*, available at SSRN: <http://dx.doi.org/10.2139/ssrn.2681841>.

<sup>15</sup>Silicon Valley Bank 2020 Global Startup Outlook, available at [https://www.svb.com/globalassets/library/uploadedfiles/content/trends\\_and\\_insights/reports/startup\\_outlook\\_report/suo\\_global\\_report\\_2020-final.pdf](https://www.svb.com/globalassets/library/uploadedfiles/content/trends_and_insights/reports/startup_outlook_report/suo_global_report_2020-final.pdf).

<sup>16</sup>Ginger Zhe Jin, Mario Lecesce and Liad Wagman (2023a) “How Do Top Acquirers Compare in Technology Mergers? New Evidence from an S&P Taxonomy”, *International Journal of Industrial Organization*, Volume 89, July 2023. Available at <https://www.sciencedirect.com/science/article/abs/pii/S0167718722000662>.

<sup>17</sup>Ginger Zhe Jin, Mario Lecesce and Liad Wagman (2023b) “M&A and Technological Expansion,” forthcoming *Journal of Economics & Management Strategy*, available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/jems.12551>.

exchanges, we find that 13.1% engage in majority-control tech M&A in a dataset compiled by Standard and Poor’s (S&P), whereas only 6.75% of the same pool of public firms engage in any (tech or nontech) M&A according to a database from Refinitiv (a database covering both tech and nontech mergers, originally offered by Thomson Reuters). As expected, acquirers tend to be larger and older in their own sectors than non-acquirers, as they may have more resources and processes in place to manage acquisitions.

That being said, it is common to observe firms operating in finance, health care, supply chain, trade, or services acquiring targets that specialize in internet content and commerce, software, mobility, or information management. Utilizing Refinitiv’s classification regarding whether an acquirer’s core businesses can be regarded as “high-tech,” we find that 24.44% of tech M&As have a non-high-tech acquirer, supporting the argument that M&A is an effective way for entities that do not focus on technological innovation themselves to expand into new technology categories.

Furthermore, out of the 41,796 majority-control tech acquisitions that S&P recorded during 2010-2020, GAFAM accounts for only 595, or less than 1.5%. On a per-firm basis, some top technology acquirers, including private equity companies and other non-GAFAM firms, have matched or exceeded GAFAM in the volume of majority-control acquisitions per year since 2018.

**Fact 4: Technology acquirers increasingly overlap with each other through M&A.**

It is challenging to define precisely who is competing against whom in the tech space among all public and private firms. Instead of relying on ad-hoc market definitions, our research utilizes a technology taxonomy developed by S&P.<sup>18</sup> Because the M&A data that S&P collects under this taxonomy have been widely used by investors in financial markets, the business areas identified by the S&P taxonomy can help identify potential and/or nascent competition that take place in antitrust markets in or related to those business areas. We find that a GAFAM acquisition in a technology area is *positively* correlated with other firms also entering the area via tech M&A. If we examine M&A within GAFAM over the same

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<sup>18</sup> *Supra* note 16.

2010-2020 period, the five giants increasingly overlap in the extent to which they acquire tech targets within the same business areas.

**Fact 5: Most acquired firms in tech M&As fall outside the acquirer’s core area of business.** In the S&P taxonomy categorizing majority-control tech M&As, every firm is assigned to a level-1 parent category and a level-2 child ‘business area,’ which enables researchers to classify whether the acquirer and the target are in the “same” business area (same level-2), “adjacent” areas (same level-1 but different level-2s) and “unrelated” areas (different level-1s).

Based on S&P’s merger data during 2010-2020, we find that GAFAM and other top acquirers primarily acquire tech companies in order to expand into unrelated areas, although GAFAM acquisitions are less concentrated across level-1 tech categories than other top acquirer groups, due, in part, to an “acquire-adjacent-and-then-expand” strategy.<sup>19</sup>

Focusing on publicly traded companies, we find a similar pattern: the majority of targets in tech M&As fall outside the acquirer’s core area of business (defined by level-2 in the S&P taxonomy); and firms are, in part, driven to acquire tech companies because they face increased competition from other publicly traded companies<sup>20</sup> (as defined by “Product Market Fluidity”, a firm-year-specific continuous measure of competition.<sup>21</sup>)

**What do the aforementioned facts imply for the Draft Merger Guidelines?** Let us first consider potential entrants D and E in our initial stylized example. By definition, E is a large resourceful company operating in a market unrelated to the focal market, while D operates in an adjacent or related market, and could well be a publicly-listed company as studied in Jin, Leccese and Wagman (2023b), aiming to differentiate its products and/or diversify away from their core business area by acquiring startup B or C. To be responsible to their shareholders, D or E should compare the pros and cons between entry via organic growth and entry via M&A. According to Guideline #4, this consideration alone would

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<sup>19</sup> *Supra* note 16.

<sup>20</sup> *Supra* note 17.

<sup>21</sup> See Hoberg, Phillips, and Prabhala (2014), “Product market threats, payouts, and financial flexibility,” *Journal of Finance*, Volume 69, Number 1, pages 293–324.

qualify them as a potential entrant even if they are not large and resourceful. However, Facts 3/4/5 suggest that many public firms prefer to enter an unrelated business area via M&A rather than through organic growth. Thus, D or E may not necessarily enter via organic growth if M&A is disallowed, as per Guideline #4.

