

Expert report by Dr. Gregor Langus and Prof. Dr. Frank Verboven

HIGHLY CONFIDENTIAL – OUTSIDE ATTORNEYS’ EYES ONLY

Contents

1	Introduction	3
2	Summary of conclusions	4
3	Qualifications, declarations, and restrictions	6
4	Prof. Carlton underestimates the likely cost of the removal of price caps on independent registrars.	6
4.1	Intense competition between registrars does not necessarily imply full pass-on, let alone continuous and systematic full pass-on.....	7
4.2	Prof. Carlton’s empirical analysis does not provide reliable evidence of the extent of pass-on 9	
4.3	Announcement to pass-on cost increases does not imply commitment to the full pass-on ...	11
4.4	Namecheap’s registrants may divert to other registrars	11
4.5	Redacted - Confidential Information	12
4.6	Registry price increases may significantly reduce overall demand for domain names	13
4.7	Registrars make substantial profits from sales of complementary services; registration price hikes may trigger the loss of sales of these services	14
5	Costs and benefits of price caps	15
5.1	Summary of our conclusions on the costs and benefits of price caps on .ORG, .INFO, and .BIZ	15
5.2	Summary of Prof. Carlton’s arguments on the likely benefits and costs of price caps in .ORG, .INFO and .BIZ.....	16
5.3	Evaluation of Prof. Carlton’s arguments on the likely benefits and costs of price caps in .ORG, .INFO and .BIZ.....	17
5.3.1	Prof. Carlton’s position on the likely costs and benefits of price caps is untenable	17
5.3.2	Prof. Carlton’s assessment of the costs of regulation is unreliable also because it is detached from the features of the price caps on .ORG, .INFO, and .BIZ and more than 15 years of ICANN’s experience of administering price caps	18
5.3.3	Prof. Carlton’s claim that we fail to adequately consider the potential costs of price regulation is unfounded	20

5.4	Prof. Carlton’s counterfactual for the analysis of the likely benefits of price caps is different from ours; because of this, his analysis and conclusions cannot be directly applied to our questions and conclusions.....	22
5.5	Prof. Carlton does not establish that .ORG, .INFO, and .BIZ are unlikely to set prices significantly above competitive level	24
5.5.1	Summary of our arguments as to why .ORG, .INFO and .BIZ hold market power	24
5.5.2	Summary of Prof. Carlton’s arguments relating to market power and the risk that .ORG, .INFO, and .BIZ would exploit it	25
5.5.3	Prof Carlton does not show that .COM and other TLDs present a sufficient competitive constrain on .ORG, .INFO and .BIZ	26
5.5.4	Number of different TLDs and shares of .ORG, .INFO and .BIZ in total registrations, as well as the evolution of these shares, are not reliable indicators of market power or lack thereof.....	32
5.5.5	The fact that .ORG’s registry is a not-for-profit entity does not mean that it does not and will not have an incentive to exercise market power and set prices high	33
5.5.6	.INFO and .BIZ score high on reliable indicators of market power	35
5.5.7	Ability to lock-in prices cannot eliminate the harm to registrants from future price increases	43
	Expert Declaration	45
	Appendix: Scope of Review	46

1 Introduction

1. This report has been prepared by Dr. Gregor Langus and Professor Dr. Frank Verboven for Namecheap, Inc. (‘Namecheap’ or the ‘Claimant’) in connection with a dispute with the Internet Corporation for Assigned Names and Numbers (‘ICANN’ or the ‘Respondent’) administered by ICDR (‘International Centre for Dispute Resolution’) (the ‘Proceedings’). This is our third report in these proceedings. Our second report (‘Second Report’) was prepared on November 25, 2021.
2. We have been asked by the counsel to Namecheap to provide our expert opinion in response to the Expert Report of Prof. Dr. Dennis Carlton, PhD (‘‘Carlton Report’’ henceforth).¹ We have been asked, specifically, to
 - a. evaluate the arguments in Carlton Report that are relevant to our analyses and conclusions in the Second Report;
 - b. determine whether our conclusions in the Second Report may have changed after reading the Carlton Report.
3. The evidence and arguments put forward by Prof. Carlton relate to two sets of conclusions in our Second Report. Specifically, that:²
 - a. It cannot be reliably expected that the removal of price caps on .ORG, .INFO, and .BIZ will improve the economic outcomes in the DNS space in the foreseeable future. Relatedly, it cannot be reliably excluded that the removal of price caps will worsen the economic outcomes in the DNS space.
 - b. It can be expected that the removal of price caps will harm Namecheap and other independent registrars.
4. As follows from his conclusions, Prof. Carlton addressed somewhat different questions than those posed to us by the counsel to Namecheap. Nevertheless, we understand that Prof. Carlton also disagrees with our conclusions.
5. Prof. Carlton arrives at two main conclusions in his report. First, that ICANN’s removal of price control provisions on .ORG, .INFO, and .BIZ has not caused any harm so far to Namecheap and is not likely to cause material harm to Namecheap in the future.³ More specifically, in terms of future harm, Prof. Carlton argues that, firstly, if registry prices increased, Namecheap would Redacted - Confidential Information pass-on the price increases to registrants. Thus, if prices increased above what could have occurred under the price controls, the impact would be borne primarily by registrants. Secondly, Prof. Carlton argues that Namecheap is not likely to lose many sales as a result of such price increases because Namecheap’s registrants are unlikely to divert to other registrars, and the overall demand for TLDs is highly inelastic.⁴

¹ Expert Report of Dennis W. Carlton, January 14, 2022.

² We also address the question whether ICANN has been acting as an economic regulator in the DNS space. Prof. Carlton does not address this question. Prof. Carlton indirectly acknowledges that ICANN might have been acting as a regulator, when he states: ‘‘When I use the term regulation in this report, I do not necessarily mean government regulation. I also use regulation to refer to the contractual price restrictions’’ (footnote 8).

³ Carlton Report, ¶ 12.

⁴ Carlton Report § II. B. 2. and II. B. 3.

6. In our Second Report we have analyzed what is the likely direction of the effect of the removal of price caps on the profits of Namecheap and other independent registrars. We concluded that it is likely negative. We did not attempt to estimate the quantum of this effect for the following reasons. First, we understand that these proceedings are not about the restitution of damages. Second, the information that we have available does not allow us to make sufficiently precise estimates of the quantum of damages.
7. The second main conclusion of Carlton Report is that there is no justification for reimposing price controls on .ORG, .INFO, and .BIZ. In that regard, Prof. Carlton argues that in our analysis we do not adequately consider the costs of regulation; and that when set against these costs, the benefits of reimposing price controls are likely to be small.⁵
8. In our Second Report we do not analyze the question whether price caps on any or all of .ORG, .INFO, and .BIZ should be reimposed. In our understanding, this question is not central to the dispute, as Namecheap requests the annulment of the decision to remove the price caps as inconsistent with, and violative of, various provisions of ICANN’s Articles of Incorporation and Bylaws.⁶
9. Instead, we answered the questions whether it can be reliably excluded that the removal of price caps will harm the economic outcomes in the DNS space and, relatedly, whether it can be reliably expected that the removal of caps will improve such outcomes. Prof. Carlton does not state whether he agrees or disagrees with our answers to these questions as posed to us by the counsel.
10. In addressing the new set of questions (in ¶ 2 above) that the counsel asked us to address, we have structured our report as follows. In Section 2 we provide a summary of our conclusions. In Section 4 we explain why, contrary to his claims, Prof. Carlton does not show, either theoretically or empirically, that Namecheap is likely to be not harmed by the removal of the price caps. In Section 5 we summarize our and Prof. Carlton’s arguments on the likely benefits and costs of price caps, and we then explain why Prof. Carlton’s arguments and conclusions are either not applicable to the questions we have addressed or are not reliable for the purpose of assessing the likely costs and benefits of price caps. Accordingly, we maintain our conclusion in the Second Report that we can expect that the removal of price caps on .ORG, .INFO, and .BIZ will harm Namecheap.

2 Summary of conclusions

11. After reading the Carlton Report, our conclusions on the questions that counsel asked us to address remain as we stated them in our Second Report.
12. First, contrary to his claims, Prof. Carlton does not show, either theoretically or empirically, [REDACTED] [Redacted - Confidential Information] We show that Prof. Carlton’s assertion that intense competition is likely to result in (nearly) full pass-on is ungrounded. His empirical assessment fails to consider multiple factors other than wholesale prices that determine the evolution of retail prices. Prof. Carlton also focuses on the long-term pass-on and ignores any harm that Namecheap could suffer in the short run. (Subsections 4.1 below and 4.2)
13. Second, Namecheap’s registrants may switch, contrary to Prof. Carlton’s claim, to other registrars in the event of a wholesale price increase, because some registrars (in particular, GoDaddy) are

⁵ Carlton Report, ¶ 13.

⁶ In our understanding, this question could become relevant in a scenario where ICANN’s decision to remove the price caps was legitimate and ICANN seeks to reintroduce price caps. We have not been asked to opine on this hypothesis.

vertically integrated and need not to increase retail price as much as standalone registrants. Furthermore, even if the registrants stay with Namecheap, but switch away from .ORG, .INFO, and .BIZ to other TLDs, this may harm Namecheap because of immediate loss of renewal margins

Redacted - Confidential Information

14. Third, registry price increases may significantly reduce overall demand for domain registrations and harm Namecheap via lost profitable sales. Prof. Carlton does not present any evidence that the reduction of overall demand is economically negligible. Moreover, Namecheap’s complementary services, which Prof. Carlton does not consider, play an important role in profit generation and are likely to aggravate Namecheap’s losses both via imperfect pass-on and via demand reduction. (Subsections 4.6 and 4.7)
15. Fourth, in his analysis of the likely costs and benefits of price caps, Prof. Carlton reaches an untenable position. He effectively maintains that price caps would not likely bring significant benefits because they would *not constrain the pricing* of .ORG, .INFO, and .BIZ, while also maintaining that price caps could generate significant costs because they would inefficiently *limit the pricing flexibility* of registries. But it cannot be both. We conclude that Prof. Carlton’s analysis (and its conclusions) are unreliable. (Subsection 5.3.1)
16. Fifth, Prof. Carlton’s analysis of benefits of price caps relies on an assumption that ICANN’s best alternative to removing price caps was to leave them as they were set in the registry agreements signed in 2013. In our view, this assumption is not justified as ICANN could have strengthened price caps instead of removing them. Due to the way in which price caps on .ORG, .INFO, and .BIZ were set in 2013 (allowing a 10% year-on-year price increase), they may have no longer been binding on .ORG, .INFO, and .BIZ in 2019 or would not be binding in the future despite considerable market power of .ORG, .INFO, and .BIZ. Because of the unwarranted assumption on the future price caps, Prof. Carlton’s analysis has limited probative value for the questions that we have analyzed. (Subsection 5.4)
17. Sixth, Prof. Carlton’s conclusions on the likely costs of price caps are based on a perfunctory analysis which ignores the reality of the DNS space and ICANN’s long experience with price caps. Prof. Carlton’s analysis cannot overturn our conclusions on the likely costs of price caps in the DNS space. (Subsection 5.3.2)
18. Seventh, in our Second Report we established that certain supply and demand characteristics in the DNS space create conditions for market power of .ORG, .INFO, and .BIZ. We have also shown that these TLDs score high on several reliable indicators of market power. Prof. Carlton dismisses our analysis and conclusions sweepingly by asserting that new gTLDs and .COM compete with .ORG, .INFO, and .BIZ. He does not, however, establish that new gTLDs and .COM *effectively* constrain the market power of .ORG, .INFO, and .BIZ. Moreover, Prof. Carlton does not recognize certain characteristics of demand and supply for TLDs that give rise to market power, despite having recognized their relevance in his 2019 report for ICANN in relation to delegation of .WEB to Verisign.⁷ (Subsection 5.5)

⁷ Report of Dennis W. Carlton in ICDR Case No. 01-18-0004-2702; 30 May 2019.

3 Qualifications, declarations, and restrictions

19. For qualifications we refer to our Second Report, Section III. For declarations and restrictions, we refer to our Second Report, Section IV. These qualifications, declarations, and restrictions are incorporated herein by reference with the addition that Dr. Gregor Langus has set up CompetitionSphere. In preparing this report, the authors have been assisted by staff from both E.CA Economics and CompetitionSphere working under the authors’ direction, supervision, and review.

4 Prof. Carlton underestimates the likely cost of the removal of price caps on independent registrars

20. The wholesale fees for .ORG, .INFO, and .BIZ were subject to price caps, which were intended to limit, and which in practice have likely been effective in limiting, the ability of the registries to exploit their market power by increasing wholesale registration fees. Therefore, the removal of price caps in relation to these TLDs can be expected to result in an increase of wholesale registry prices of affected gTLDs, i.e., Namecheap’s costs. Because Namecheap has no ability to pass-on the increased costs by increasing retail registration fees without losing customers, ICANN’s removal of price controls can be expected to reduce Namecheap’s profits, causing harm to Namecheap.
21. In chapter II of his report, Prof. Carlton claims that Namecheap has not been and is not likely to be materially harmed from the removal of price controls. He argues that no material harm would occur, because (1) Namecheap would pass on any wholesale price increases completely, or nearly completely, and (2) the volume effect on the overall demand resulting from the complete pass-through would be negligible. For no harm to Namecheap both conditions specified by Prof. Carlton need to be fulfilled simultaneously. Indeed, economic theory predicts that Namecheap will be harmed even if only one of the two conditions specified by Prof. Carlton is violated.⁸
22. Prof. Carlton also criticizes that we did not quantify harm to Namecheap. We first note that counsel did not ask us to quantify harm. We understand that this is because this case is not about a claim for restitution of damages. Second, quantifying harm would be particularly difficult in this case because we expect most harm to occur in the future. Nevertheless, we show here that Prof. Carlton’s claims regarding the extent to which Namecheap can pass-on wholesale cost increases, and regarding the amount of sales lost from cost pass-on, are not warranted and are sometimes misleading.
23. In summary, Prof. Carlton’s analysis is unreliable for the following reasons:
- **Intense competition** between registrars or/and low barriers to entry do not imply full pass-on. Competition puts a limit on absolute value of margins rather than on the reaction of margins to the cost changes (with full pass-on, per unit margins remain constant). Entry possibilities may put pressure on the long-run margin, but this does not exclude imperfect pass-on; further, even a full long-run pass-on is not sufficient to exclude that Namecheap may be harmed by a wholesale price increase. (Subsection 4.1)

⁸ See for example, Verboven, Frank, and Theon van Dijk. "Cartel damages claims and the passing-on defense." *The Journal of Industrial Economics* 57.3 (2009): 457-491. They provide a framework for damages that conceptually distinguishes between the price and volume effect from cost increases.

- **Empirical analysis** undertaken by Prof. Carlton is not inconsistent with the imperfect pass-on on both new registrations and renewals. Prof. Carlton computes certain ratios that are not highly informative about the extent to which Namecheap could be harmed in the event of a wholesale price increase. (Subsection 4.2)
- **Announcement** to pass-on a cost increase made in a campaign to protest against the removal of price caps may not be used as an indicator of commitment to (fully) pass-on such a cost increase to the registrants. (Subsection 4.3)
- Namecheap’s registrants may **switch** to other registrars in the event of a wholesale price increase. Despite intense competition, registrars are heterogeneous and may react differently to the same cost increase. In particular, GoDaddy’s incentives in setting retail price on .BIZ registrations differ from those of other registrars, because GoDaddy owns the .BIZ registry operator. Prof. Carlton does not provide evidence that GoDaddy would set the same price for .BIZ registrations as prices set by standalone registrars in the event of a wholesale price increase. (Subsection 4.4)
- Switching of customers away from .ORG, .INFO, and .BIZ to other TLDs, even if still using Namecheap’s services, is likely to harm Namecheap because of immediate loss of **renewal** margins that Redacted - Confidential Information Prof. Carlton does not discount Namecheap’s profits and does not consider harm in the short run, thus overlooking this mechanism. (Subsection 4.5)
- Registry price increases may significantly reduce **overall demand** for domain registrations and harm Namecheap via lost profitable sales. Prof. Carlton does not present any evidence that the reduction of overall demand is economically negligible. (Subsection 4.6)
- Namecheap’s complementary services play an important role in **profit generation**. The response of demand for these services to an increase in wholesale price for TLD registrations is likely to harm Namecheap both via decreased price and decreased volume of complementary services. Prof. Carlton does not take this likely effect of price cap removal into account in his analysis. (Subsection 4.7)

4.1 Intense competition between registrars does not necessarily imply full pass-on, let alone continuous and systematic full pass-on

24. Prof. Carlton claims that, because Namecheap does not possess significant market power, it will fully pass-on any cost increases to registrants. He refers to the textbook example of a perfectly competitive industry with constant marginal costs, in which a common increase in marginal cost of an input is fully passed through to consumers.⁹ Although he acknowledges that no market is perfectly competitive, he asserts that the observed market conditions lead one to expect full pass-on given enough time is allowed to pass.¹⁰
25. The textbook example is overly simplistic and misleading. It is true that firms which do not have significant market power will earn a small margin on their sales. However, the size of pass-on is not directly related to the size of the margin, but rather to how the margin reacts to the cost changes.

⁹ Carlton Report, ¶ 17.

¹⁰ Carlton Report, footnote 18.

Indeed, a positive margin, however small, may, in principle, fall, rise, or stay the same when costs are changing.¹¹ Therefore, even markets with thin margins may well exhibit imperfect pass-on.

26. Bearing this in mind, Prof. Carlton’s claim, according to which observed market conditions lead one to expect full pass-on, must not be taken at face value. It appears that, by “the observed market conditions facing domain name registrars”, he means the absence of market power. However, the absence of (significant) market power does not imply perfect competition, as Prof. Carlton admits. At the same time, in conditions of imperfect competition, small margins do not imply full pass-on, as discussed above. Therefore, it cannot be granted that the intense competition between registrars implies full pass-on.¹²
27. Prof. Carlton further notes that registrars could not earn supra-competitive profits, which we understand as the inability to earn significant positive margins, because of free entry.¹³ While superficially appealing, this argument is also misleading. This is because, just as no market is perfectly competitive, no market is free to enter either.¹⁴ This simple textbook logic does not apply in this context either.
28. What Prof. Carlton appears to argue, without explicitly stating, in his footnote on the free entry, is that the long-run pass-on must be unity because, in the long run, the registrars necessarily just break even and therefore do not earn a positive margin. This argument is misguided for at least three reasons. First, the long-run pass-on is not indicative of harm to Namecheap. An imperfect short-run pass-on is sufficient for the harm to Namecheap to materialize when input price rises. Second, zero long-term margin does not necessarily imply perfect long-run pass-on. This is because imperfectly passed-on cost *increases* may well be compensated by imperfectly passed-on cost *reductions* in the long run to arrive at a zero long-term margin. Similarly, supply (cost) shocks that are imperfectly passed on to consumers may be compensated by the demand shocks, to the same effect. Third, intense competition in dynamic industries is consistent with a certain long-term margin even with “free” entry to the extent firms continuously invest in the improvement of their service.
29. The theoretical predictions to which Prof. Carlton refers to are therefore not valid in the context of the industry under scrutiny because they depend on a number of strong assumptions that are unlikely to all be satisfied. In addition to how intense the competition is, a number of other factors determine how large the pass-on is.¹⁵ Without a careful empirical assessment — and, as we explain in the next subsection, Prof. Carlton’s analysis does not amount to such a careful assessment — one cannot presume that there will be a full pass-on.

¹¹ Fabinger and Weyl (2012) show that, with constant marginal cost, whether the pass-through is greater or less than unity crucially depends on the curvature of the aggregate demand rather than on intensity of competition: Fabinger, M., and G. Weyl (2012), Pass-Through and Demand Forms, mimeo.

¹² Still another factor that leads to imperfect pass-on in the conditions of intense competition is asymmetry of cost change. Because the TLDs in question are of different importance in sales of different registrars, the competitive positions of these registrars may change in reaction to the cost change. A limiting textbook result in this regard is that a perfectly competitive firm facing a firm-specific shock will not be able to pass-on any of the cost increase to its customers (zero pass-on).

¹³ Carlton Report, footnote 19.

¹⁴ Registrars of gTLDs need to be accredited. That means a fee payable to ICANN plus creation of processes to comply with Registrar Accreditation Agreement.

¹⁵ As mentioned in footnote 11, the curvature of aggregate demand is one such factor. Others include elasticity of supply and elasticity of demand.