If D or E cannot enter the market via M&A, the financial returns that startup C could expect from entering the focal market would be much lower based on Fact 2, as it can only hope to survive via IPO or staying private. However, Fact 2 also implies that venture capital (or other private) investors would have the same discounted expectations of future profits and thus be reluctant to fund C prior to an IPO, which further reduces C's chances of survival.

All the above suggests that Guideline #4 may deter the potential entry of C, D and E, which is exactly opposite to the hopeful scenario the DMGs implicitly assume and presumably aim to foster.

More alarming is the effect of Guideline #4 on the existing players in the focal market in our example. By definition, startup B is already in the market. However, if B cannot expect a successful exit through M&A with either D or E, it may have a lower chance of survival because it cannot leverage the expertise and resources of D or E. As a result, Guideline #4 does not only weaken B's incentive to continue competing against A but also precludes a potentially more vigorous competition between A and the acquirer of B.

The new incentive that Guideline #4 introduces for the incumbent A is even more unfortunate. It enables A to claim to antitrust agencies that C, D, E are potential entrants, and therefore potentially deter their entry altogether, especially if entry via M&A is much more efficient for those firms than entry through organic growth.

## **Conclusion**

We provide five empirical facts from the academic literature that together imply that Guideline #4 in the DMGs, as it is currently proposed, could profoundly distort the incentives of firms. We provide an example with 5 firms where all firms face new, distorted incentives as a result of Guideline #4, and these new incentives could deter potential entry



and considerably diminish competition in the market under consideration.

Such unintended anti-competitive effects occur not just because the hopeful counterfactual scenario behind Guideline #4 tends to overestimate the potential entrants' probabilities of entry through organic growth. Guideline #4 specifically provides a tool for a dominant incumbent to request the assistance of the antitrust agencies in deterring and handicapping current and potential rivals. This cannot be acceptable as part of a guideline intended to promote competition.

We recognize that acquisitions can lead to anticompetitive effects if they result in killer acquisitions, kill zones that effectively deter future entries, or complete foreclosures of competitors' access to key inputs. But these possibilities should be carefully examined in light of empirical facts in each particular case and in comparison with alternative theories of harm as well as potential pro-competitive benefits and efficiencies. Merger guidelines should not simply delineate a short list of circumstantial evidence with the presumption that any evidence covered in that list would automatically lead to substantial harms to competition.

We conclude with two additional thoughts: one on court decisions related to the antitrust practice proposed by the DMGs, and the other on the implementation of the DMGs.

On court decisions, in a recent 2022 case where the FTC challenged Meta's acquisition of Within Unlimited (a startup that develops a fitness virtual reality app), the FTC argued that Meta was a potential entrant because it had sufficient size and resources to enter the dedicated fitness virtual reality market, but the court rejected this argument because it found that Meta had considered its own entry through organic growth but concluded that it did not have all the relevant expertise.<sup>22</sup> The FTC subsequently withdrew its case.<sup>23</sup> In another case, the FTC challenged Microsoft's acquisition of Activision. The complaint alleged that as a result of the merger, the acquirer could gain control of top video game franchises, thus harming competition in high-performance gaming consoles and subscription services by

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<sup>22</sup>See the Court's order denying the FTC's motion preliminary injunction opinion at <https://s3.documentcloud.org/documents/23598337/ftc-vs-meta-within-ruling.pdf>.

<sup>23</sup><https://www.ftc.gov/legal-library/browse/cases-proceedings/221-0040-metazuckerbergwithin-matter>.

denying or degrading rivals' access to its content.<sup>24</sup> In contrast, the Court allowed Microsoft to proceed with the acquisition, arguing that the merger may in fact enhance consumer access to Activision's content. The Court also questions the FTC's argument regarding a trend toward further concentration in the industry, asserting that the FTC fails to explain how this trend is anticompetitive.<sup>25</sup>

On implementation, assuming the agencies can revise Guideline #4 to address the issues we delineate above, a systematic consideration of potential entrants will effectively require DOJ and FTC staff to function as a venture capitalist, predicting future market structure, future product development and future consumer preferences. The extent of resources that the agencies would require to match the capabilities of the VC industry (which manages over \$1 trillion in assets) is unclear.

The DMGs do not elaborate on Guideline #9, so it is difficult to ponder its potential unintended consequences and impact. One fact is worth considering: based on S&P's tech merger data from 2010 to 2020, we find that the vast majority of tech acquisitions (81.56%) are consummated by firms that have completed prior tech M&As, and that the average time period between any two same-acquirer tech acquisitions is relatively short (525 days).<sup>26</sup> This implies that a systematic evaluation of serial acquisitions would require substantial resources, even if Guideline #9 is free of any incentive loopholes and antitrust staff at the agencies can replicate the due diligence functions of venture capitalists.

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<sup>24</sup><https://www.ftc.gov/legal-library/browse/cases-proceedings/2210077-microsoftactivision-blizzard-matter>.

<sup>25</sup>See the Court's preliminary injunction opinion at <https://www.cand.uscourts.gov/wp-content/uploads/2023/07/FTC-v-Microsoft.pdf>.

<sup>26</sup>*Supra* note 17.