4.2 Prof. Carlton’s empirical analysis does not provide reliable evidence of the extent of pass-on

30. Prof. Carlton computes a ratio of change in average retail price to the change in average wholesale price for .ORG, .INFO and .BIZ based on Namecheap data. He considers the change in each average price that happened from April 2018 to October 2021.¹⁶ He finds that these ratios [Redacted - Confidential Information] for new registrations on .BIZ. Prof. Carlton interprets these ratios as some measure of pass-on by Namecheap on the relevant TLDs. Following Prof. Carlton’s interpretation, one might be led to believe that there is [Redacted - Confidential Information] and Namecheap therefore would benefit from removal of price caps once this leads to an increase in wholesale prices for domain registrations.
31. Such interpretation is flawed. The ratios presented by Prof. Carlton are not indicative of pass-on because they do not take into account any supply and demand factors that affect retail price other than wholesale price. These include, but are not limited to, sentiment of registrants, their disposable income, registrar’s costs other than wholesale price, and intensity of competition at the retail level. Such factors are very likely to change over a period of more than three years.¹⁷
32. Even if the ratios were indicative of the long-run pass-on (which they are not), the long-run pass-on [Redacted - Confidential Information] would not indicate the absence of harm for Namecheap. This is because adjustments to changes in the wholesale price occur with delay and Namecheap may be harmed in the short run.
33. Prof. Carlton further extends his analysis of retail-to-wholesale price change ratios to include TLDs other than .ORG, .INFO and .BIZ. Here, Prof. Carlton uses an econometric model to relate the price changes of all TLDs with at least 50 registrations to the wholesale price changes over the relevant period, accounting also for a common price change across all TLDs. He finds an association between retail and wholesale price changes over this period [Redacted - Confidential Information] for both new registrations and renewals. He states that various manipulations of the data by dropping or adding observations that satisfy certain criteria, such as the size of price change or the size of cost change, do not lead to a substantial change of this result. He also states that his estimated association between the retail and wholesale price changes is not statistically significantly different [Redacted - Confidential Information] in all the scenarios that Prof. Carlton considered.¹⁸
34. Prof. Carlton interprets the estimated association between price changes and wholesale price changes as a measure of pass-on by Namecheap. While these estimates may control for some of the many factors that have affected prices in the period under investigation, such interpretation is still misleading. First, important factors may still be left unaccounted for, as, e.g., the demand for TLDs is highly heterogenous and competitive conditions that Namecheap faces on each of the TLDs

¹⁶ Carlton Report, Tables 1,2 and ¶¶ 24-25; the prices are monthly averages in case of new registrations and averages of variable periods in case of renewals, the length of the period is determined by the constancy of the corresponding wholesale price.

¹⁷ Curiously, findings of [Redacted - Confidential Information] akin to those of Prof. Carlton may be generated simply by inflation. Indeed, consider an inflation rate r (which can be substantial over the period of more than 3 years) and assume that both wholesale price c and retail price p are simply indexed by this rate over the relevant period, i.e., $p_1 = (1+r)p_0$, $c_1 = (1+r)c_0$. Here, subscript 0 denotes the value at the beginning of the period and subscript 1 denotes the value at the end of the period.

Consider further a mark-up decreasing in price, say $a - kp$, where k is a small positive constant and a is a factor unrelated to the pass-on. The pass-on is $1/(1+k)$, [Redacted - Confidential Information] The ratio of the change in retail price to the change in wholesale price is, however $(1 + \frac{a_0}{c_0})/(1+k)$, which is above unity whenever $k < \frac{a_0}{c_0}$. This simple example illustrates how the ratios considered by Prof. Carlton may be [Redacted - Confidential Information]

¹⁸ The full list of scenarios considered for data manipulation is listed in Carlton Report, footnote 30.

vary (some TLDs may be substitutes while others are complements to each other). Second, Namecheap would be harmed in the short run if a wholesale price increase were not passed on fully (and promptly) to customers. Therefore, short-run incomplete pass-on is a sufficient indicator of harm in the context of this case, and a focus on the long-run pass-on (i.e., pass-on over the period April 2018 to October 2021) is not appropriate.

35. To illustrate this, we have done a number of simple extensions to Prof. Carlton’s analysis. We stress that our findings cannot be interpreted as pass-on estimates, because, like Prof. Carlton, we do not control for other supply and demand factors that may be responsible for price changes of specific TLDs. For simplicity of the discussion, we will nevertheless refer to our estimates as those of “pass-on”.
36. We first relate the price change of the TLDs with at least 50 registrations (like Prof. Carlton) to the wholesale cost change during the period from April 2018 to October 2021. We obtain the results similar to those of Prof. Carlton and note that the 95% confidence intervals are relatively large and do not exclude the possibility for incomplete “pass-on”. We then consider a few simple modifications of Prof. Carlton’s approach to illustrate the role of the short-term adjustment.
37. First, we relate the year-on-year price change for the same TLDs to the year-on-year wholesale cost in October 2021.¹⁹ For this period, [Redacted - Confidential Information]. Second, we relate three year-on-year price changes, i.e., in October 2019, October 2020, and October 2021, to the respective year-on-year wholesale cost changes.²⁰ We again [Redacted - Confidential Information]. Third, we relate quarterly price changes to quarterly wholesale cost changes during the whole period considered. In this exercise, we obtain [Redacted - Confidential Information].²¹ We conclude from these illustrative analyses that Prof. Carlton’s results are sensitive to the period over which price changes are considered. As such, they cannot be used to argue with a high degree of confidence that [Redacted - Confidential Information], either in the long or in the short run.
38. Finally, as Baker et al (1998)²² show, it would be necessary to account for firm-specific cost shocks in an estimation of industry-wide pass-on, which Prof. Carlton does not do. This is because a firm-specific cost shock changes the competitive position of the firm experiencing this shock (its best response) and thus affects pricing behavior by its rivals. Such an analysis is not feasible in the present case, which is one of the reasons why we did not opine on the magnitude of pass-on in our Second Report. However, we consider it is likely that [Redacted - Confidential Information].

¹⁹ We only consider one-year registrations and renewals because the wholesale pricing information for one-year transactions appears most reliably recorded in the Namecheap data. The one-year transactions represent by far the largest share, generally above 95%, of all transactions. All prices are monthly averages.

²⁰ This means the dataset now becomes a panel of TLDs over different periods, instead of a cross-section dataset of TLDs over a single period.

²¹ We considered additional extensions by including different subsets of TLDs, which showed that the results are sensitive to the specification and therefore not robust.

²² Baker, J., O. Ashenfelter, D. Ashmore and S.-M. McKernan, *Identifying the Firm-Specific Cost Pass-Through Rate*, Federal Trade Commission. Bureau of Economics 1 (1998). Available at: https://digitalcommons.wcl.american.edu/facsch_lawrev/1910

4.3 Announcement to pass-on cost increases does not imply commitment to the full pass-on

39. Prof. Carlton claims that Namecheap announced to its customers that it would pass through (implying full pass-on) cost increases on .ORG, .INFO and .BIZ to registrants.²³ However, the quotes that Prof. Carlton provides, “would force us to pass along those increases to you”²⁴ and “if they choose to increase their prices, then registrars will need to do so as well”,²⁵ only imply that pass-on will be strictly positive, but not that such pass-on would be perfect. Another excerpt from the same Namecheap’s e-mail states that “[...] PIR could suddenly start charging registrars like Namecheap 100 times as much. In turn, registrars would have no choice but to pass these changes on to customers.”²⁶ This excerpt is also consistent with the view that *partial* pass-on is implied in these Namecheap’s announcements rather than a full pass on.
40. The latter quote also highlights the nature of this communication as non-committal. Namecheap considers a hypothetical situation in which wholesale prices rise by 100 times and outlines that its hypothetical reaction would be to increase prices. We understand that the e-mail was meant to convince registrants to protest against the planned price caps removal, and not to indicate the extent of future pass-on. Therefore, in our opinion, those statements appear to have no or little evidentiary value. In fact, Namecheap’s engagement with the existing and potential registrants to oppose the price caps removal is consistent with the view that Namecheap expected that it would be harmed by the removal.

4.4 Namecheap’s registrants may divert to other registrars

41. Prof. Carlton claims that Namecheap’s registrants are unlikely to divert to other registrars because “any wholesale price increase faced by Namecheap also would be faced by other registrars.”²⁷ He recognizes that this is not necessarily true in case some registrars are vertically integrated into registry services.²⁸ Nevertheless, Prof. Carlton appears to believe that vertical integration in the case of GoDaddy is highly unlikely to have anti-competitive effects.²⁹ In support of this view, Prof. Carlton quotes the share of .BIZ registrations held by GoDaddy (27%) and the share of all registrations held by GoDaddy (31%) as of August 2021. He finds that these shares are similar and that this may serve as evidence that Registry Services (the registry of .BIZ) did not favor its owner GoDaddy in any perceptible way.
42. This view is somewhat misleading. First, as a matter of economics, an increase of wholesale price by an upstream provider is a cost increase for downstream firms, but not a cost increase for the downstream arm of a vertically integrated firm. Rather, it is an outcome of profit maximization by

²³ Carlton Report, ¶ 21

²⁴ Ibid.

²⁵ Carlton Report, footnote 26

²⁶ Namecheap000165, Ex. R-44

²⁷ Carlton Report, ¶ 34

²⁸ As is the case for GoDaddy after its acquisition of Neustar’s registry business – Prof. Carlton refers to GoDaddy’s upstream arm as “Registry Services”.

²⁹ Carlton Report, ¶ 35.

the vertically integrated firm. The wholesale price will only be increased if it benefits the vertically integrated firm, while standalone downstream firms will often not benefit from such a price increase. Therefore, there is a fundamental asymmetry in how a wholesale price increase affects standalone versus integrated firms. Such a price increase could result in Namecheap’s registrants diverting to GoDaddy following a wholesale price increase by the .BIZ registry operator.³⁰

43. Second, in relation to the interpretation of GoDaddy’s shares of registrations: such shares may be similar or different across different TLDs, depending on the competitive position of GoDaddy in various TLDs. Neither such difference nor similarity is informative about GoDaddy’s potential to divert retail sales of .BIZ registrations from GoDaddy’s rivals. In order to assess this potential, one would need to track how the retail price of GoDaddy changes in response to a price increase for registry services for .BIZ and compare this retail price increase with the retail price increases of other registrars. The acquisition of Neustar’s registry business by GoDaddy is quite recent and an econometric analysis of this potential could be inconclusive even if we had data for such an analysis (which we do not).
44. Third, even if GoDaddy’s upstream registry arm did not favor GoDaddy over other registrars so far, as Prof. Carlton claims,³¹ this by no means excludes the possibility that such favoring may arise in the future. Indeed, the incentives to do so are well recognized by economic theory and this may happen in some form at some point in time. Price caps can reduce the extent to which the integrated registry could raise the cost of its standalone competitors.

4.5 [Redacted - Confidential Information]

45. Prof. Carlton argues that “[E]ven if some registrants decided to no longer use .ORG, .INFO, or .BIZ in response to higher prices from Namecheap, this does not mean that Namecheap would necessarily lose the business of these registrants as Prof. Dr. Verboven and Dr. Langus seem to suggest. Many of these registrants — if faced with higher pricing from .ORG, .INFO, or .BIZ — could switch to other registries, and Namecheap can still serve these registrants who switch.”³²
46. Contrary to what Prof. Carlton states, we did not suggest, either in our First Report, or in our Second Report, that Namecheap would lose all the business of the registrants who decided to no longer use .ORG, .INFO, or .BIZ.
47. Prof. Carlton states that Namecheap has earned [Redacted - Confidential Information] [Redacted - Confidential Information] from April 2018 to October 2021.³³ He uses this fact to claim that in the event of a wholesale price rise on .ORG, .INFO, and .BIZ registrations, the registrants may switch to other TLDs [Redacted - Confidential Information].³⁴

³⁰ The logic of this theoretical result is as follows. For a vertically integrated firm, the wholesale price directly affects the revenues, whereas for a standalone downstream firm, it directly affects the costs. While the independent downstream firms will pass-on some of the cost increase to consumers, the integrated firm may keep the retail price at the same level and thus attract customers of standalone firms.

³¹ Carlton Report, ¶ 35

³² Carlton Report, ¶ 29

³³ Carlton Report, ¶ 30

³⁴ Carlton Report, ¶ 29

48. While potentially appealing on the surface, this claim is misleading because it does not take into account [REDACTED] Redacted - Confidential Information [REDACTED] [REDACTED]³⁵. [REDACTED] [REDACTED]³⁶ Thus, Namecheap would be directly harmed at least in the short run.
49. Prof. Carlton also calculates a blended margin under the assumption that the system is in steady state, i.e., the number of new registrants on a TLD in a year is equal to the number of customers who decide to discontinue using this TLD this year.³⁷ While this assumption may be too strong for many TLDs with varying number of subscriptions, a more striking feature of Prof. Carlton’s analysis of blended margins is the absence of discounting. This significantly outweighs any benefits that Namecheap could get from customers that switch away from .ORG, .INFO, and .BIZ relative to the immediate loss of profit on these TLDs.

4.6 Registry price increases may significantly reduce overall demand for domain names

50. Prof. Carlton appears to agree with us that the demand for domain name registrations is not perfectly inelastic.³⁸ However, he concludes, from his examination of current wholesale prices for registrations on .ORG, .INFO, and .BIZ, that it is unlikely that a price increase would result in a significant reduction in overall demand.³⁹ Prof. Carlton appears to believe that these costs are so low that a ‘moderate’ increase in them is bound not to matter much in the decision of customers to register a new domain or not. There are several problems with this reasoning.
51. Firstly, customers often do not register a single domain name in a TLD, but a number of those, such that the total bill may sum up to a significant figure.⁴⁰ In such cases, a price rise, even if not significant enough to remove all or most of the online presence, may trigger a decision not to register some of the domains that would have been registered otherwise. This would clearly result in harm to Namecheap via lost sales.
52. Secondly, what may seem like a negligibly small sum to Prof. Carlton may be a significant cost item for a one-person small local enterprise that decides whether to advertise its offline business also online. Every dollar may matter in such a decision, especially if the decision is taken in a country where dollar is overvalued in terms of purchasing power parity.⁴¹

³⁵ We have reviewed the Namecheap data on .ORG, .INFO, .BIZ, .ICU, .ONLINE, .SITE, .TOP, .XYZ, .DE, .EU and .UK. between 2018 and 2021 to come to this conclusion.

³⁶ Although, the extent of this switching would likely be muted by the significant switching costs that many registrants face as we explained in the Second Report ¶¶ 124 - 129 and also below in subsection 5.5.3.3.

³⁷ Carlton Report, ¶ 31.

³⁸ Carlton Report, ¶ 37. Prof. Carlton qualifies this statement by saying that ‘demand is *unlikely* to be perfectly inelastic’

³⁹ Carlton Report, ¶ 38.

⁴⁰ We explain that different TLDs can be complements in our Second Report ¶¶ 119 – 123 and below in ¶¶ 130 – 134.

⁴¹ More generally, what matters for demand response—and the question of how many people may decide not to register a domain in the event of a price increase—is the mass of marginal users around the price that changes (those who are nearly indifferent between registering the domain and not), while considering absolute values of registration fees is relevant for an average user.

53. Prof. Carlton also claims that the registrants are anyway insulated from price increases because they have an option to lock-in the current price for 10 years to come. However, most of the registrants do not have a long planning horizon as indicated by the fact that a very small fraction of registrations and renewals are for periods longer than one year despite a longer period contract being generally more favorable compared to a series of short-term contracts. This suggests that many registrants are either somewhat myopic or prefer not to commit to long-term contracts for other reasons.⁴²

4.7 Registrars make substantial profits from sales of complementary services; registration price hikes may trigger the loss of sales of these services

54. In concluding that Namecheap is unlikely to be harmed by a wholesale price increase for registry services of .ORG, .INFO and .BIZ, Prof. Carlton also ignores the fact that registrars make a considerable share of profits on sales of complementary services. Namecheap has provided to us the estimates of these shares, which we show for selected TLDs in Table 1.

Table 1: Share of profit from complementary services

TLD	2018	2019	2020	2021
Redacted - Confidential Information				

Source: Namecheap estimates.

Note: For a description of data and assumptions made for these estimates we refer to the affidavit of Hillan Klein of 8 Feb. 2022 as described in Appendix: Scope of Review.

55. Registrants may buy a bulk of complementary services from Namecheap when registering their domain. These may include email, storage space, webpage creation templates and advice, etc. The demand for a bundle of such services together with the domain registration itself may be significantly more elastic than the demand for registrations only, both on the individual TLD and aggregate level. This has two implications. First, even if retail prices for registrations are increased by the amount of wholesale price increase (i.e., there would be close to a 100% pass-on), the price of complementary services may decrease and thus overall pass-on would be imperfect. Second, even if the decision to register a domain name does not change with a price increase, the decision how many services to buy along with this registration will in all likelihood be affected by such price increase.

56. Because Namecheap’s complementary services play an important role in profit generation, the response of demand for these services to a wholesale price increase is likely to harm Namecheap in the event of such increase. As discussed in the previous paragraph, this may happen via decreased price or decreased volume of complementary services sold by Namecheap in connection to registrations on .ORG, .INFO and .BIZ.

⁴² See also subsection 5.5.7 for the discussion of price lock-in.

5 Costs and benefits of price caps

5.1 Summary of our conclusions on the costs and benefits of price caps on .ORG, .INFO, and .BIZ

57. The registry agreements for .ORG, .INFO, and .BIZ in force until June 2019 contained price cap provisions on registry prices. ICANN decided to remove these provisions from the new registry agreements for .ORG, .INFO, and .BIZ.
58. In our Second Report, we concluded that it cannot be reliably expected that this removal of price caps from registry agreements will improve the economic outcomes in the DNS space in the foreseeable future. Relatedly, it cannot be reliably excluded that the removal of price caps will worsen the economic outcomes in the DNS space.⁴³ We arrived at these conclusions after evaluating the likely costs and benefits of price caps on .ORG, .INFO, and .BIZ. After analyzing the report by Prof. Carlton, we remain of the view that those conclusions are correct and conservative.
59. In our Second Report, we explained that, by lowering prices and expanding demand, price caps can improve the economic outcomes in markets where firms hold persistent market power. In industries with vertical structure, like the DNS space (with registries upstream and registrars downstream), price caps can also promote entry and innovation downstream. The considerable market power of .ORG, .INFO, and .BIZ were likely key reasons why ICANN imposed price caps in its original registry agreements for these gTLDs. We established that price caps on .ORG, .INFO, and .BIZ that ICANN administered were effective in the past in keeping wholesale prices closer to competitive levels.
60. We examined several indicators of market power — data on registry fees, evolution of registration volumes and information on margins — and concluded that .ORG, .INFO and .BIZ continue to hold considerable and persistent market power, where .ORG likely holds most. This market power arises due to special characteristics in the supply and demand for domain name registrations and/or their first-mover advantage; because of the market power of .ORG, .INFO, and .BIZ, there is scope for price caps to improve economic efficiency in the DNS space.
61. We also analyzed the likely costs of price caps; specifically, the risk that price caps may hinder the competitive process (or inefficiently impair economic incentives of firms) in markets with good prospects for effective competition (which means they can worsen the economic outcomes in such markets). In the DNS space, this could occur if price caps led to inefficient demand rationing, hampered entry of efficient rivals, stifled the incentives for investment in quality of registry services, or if price caps facilitated tacit coordination. We analyzed each of these concerns in relation to price caps on .ORG, .INFO, and .BIZ. and found that the risk of such adverse outcomes has been low. We are not aware of any evidence that price caps resulted in significant adverse outcomes at any time they were in force for over 15 years.

⁴³ To be clear, when we say the “DNS space” we do not mean “DNS market”.

5.2 Summary of Prof. Carlton’s arguments on the likely benefits and costs of price caps in .ORG, .INFO and .BIZ

62. In this subsection, we summarize Prof. Carlton’s arguments of his 14 January 2022 report. Our analysis of Prof. Carlton’s arguments follows in Subsections 5.3-5.5.

63. Prof. Carlton agrees with us that a proper assessment of whether price caps are justified requires a balancing of their likely costs against their likely benefits. He states:⁴⁴

Price regulation can both benefit and harm consumers. Regulation that keeps prices low can, at least in the short run, benefit consumers because it lowers the price that they would otherwise pay and creates incentives for more consumers to purchase a good or service. Those same low prices, however, can also impose a significant cost on consumers by depressing supplier incentives and degrading the quality and value of the service or product consumers purchase. *In assessing the desirability of price controls, therefore, one must assess whether the likely benefits outweigh the likely harms.*

64. In his assessment of potential benefits of price caps, Prof. Carlton assumes that ICANN would set price caps in the future in the same way as they were set in the registry agreement that was up for a renewal (10% year on year maximum price increase from the 2019 price level).

65. Specifically, Prof. Carlton states:⁴⁵

Based on the evidence I discuss below, I conclude that TLD competition and other factors limit .ORG, .INFO, and .BIZ’s ability to raise price and that they are unlikely to raise prices significantly above the levels that would have been allowed under the *prior price controls*. If they did attempt to raise prices above the levels allowed by the *prior price controls*, registrants – even locked-in registrants – could mitigate the harm of any such increases.

66. In Prof. Carlton’s view, the benefits of such price caps on .ORG, .INFO, and .BIZ would likely be low because, absent price caps, these TLDs would not charge registry prices significantly above the levels allowed under the prior price caps. An increase in registry prices above the one that would be allowed by price caps is unlikely, he argues, because of (i) competition from other TLDs, (ii) .ORG’s commitments not to raise prices unreasonably, and (iii) availability of long-term renewal contracts to registrants that they could use to lock in current prices.

67. Prof. Carlton provides the following arguments to support his conclusion:

- a. .ORG, .INFO, and .BIZ face competition from other TLDs, which has grown over time;⁴⁶
- b. .BIZ has not raised prices above the level allowed by the previous controls;⁴⁷
- c. .INFO and .BIZ fail to meet certain criteria for significant market power;⁴⁸

⁴⁴ Carlton Report, ¶ 40 [emphasis added]. We note that Prof. Carlton does not identify all potential benefits of price caps. He only refers to lower consumer prices and the associated expansion of demand. We identify other potential benefits of price caps in industries with a vertical structure like the DNS.

⁴⁵ Carlton Report, ¶47.

⁴⁶ Carlton Report, § III. B. 1.

⁴⁷ Carlton Report, § III. B. 2. (a)

⁴⁸ Carlton Report, § III. B. 2. (b)

- d. .ORG is operated by a not-for-profit registry which has demonstrated its commitment not to abuse market power, and which recognizes limitations to its ability to do so in the future;⁴⁹
 - e. Registrants can respond to a significant price increase by invoking a renewal option to keep pricing at current levels for up to ten years.⁵⁰
68. Whereas Prof. Carlton assesses the benefits of price caps in relation to the prices caps exactly as they were in force just prior to their removal, he analyzes the costs of price caps in hypothetical terms. In this regard, he argues that these costs include “not only the cost of determining, monitoring, and enforcing the regulation, but also the cost of setting the wrong price, i.e. setting a price that inefficiently impairs registry incentives.”⁵¹ He further states that ICANN has no special ability to set prices optimally,⁵² and that without such expertise there is “danger that ICANN could set the wrong price – one that impairs efficient market outcomes – which would ultimately harm registrants rather than protect them.”⁵³

5.3 Evaluation of Prof. Carlton’s arguments on the likely benefits and costs of price caps in .ORG, .INFO and .BIZ

5.3.1 Prof. Carlton’s position on the likely costs and benefits of price caps is untenable

69. To assess whether a reimposition of price caps on .ORG, .INFO, and .BIZ is justified, one must balance the likely benefits against the likely costs for the *same* price caps scheme. All other factors must also be held constant in such balancing.
70. As we will demonstrate below, Prof. Carlton’s analysis either fails to respect this basic rule or leads Prof. Carlton into an inconsistent position. In either case, his conclusions are unreliable.
71. Specifically, when assessing the benefits of price caps, Prof. Carlton maintains that price caps would likely *not constrain* the pricing of .ORG, .INFO, and .BIZ, while he presumes that (the same) price caps would *constrain* that pricing when assessing the costs. It cannot be both.
72. In arguing that the benefits of price caps are low, Prof. Carlton relies on a proposition (in Prof. Carlton’s view supported by evidence) that it is unlikely that .ORG, .INFO, and .BIZ could charge significantly higher prices in a scenario without price caps compared to the scenario with them (as they were in place just before their removal).⁵⁴ This proposition implies that these same price caps would also *unlikely limit the pricing flexibility* of registries. Price caps can only limit such flexibility

⁴⁹ Carlton Report, § III. B. 3. (a) and III. B. 3. (b)

⁵⁰ Carlton Report, ¶ 65.

⁵¹ Carlton Report, ¶ 42.

⁵² Carlton Report, ¶ 43.

⁵³ Carlton Report, ¶ 44.

⁵⁴ Indeed, as the reason for why the benefits of price caps would likely be small, he states the following: “...The evidence indicates that .ORG, .INFO, and .BIZ are not likely to raise registry prices significantly above the levels allowed by the prior price controls in the immediate future or even further in the future.” (Carlton Report, ¶ 13 [emphasis added]) and “Based on the evidence I discuss below, I conclude that TLD competition and other factors limit .ORG, .INFO, and .BIZ’s ability to raise price and that they are unlikely to raise prices significantly above the levels that would have been allowed under the prior price controls.” (Carlton Report, ¶ 47 [emphasis added]).

if they force the registries to price significantly lower than they would without them – a situation which Prof. Carlton believes is unlikely.

73. Yet, in relation to the costs of price caps, which Prof. Carlton purports to show are significant, he explains that they arise (aside from potential costs of administering price caps, which we will show are small)⁵⁵ precisely because price caps *limit the pricing flexibility* of .ORG, .INFO, and .BIZ:⁵⁶

For example, limiting the amount a registry can charge may harm registrants (especially in the long run), because *such controls limit the pricing flexibility of registries* to market their product and can reduce the incentives of registries to provide a high-quality product leading to declines in TLD investment, innovation, promotion, and expansion.

74. Because of the inconsistency of his positions on benefits and costs, Prof. Carlton’s assessment and conclusions on the justification of price caps are unreliable.⁵⁷ His evaluation and conclusions in relation to our analysis in the Second Report is also unreliable for the same reason.
75. To be clear, Prof. Carlton’s analysis would also be flawed, for obvious reasons, if in his assessment he compared the likely benefits of one price caps scheme with likely costs of another price caps scheme.

5.3.2 Prof. Carlton’s assessment of the costs of regulation is unreliable also because it is detached from the features of the price caps on .ORG, .INFO, and .BIZ and more than 15 years of ICANN’s experience of administering price caps

76. Having established that Prof. Carlton’s position on costs and benefits of price caps is untenable, we now explain how he overestimates the costs of price caps on .ORG, .INFO, and .BIZ.
77. Prof. Carlton refers to two categories of potential costs of price caps on .ORG, .INFO, and .BIZ. The *first* category comprises determining, monitoring, and enforcing the regulation; the *second* category involves setting a price cap on .ORG, .INFO, and .BIZ at too low levels. Prof. Carlton thus states:⁵⁸

The potential costs of regulation include not only the costs of determining, monitoring, and enforcing the regulation, but also the cost of setting the wrong price, i.e., setting a price that inefficiently impairs registry incentives. For example, limiting the amount a registry can charge may harm registrants (especially in the long run), because *such controls limit the pricing flexibility* of registries to market their product and can reduce the incentives of registries to provide a high-quality product leading to declines in TLD investment, innovation, promotion, and expansion.

78. Prof. Carlton asserts that we have underestimated these costs in relation to price caps on .ORG, .INFO, and .BIZ.⁵⁹ He goes on purporting to show that, in fact, these costs are significant,

⁵⁵ Only briefly and casually, Prof. Carlton also mentions the costs of determining, monitoring and enforcing regulation. However, as we show later, these costs are likely negligible in relation to price caps as they were in force just before ICANN removed them in June 2019.

⁵⁶ Carlton Report, ¶ 42. Prof. Carlton does not provide any other example of how price caps could create costs.

⁵⁷ Albeit Prof. Carlton does not seem to think so, we recognize that, in principle it is possible – yet highly unlikely in practice – that price caps as they were prior to their removal would constrain the pricing of .ORG, .INFO, or .BIZ to the levels even below the price in a competitive benchmark. This would then harm the economic outcomes in the DNS space. But in this case, ICANN could react by relaxing the price caps.

⁵⁸ Carlton Report ¶ 42 [emphasis added].

⁵⁹ Carlton Report, ¶ 40.

by stating that “ICANN has no special ability to set prices optimally”,⁶⁰ and that without such expertise there is “danger that ICANN could set the wrong price – one that impairs efficient market outcomes – which would ultimately harm registrants rather than protect them.”⁶¹

79. As we will show below, Prof. Carlton’s analysis of costs is cursory, and it is problematic from a methodological perspective. In any case, it does not establish that we have underestimated the costs of price caps.

5.3.2.1 The cost of determining, monitoring, and enforcing the price caps (as they were just prior to their removal) are low

80. When assessing the likely benefits of price caps on .ORG, .INFO, and .BIZ, Prof. Carlton assumes that the caps would be set as they were *prior* to their removal. Based on this assumption, he should have also assessed the costs of such price caps. But based on the assumption, the costs of determining price caps would likely be zero, or close to zero. This is because the “prior” price caps were already determined in 2013 when the registry agreements that were up for a renewal were signed. Thus, price caps as Prof. Carlton assumes would be in force in his counterfactual, would simply be left in the registry agreements as they were; accordingly, the additional costs of determining them would be very low if not zero.
81. Even if Prof. Carlton took some reasonable price cap scheme other than the prior price caps as the proper counterfactual in his cost analysis, he would have likely reached the conclusion that the costs of determining price caps would be limited. Indeed, ICANN reviewed the price caps on .ORG, .INFO, and .BIZ infrequently, on each cycle of renewals of registry agreements (approximately every 6 to 10 years, from 2006 onwards when a presumptive renewal clause was added to registry agreements). The costs of determining price caps at such prolonged intervals were likely low and could remain low in the future. There is no evidence that the renewal of registry agreements with price caps required (or would require) prolonged negotiations or that it involved (or would involve) complex calculations. In any case, ICANN has been using price caps for over 20 years (and they are still in force on .COM and .NET). It can therefore be presumed that ICANN has acquired significant experience about how to set them efficiently (and that ICANN has information about the likely effects of price caps, including potentially negative ones).
82. As for monitoring costs, registrars themselves have been monitoring the compliance with price caps almost automatically, as part of their daily business interactions with registries. They still do so in relation to .COM and .NET. In these interactions, registrars would likely promptly detect any breaches of price caps. Given the immediate effect and an unambiguous record of registry prices in transactions between registries and registrars, monitoring the registries’ compliance with price caps can indeed be fully automated at minimal additional costs.
83. Enforcing price cap provisions on .ORG, .INFO, and .BIZ did not likely result in significant costs either. Indeed, we understand that the registries of .ORG, .INFO, and .BIZ generally complied with price cost provisions. If evidence to the contrary exists, it must be in ICANN’s possession.

⁶⁰ Carlton Report, ¶ 43.

⁶¹ Carlton Report, ¶ 44.

5.3.2.2 The risk that price caps would limit the pricing flexibility of .ORG, .INFO, and .BIZ to a detriment of welfare is limited

84. Prof. Carlton hypothesizes that price caps could limit the pricing flexibility of registries of .ORG, .INFO, and .BIZ in a way which “inefficiently impairs registry incentives”.⁶² But he does not assess the likely significance of this category of costs. His analysis is purely hypothetical.
85. The only hint of an attempt of linking this category of harm to price caps on .ORG, INFO, and .BIZ is footnote 48 of Carlton Report. Here, Prof. Carlton states: “registry operators can provide different levels of service. For example, although there are minimum levels of DNS abuse prevention that all registry operators must adhere to, some registry operators, such as Verisign and PIR, go beyond those minimum levels.”
86. Presumably, by this example Prof. Carlton intended to say that price caps could reduce the incentives of registries to “go beyond those minimum levels” of service. If so, the example is not convincing. First, Verisign’s by far largest TLDs are .NET and .COM, and both have been price capped from the time of ICANN’s founding. Those price caps are binding, as Prof. Carlton himself observed, which means that they constrain the pricing flexibility of Verisign. Yet, as Prof. Carlton again himself observes, Verisign and PIR seem to “go beyond those minimum levels of service.” This means that binding (i.e., effective) price caps have not deterred Verisign from providing a high-quality service. It is not clear why this would be any different in relation to the registries of .INFO, or .BIZ. Second, PIR’s largest TLD is .ORG, which was subject to a price cap until June 2019. We understand that PIR has been providing a higher level of service than the minimum required already before that date, and simply continued doing so after the price caps were removed. If anything, therefore, Prof. Carlton’s example shows the opposite of what Prof. Carlton is suggesting. That is, the example shows that price caps are unlikely to adversely affect the level of service of .ORG, .INFO, and .BIZ.
87. Prof. Carlton’s example of how wrong price regulation harmed the incentive or railway operators’ incentives in the 19th century cannot replace a proper cost analysis in the context of DNS.⁶³ Only a careful analysis of the costs of price caps under scrutiny (and not some hypothetical price caps in a completely different industry) could be informative on the question of whether reimposing price caps is justified. We carried out such careful analysis. Prof. Carlton has not.

5.3.3 Prof. Carlton’s claim that we fail to adequately consider the potential costs of price regulation is unfounded

88. Prof. Carlton states that we fail to adequately consider the potential costs of price regulation, as follows: “Prof. Dr. Verboven and Dr. Langus’ criteria for identifying markets that would benefit from price regulation is overly simplistic and *ignores* the costs of regulation.”⁶⁴ This claim is false and misleading.
89. In the Second Report (¶ 193 – 211), we analyzed the likely costs of price caps on .ORG, .INFO, and .BIZ.⁶⁵ We noted that such price caps could have costs if they hindered the competitive process in the DNS space. We identified four ways in which this could occur:

⁶² Carlton Report, ¶ 42.

⁶³ Carlton Report, footnote 46.

⁶⁴ Carlton Report, ¶ 46. [emphasis added]

⁶⁵ Where we implicitly assumed that ICANN would administer the price caps in the foreseeable future in a similar way as before.

- a. if price caps led to inefficient demand rationing of registry services,
 - b. hampered entry of efficient rivals (new TLDs),
 - c. stifled the incentives for investment in quality of registry services, or
 - d. if they facilitated tacit coordination among registries.
90. We analyzed these concerns in detail, over five pages, one by one, and specifically in relation to price caps on .ORG, .INFO, and .BIZ. For each concern we explained why the risks that price caps would lead to costs are limited and concerns are not significant. Prof. Carlton does not directly address any of our analyses in his report.
91. Instead, Prof. Carlton makes several sweeping and misleading statements. For example, he states that we “appear to assume that ICANN is the perfect regulator, one capable of setting an optimal price that protects registrants against unwarranted large price increases, yet simultaneously incentivizes the investments important to consumers.”⁶⁶ Yet, nowhere in our Second (or First) Report did we rely on any such assumption. At the same time, we did argue that in the past, ICANN proved being capable of setting price caps in a way which limits the exercise of market power by .ORG, .INFO, and .BIZ without stifling their incentives to provide a high quality of service. But this is not the same as assuming that ICANN is “the perfect regulator.”
92. Prof. Carlton also suggests that we argued by means of a tautology, when we stated in the headline of section VII.A.2 of our Second Report that “[w]hen set at the right level, price caps can bring substantial benefits in markets where the prospects for effective competition are limited.”⁶⁷ Yet, the headline that Prof. Carlton characterizes as a tautology announced that in the corresponding section we will explain the mechanism by which price caps can bring benefits (as opposed to a preceding section where we discussed potential costs of price caps). After announcing our intention in the headline, we explained these benefits in clear terms in ¶¶ 70 – 78. It is fully clear from our explanations and the context that by “when set at the *right level*” in the headline we meant the level of price caps low enough to effectively constrain the exploitation of market power, and not a price cap which is “right” because it brings benefits that are larger than its costs.⁶⁸
93. Further, Prof. Carlton suggests that we “ignore the practical difficulties of identifying when price caps would be beneficial and determining what price level is the ‘right’ level.” However, Prof. Carlton does not explain which “practical difficulties” ICANN would have faced if it left price caps in place as they were in June 2019 as he assumes for the proper counterfactual in his exercise of balancing costs and benefits.⁶⁹ This information should be in ICANN’s possession: by the time ICANN removed the price caps from the registry agreements for .ORG, .INFO, and .BIZ, it had benefitted from over 15 years of experience with the determination and administration of those price caps. ICANN could have provided Prof. Carlton with explanations of the “practical difficulties” that it has experienced in the process.
94. In cooperation with the Department of Commerce, ICANN continues to set price caps on .COM. These caps have likely constrained the flexibility of .COM’s pricing to an even greater degree than

⁶⁶ Carlton Report ¶¶ 43.

⁶⁷ Ibid.

⁶⁸ Similarly, in relation to Prof. Carlton’s characterization of “[t]here is also no reason to believe that the risk is significant that properly set price caps on these gTLDs could have led to such adverse outcomes in the future”, as a tautology, we explain what ‘properly set’ means by way other than simply referring to the level at which the benefits of price caps are larger than the costs.

⁶⁹ In Subsection 5.3.1, we have already explained why the balancing exercise is problematic as a matter of logic.

price caps on .ORG, .INFO, and .BIZ.⁷⁰ Despite that, the price caps did not seem to have stifled Verisign’s incentives to any significant extent. In other words, neither ICANN nor the Department of Commerce is a “perfect regulator”; yet the price caps on .COM that they have been setting have been effective in constraining the exercise of market power without inefficiently stifling the incentives of Verisign. By June 2019, the mechanisms to set these price caps had been well rehearsed, and it is reasonable to assume that the potential effects of such price caps were well understood by active market participants, including ICANN who administered (and still administers) them. Indeed, it is not clear what “practical difficulties” with setting of price caps Prof. Carlton has in mind.

95. Prof. Carlton also suggests that we “fail to adequately recognize that economists prefer to rely on market mechanisms to constrain prices precisely because regulation is difficult, costly, and can have unintended consequences.” This statement is also misleading. As a matter of fact, in our Second Report we announced our analysis of the costs of price caps by stating in a headline that “Price caps are not warranted in markets with good prospects for effective competition...” and then went on to describe the reasons for that (i.e. potential costs or adverse effects of price caps) in the corresponding section in detail.⁷¹ We next extensively analyzed the potential adverse effects of price caps on .ORG, .INFO, and .BIZ, as explained earlier in Subsection 5.3.3.⁷² Prof. Carlton did not engage with that analysis. We therefore reject Prof. Carlton’s characterization of our analysis as inadequate.

5.4 Prof. Carlton’s counterfactual for the analysis of the likely benefits of price caps is different from ours; because of this, his analysis and conclusions cannot be directly applied to our questions and conclusions

96. When Prof. Carlton assesses the likely benefits of price caps for .ORG, .INFO, and .BIZ, he assumes that they would remain as set in 2013 registry agreements.⁷³ Those caps would have allowed .ORG, .INFO, and .BIZ to increase prices from the level in June 2019 by 10% each year. On the basis of that assumption, Prof. Carlton argues that price caps would unlikely bring significant benefits because .ORG, .INFO, and .BIZ are “...unlikely to raise prices above the levels that would have been allowed under *the prior* price controls.”⁷⁴
97. In contrast, in our analysis, we did not rely on strong assumptions on the exact structure and parameters of the price caps scheme that ICANN would adopt if it chose to keep price caps in the new registry agreements for .ORG, .INFO, and .BIZ. Instead, we asked the question whether ICANN could set price caps that constrain the pricing of .ORG, .INFO, and .BIZ, without setting them below the levels that would prevail if other TLDs presented an effective competitive constraint on these TLDs. We conclude that this is indeed likely the case because .ORG, .INFO, and .BIZ hold considerable market power.

⁷⁰ Prof. Carlton explains that price caps were strongly binding on .COM in his report cited in footnote 7.

⁷¹ Second Report, Section VII.A.1.

⁷² See also Second Report, Section X.

⁷³ Carlton Report, ¶ 45. Although, as discussed in 5.3.1, it is not reflected in his choice of the counterfactual for his analysis of the likely costs of price caps reimposition.

⁷⁴ Carlton Report, ¶ 47.

98. The differences in our approach and the approach of Prof. Carlton can be illustrated in a diagram as presented in Figure 1 (MC stands for marginal cost).

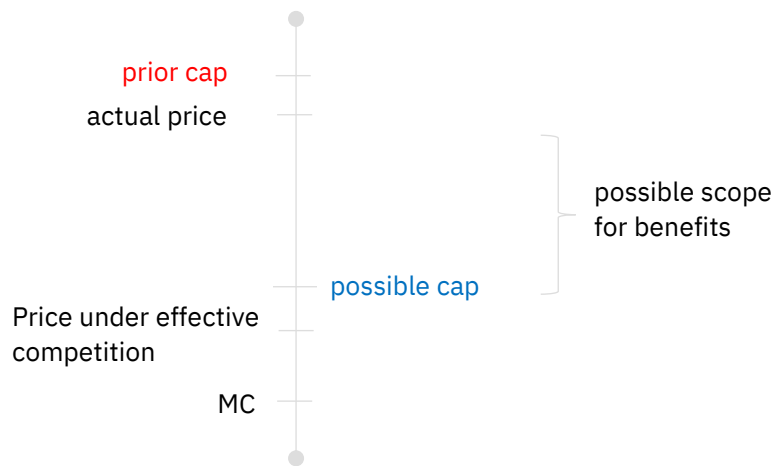


Figure 1: Difference in approaches

99. Prof. Carlton’s analysis of the likely benefits of price caps essentially amounts to a test of the hypothesis that ‘prior cap’ (Prof. Carlton’s assumed counterfactual for price caps) would not be significantly below the ‘actual price’ in the foreseeable future, as depicted in Figure 1. This approach does not account for the possibility that ICANN could set stricter (or less strict) price caps on .ORG, .INFO, and .BIZ instead of removing them.
100. Instead, our analysis of the likely benefits of price caps could be viewed as a test of a hypothesis that ‘actual price’ is or will be in the foreseeable future significantly above the ‘price under effective competition’ and that ICANN would be capable of setting the price cap in the range between the ‘price under effective competition’ and ‘actual price’ as depicted in Figure 1. By ‘price under effective competition’ we mean the price that a registry would set for a TLD which faces effective competition from close substitute TLDs or an effective threat of an entry of such a TLD.⁷⁵
101. To conclude, therefore, that the scope for benefits from price caps is likely limited in our analytical framework, one would have to show that the ‘actual price’ of .ORG, .INFO, and .BIZ is close, and would remain close in the foreseeable future, to the ‘price under effective competition’ so that setting the price caps in the range between the ‘price under effective competition’ and ‘actual price’ would be difficult.
102. In our Second Report, we concluded that this is unlikely to be the case for .ORG, .INFO, and .BIZ who hold market power and exercise it by setting prices above the levels that would prevail in conditions of effective competition. Prof. Carlton does not seem to explicitly state that he has

⁷⁵ By the term ‘effective competition’ we mean the following: A structure of supply and demand, and the dynamic forces that shape the supply and demand, such that the firms that are active in the market can realize margins that are sufficient for them to cover their fixed costs and provide incentives to invest in quality improvements, but not significantly higher than that. In conditions of effective competition, innovative firms can realize margins that are substantially higher than just enough to cover fixed costs, but they cannot realize such margins over a prolonged period unless they innovate continuously. Effective competition thus allows for short-term monopoly profits for firms that are especially innovative (see e.g., OECD (2021). *Methodologies to Measure Market Competition*. [online] Available at: <https://www.oecd.org/daf/competition/methodologies-to-measure-market-competition-2021.pdf> [Accessed 2 Feb. 2022], p. 10).

reached a different conclusion. He does, however, make several claims that purport to show that .INFO and .BIZ face effective competition from other TLDs for new and existing registrants.

5.5 Prof. Carlton does not establish that .ORG, .INFO, and .BIZ are unlikely to set prices significantly above competitive level

103. Prof. Carlton makes several claims that relate to our analysis of market power of .ORG, .INFO, and .BIZ. In this section we first summarize our analysis in the Second Report (Subsection 5.5.1) and Prof. Carlton’s claims that relate to that analysis (Subsection 5.5.2). We next show that Prof. Carlton’s claims are either unfounded or for other reasons do not establish that .ORG, .INFO, and .BIZ do not hold market power that may allow them to price at levels significantly above those that would prevail in conditions of effective competition (Subsection 5.5.3).
104. We also show that these TLDs have set prices in a way which is consistent with exercise of market power before and after the removal of price caps in June 2019 (Subsections 5.5.5 and 5.5.6). This indicates that there is scope for price caps on .ORG, .INFO, and .BIZ to improve the economic outcomes in the DNS space. Given that, as we established in our Second Report, and restated above, the costs of price caps on .ORG, .INFO, and .BIZ are unlikely high, we conclude that it cannot be reliably excluded that the removal of price caps has or will harm the economic outcomes in the DNS space.

5.5.1 Summary of our arguments as to why .ORG, .INFO and .BIZ hold market power

105. In our Second Report, we identified the characteristics of supply and demand for registrations that may create conditions for market power of registries. We thus explained that:⁷⁶
- a. TLDs are differentiated semantically, and some TLDs are restricted.
 - b. Certain legacy gTLDs benefit from first-mover advantage and positive network effects. New gTLDs are not generally very good substitutes for such legacy gTLDs.
 - c. An important share of registrants view new gTLDs as complementary to legacy gTLDs.
 - d. An important share of existing registrants would experience substantial costs when switching between different TLDs.
106. We confirmed that these factors are relevant in relation to .ORG, .INFO, and .BIZ, albeit to a varying extent depending on the TLD. The evidence supporting this conclusion, which we put forward in our Second Report, includes several studies commissioned by ICANN,⁷⁷ academic literature,⁷⁸ a study of perception of new gTLDs by Nielsen commissioned by ICANN,⁷⁹ a study by CCT&CC Review

⁷⁶ Second Report, ¶¶ 111 – 131.

⁷⁷ Second Report, ¶¶ 102 – 103, 112, 127, 133 -135, 136, and 138 – 140.

⁷⁸ Second Report, ¶¶ 122, 126, and 131.

⁷⁹ Second Report, ¶¶ 112 and 118.

Team,⁸⁰ documents produced by ICANN personnel,⁸¹ and documents produced by the Department of Justice and the Department of Commerce.⁸²

107. Next, we identified several indicators of market power (or lack thereof): levels and evolution of (i) prices, (ii) margins, and (iii) registration volumes.⁸³ We also considered the market shares of registry operators and their evolution as potential indicators of market power but found those to be not reliable for the assessment of market power in the TLD space.⁸⁴
108. In a next step, we considered, separately for each of .ORG, .INFO, and .BIZ, to which extent they possess the characteristics that can result in market power and whether indicators that we have identified are consistent with market power. We concluded that, among the three TLDs, .ORG likely possesses the relevant characteristics to the largest extent; consistently with that, market power indicators suggest it holds most market power. The indicators also suggest that .ORG has been exercising its market power. .INFO, and .BIZ also possess characteristics which can give rise to market power and several indicators for .INFO and .BIZ are consistent with market power of these TLDs.

5.5.2 Summary of Prof. Carlton’s arguments relating to market power and the risk that .ORG, .INFO, and .BIZ would exploit it

109. Prof. Carlton asserts that .COM presents an important competitive constraint on .ORG, .INFO, and .BIZ. He states: “[a]ll TLDs face competition from .COM, which is by far the most popular TLD, accounting for 74% of registered domains and 67% of new registrations among gTLDs that submit monthly registry reports to ICANN.”⁸⁵ He explains that price caps on .COM have effectively been limiting the pricing of .COM, and, in turn, the pricing of .ORG, .INFO, and .BIZ.
110. Prof. Carlton further argues that .ORG, .INFO, and .BIZ also face competition from many of more than 1,100 new gTLDs currently available, in particular from those with “universal appeal such as .XYZ, .ONLINE, and .TOP.” Moreover, he argues, there are many “...‘open ccTLDs,’ such as .CO, .GA, and .TK, that can be used by any registrant regardless of where the registrant resides.”⁸⁶
111. Prof. Carlton also observes that “[t]he combined share of registered domain names accounted for by .ORG, .INFO, and .BIZ is small and both the combined number and share of domains have fallen in recent years, indicating that these TLDs are of limited competitive significance.”⁸⁷ Given these trends, Prof. Carlton concludes that any competitive significance of .ORG, .INFO, and .BIZ will further diminish in the future.

⁸⁰ Second Report, ¶¶ 113, 115, and 128.

⁸¹ Second Report, ¶¶ 121 and 127.

⁸² Second Report, ¶ 115.

⁸³ Second Report, ¶¶ 132 – 140.

⁸⁴ Second Report, ¶ 141 – 144.

⁸⁵ Carlton Report, ¶ 48.

⁸⁶ Carlton Report, ¶ 49.

⁸⁷ Carlton Report, ¶ 51.

112. Moreover, Prof. Carlton argues that certain characteristics that give rise to market power of .ORG do not apply to .INFO and .BIZ, and the same for some indicators of market power. Specifically, he states that:⁸⁸

In their discussion of .ORG, Prof. Dr. Verboven and Dr. Langus identify the following indicators of substantial market power that they claim apply to .ORG: (1) it is semantically differentiated from other TLDs; (2) it is one of the most popular TLDs in terms of registrations; (3) it has high levels of recognition and trust; and (4) market evidence is consistent with .ORG having market power because the number of registrations on .ORG has been stable despite .ORG’s “relatively high” prices. The evidence does not support the claim that .INFO and .BIZ have these characteristics, and thus Prof. Dr. Verboven and Dr. Langus’ criteria would indicate that .INFO and .BIZ do not have market power.

113. Finally, Prof. Carlton states that .ORG will not exploit its market power because it is non-profit entity with non-commercial objectives, which has not raised prices in more than five years.⁸⁹

5.5.3 Prof Carlton does not show that .COM and other TLDs present a sufficient competitive constrain on .ORG, .INFO and .BIZ

114. Prof. Carlton states that “all TLDs face competition from .COM, which is by far the most popular TLD...”.⁹⁰ If by this Prof. Carlton means that *many* TLDs face some competition from .COM, especially for new registrants, we agree. Indeed, each of .ORG, .INFO, and .BIZ faces some competition from .COM today, as they have faced it also in the early 2000s.⁹¹ Prof. Carlton also argues that .ORG, .INFO and .BIZ face competition from hundreds of other gTLDs and ccTLDs.⁹² Again, we agree with Prof. Carlton if what he really means is that, among the hundreds of new gTLDs and ccTLDs, *some* compete for *a share* of new potential registrants in .ORG, .INFO, or .BIZ.
115. However, the question that we need to ask in assessing the likely benefits of price caps is not whether .ORG, .INFO, and .BIZ face some competition. The question is whether this competition is sufficiently effective in preventing .ORG, .INFO, and .BIZ from setting high prices that harm economic outcomes in the DNS space. Prof. Carlton’s sweeping statement that “[a]ll TLDs face competition from .COM... which in turn limits the pricing of competing registries, including .ORG, .INFO, and .BIZ.”⁹³ does not amount to answering this question in the affirmative.
116. This sweeping statement is also misleading. To see this, one just needs to look at the potential for competition between .COM and .ORG. Indeed, the latter does not intensely compete with the former even for new registrants (and much less for the locked-in registrants).
117. As we argued in our Second Report, .ORG creates a strong expectation among internet users that domains registered in .ORG relate to content or activity that serves a certain public, often not-for-profit interest.⁹⁴ Although .COM has had no restrictions for eligible registrants since the mid-1990s,

⁸⁸ Carlton Report, ¶ 55.

⁸⁹ Carlton Report, ¶¶ 66 – 67.

⁹⁰ Carlton Report, ¶ 48.

⁹¹ In fact, the extent of competition from .COM on .ORG, .INFO, and .BIZ may have fallen over time, given that many desirable second level domain names are taken in .COM.

⁹² Carlton Report, ¶ 50.

⁹³ Carlton Report, ¶ 48.

⁹⁴ Second Report, ¶¶ 150 – 155.

it still creates a somewhat opposed expectation to that of .ORG: that the content relates to a commercial for-profit activity. The expectations on the content that each of .COM and .ORG create limit the potential for competition between the two as we explained in our Second Report.

118. Therefore, on account of their semantic differentiation alone, one could conclude that the potential for competition between .COM and .ORG is limited. .ORG is also semantically differentiated from many other non-restricted TLDs; and ccTLDs are not a good substitute for many potential registrants in .ORG that do not want to be associated with a particular country or a geography.⁹⁵
119. Additionally, the fact that ICANN felt it needed to impose price caps on .ORG, .INFO and .BIZ in the past indicates that competition from .COM alone has been insufficient to constrain .ORG, .INFO and .BIZ’s pricing. And competition from .COM that .ORG, .INFO, and .BIZ face has likely not increased over time and may have decreased as many of most desirable domains in .COM are taken, leading to a saturated domain name space in .COM. For all these reasons, competition from .COM cannot be used to justify the removal of price caps on .ORG, .INFO, and .BIZ in 2019.
120. In a nutshell, sweeping assertions such as that .COM and hundreds of new gTLDs compete with .ORG, INFO, and .BIZ have little or no probative value for the questions that we were answering in our Second Report.

5.5.3.1 .INFO and .BIZ are semantically differentiated from many other TLDs, including .COM in the case of .INFO

121. Prof. Carlton also argues that “[t]he evidence does not support the claim that .INFO and .BIZ have significant semantic differentiation that confers significant market power”⁹⁶ and that we “provide no evidence to support the claim that .INFO or .BIZ have especially unique identities that would be likely to prevent a significant number of registrants from switching away from them.”⁹⁷
122. These claims are misleading. First, we never claimed that the fact that TLDs are semantically differentiated necessarily confers, by itself, significant market power or creates such unique identities that would “likely prevent a significant number of registrants from switching away from them”. We also did not claim that .INFO and .BIZ have “especially unique” identities. Instead, we stated something much more conservative: that .BIZ and .INFO are semantically differentiated from other TLDs, which reduces the extent to which those TLDs are good substitutes for .INFO and .BIZ.⁹⁸
123. Second, our conclusion that .INFO and .BIZ hold significant market power does not rest *solely* on their semantic differentiation from many other TLDs. Instead, we used a comprehensive list of characteristics of demand for registration in various TLDs, like users’ familiarity, switching costs and demand for complementary registrations, *in addition* to semantic differentiation. It is these characteristics together, not any one taken individually, that create the conditions for market

⁹⁵ As we have established in our Second Report, “based on a TLD’s identity, internet users form expectations about the content of websites in a TLD, and may not trust a TLD that does not match these expectations. In turn, the registrants’ choice is limited to TLDs that create expectations that match their online content.” (Second Report, ¶ 112.)

⁹⁶ Carlton Report, § III.B. 2. (b) (1).

⁹⁷ Carlton Report, ¶ 56.

⁹⁸ Second Report, ¶¶ 169 and 183.

power.⁹⁹ On top of that, to verify that these TLDs do in fact hold market power, we examined several reliable indicators of market power.¹⁰⁰

124. Third, contrary to Prof. Carlton’s claim, we provided substantial evidence of semantic differentiation. Indeed, the fact that TLDs are generally semantically differentiated from each other is well established. This was also recognized by several studies commissioned by ICANN, as we noted in our Second Report.¹⁰¹ For example, a comprehensive survey of internet users by Nielsen for ICANN confirmed that this differentiation is important: according to the survey, around 80% of users expected either a “very clear” or “some relationship” to the gTLD under which it is registered.¹⁰² The ICANN community’s CCT&CC Review Team (2018) also noted that “[w]ith the exception of a few new strings such as .xyz, .online, .site and .space, the new gTLDs are meant to be more semantic and specific than the legacy generic TLDs.”¹⁰³ In addition, we presented specific evidence of semantic differentiation for .BIZ and .INFO in our Second Report.¹⁰⁴ We thus explained that GoDaddy, the largest registrar, advertised .BIZ as follows:¹⁰⁵

Show the world you're a business with a distinctive website URL. Not only will a .biz domain name attract more prospects, it will raise your visibility with the media and investors. .biz means you're all business! Open to registration by anyone.

125. Google wrote the following about .BIZ:¹⁰⁶

Used by millions of businesses in over 200 countries and territories, .biz is the domain of choice for hardworking businesses looking to establish their online presence and take advantage of greater opportunities. From the corner bakery to international corporations, .biz is the domain of choice.”

126. As for Namecheap, it states:¹⁰⁷

The .biz domain is designated for ‘bona fide business or commercial use.’ If you're in business, no additional restrictions on use or location apply.

127. As for the semantic differentiation of .INFO from other TLDs, including .COM, it is quite apparent from the meaning imbued in .INFO – “information”.¹⁰⁸ We are not aware of any other TLD that would

⁹⁹ Second Report, ¶¶ 111 – 131.

¹⁰⁰ Second Report, ¶¶ 132 – 144

¹⁰¹ Second Report ¶¶ 112-113.

¹⁰² Nielsen (2016). ICANN Global Consumer Research, Wave 2. [online] Available at: <https://newgtlds.icann.org/en/reviews/cct/phase2-global-consumer-survey-23jun16-en.pdf> [Accessed 31 Jan. 2022].

¹⁰³ COMPETITION, CONSUMER TRUST, AND CONSUMER CHOICE REVIEW (2018). [online] Available at: <https://www.icann.org/en/system/files/files/cct-rt-final-08sep18-en.pdf> [Accesses 7 Feb. 2022].

¹⁰⁴ The study found that more than 50% of the surveyed users expected a “very clear” relationship between the content of the website and its TLD extension. In addition, 25% expected “some relationship”. In contrast, around 15% had “no strong expectations” and around 6% had “no strong expectation”. [ICANN Global Consumer Research, Wave 2, June 2016].

¹⁰⁵ Second Report, ¶ 181.

¹⁰⁶ Second Report, ¶ 182.

¹⁰⁷ www.namecheap.com. (n.d.). *.biz Domain Registration | Buy a .biz Domain Name - Namecheap*. [online] Available at: <https://www.namecheap.com/domains/registration/gtld/biz/> [Accessed 27 Jan. 2022].

¹⁰⁸ Wikipedia reports that it was this meaning of .INFO that led the Metropolitan Transportation Authority of New York to switch to the easier to remember [mta.info](https://www.mta.info) after the September 11, 2001 attacks in the US, as reported by Wikipedia (<https://en.wikipedia.org/wiki/info>). Today the “[mta.info](https://www.mta.info)” reroutes to a new MTA’s web page at <https://new.mta.info/>. In our second report we refer to other uses of .INFO.

imply “information” as the content quite as explicitly as .INFO does. We explained that the registry operator of INFO itself recognized that when it presented INFO as a complement to and differentiated from other TLDs, including .COM:¹⁰⁹

When you use a .INFO domain, you're telling the world that your website has information about a concept, an idea, a place or your business. A .INFO site can be a stand-alone one or can complement an existing commercial site. For example, the Overstock company uses a .com to sell items, but has "o.info" as a site that offers product information.

128. GoDaddy says the following about .INFO:¹¹⁰

A .info domain showcases where information lives. It can be about your product, services, research, cause, event or whatever. The .info domain is globally recognized as a trusted destination for information — the right answer from one source in one search — and the engaging way to go if you have info to share.

.info domain goes beyond info.

While millions around the world use .info to distinguish their online content and amplify it in an increasingly confusing and crowded internet, a .info domain can help you stand out and heighten the organic reach of your website. Just think of how many people use the search term "info."

129. Prof. Carlton only offers one piece of information to support his claim that evidence of semantic differentiation between .INFO and other TLDs is lacking — a quote from Namecheap’s website that says: “Although the .info domain extension was originally intended for informative websites, its use soon broadened to include many other uses. It can be used freely as an alternative to .com and the remaining registered gTLDs.”¹¹¹ But even this quote is somewhat misleading. This is because the next sentence in the same advertisement of .INFO by Namecheap, which Prof. Carlton does not quote, confirms that Namecheap is also of the view that .INFO is semantically differentiated from other TLDs when it states: “There's a good chance that anyone seeking credible information will do a .info search. You might want to register a .info TLD if your site is all about sharing information, product specifications or research or if you want to complement your commercial site with an informational site.”¹¹²

5.5.3.2 Complementarity between TLDs also limits competition among them

130. In our Second Report we noted that .INFO, and .BIZ, likely hold less market power than .ORG. Nevertheless, we concluded that they likely still possess a considerable amount of it. For new registrations, the fact that many registrants view a registration in .INFO or .BIZ as complementary to their primary registration (in say .COM), reduces competition with other TLDs. For registrations by existing registrants competition is reduced because of switching costs that many such registrants face.

¹⁰⁹ .Info. (n.d.). Tips on Choosing a Domain Name. [online] Available at: <https://info.info/get-info/tips-choosing-domain-name> [Accessed 18 Oct. 2021]. See also .Info. (n.d.). *Why .INFO?* [online] Available at: <https://info.info/why-info> [Accessed 18 Oct. 2021].

¹¹⁰ uk.godaddy.com. (2022). *.info Domain Name*. [online] Available at: <https://uk.godaddy.com/tlds/info-domain> [Accessed 27 Jan. 2022]. GoDaddy also advertises .INFO as complementary to .COM, when it states: “Your business has registered a .COM and would like to protect its brand from cyber-squatters by registering the corresponding .info.”

¹¹¹ Carlton Report, ¶57

¹¹² www.namecheap.com. (n.d.). *.info Domain Registration | Buy .info Domain - Namecheap*. [online] Available at: <https://www.namecheap.com/domains/registration/gtld/info/> [Accessed 31 Jan. 2022].

131. A significant fraction of registrants register domains in several TLDs and view those registrations as complementary. We cited several studies that confirm the economic significance of this phenomenon. We also provided examples of registrants that view .ORG and .INFO as complementary to other TLDs, particularly .COM.¹¹³ Such registrants do not view .COM as an alternative and as such .COM does not present an effective competitive constraint on .ORG or .INFO.
132. Prof. Carlton does not engage at all with our argument in the Second Report that complementarity in registrations limits the extent of competition between TLDs, and the evidence of the economic importance of this phenomenon in the TLD space.
133. Yet, in his 2019 report for ICANN in relation to .WEB and .COM, Prof. Carlton seems to have very explicitly acknowledged the relevance of complementarity to the assessment of competitive interaction between .WEB and .COM:¹¹⁴

Registrants may benefit from using several TLDs at the same time, and therefore, .WEB may serve as a complement for .COM rather than as a substitute. In 2008, the DOJ explicitly recognized this possibility of complementarity: “[W]e found that VeriSign possesses significant market power as the operator of the .com registry because many registrants do not perceive .com and other gTLDs (such as .biz and .info) and country code TLDs (“ccTLDs,” such as .uk and .de) to be substitutes. Instead, registrants frequently purchase domains in TLDs other than .com as complements to .com domains, not as substitutes for them.” Thus, if these considerations apply to .WEB, then .WEB could attract many new registrants without being a close substitute for .COM. In such a case, there would be no effect from .WEB on .COM’s market power over existing or new registrants.

134. In our Second Report we established that the extent of complementary registrations, including registrations for defensive purposes, e.g., to protect a brand, also may be significant in general and, in particular in relation to .ORG and .INFO.¹¹⁵ Nevertheless, and despite having acknowledged its relevance to the assessment of competition in another report for ICANN in May in 2019, Prof. Carlton ignores complementarity entirely in his report in this matter.

5.5.3.3 Switching costs likely create significant market power with respect to locked-in registrants

135. While Prof. Carlton acknowledges that switching costs may create an incentive for the registries to opportunistically raise prices to locked-in registrants — in other words, that switching costs can lead to market power with respect to such registrants — he argues that this incentive is mitigated by competition for new registrants. To support this argument, he refers to his 2009 report for ICANN where he explained that “even in the absence of price caps, competition can reduce or eliminate the incentive for suppliers to act opportunistically.”¹¹⁶
136. In our Second Report, we addressed Prof. Carlton’s arguments from his 2009 report and explained why competition for new registrants will often not effectively reduce opportunistic pricing.¹¹⁷ First,

¹¹³ Second Report, ¶¶ 154 and 167.

¹¹⁴ Report of Dennis W. Carlton, *Afilias Domains No. 3 Limited v. Internet Corporation for Assigned Names and Numbers*, ICDR Case No. 01-18-0004-2702, May 30, 2019, available at: <https://www.icann.org/en/system/files/files/irp-afilias-expert-report-carlton-31may19-en.pdf>

¹¹⁵ Second Report, ¶¶ 119 – 123, 154, and 167.

¹¹⁶ Carlton Report, ¶ 64.

¹¹⁷ Second Report, ¶ 131.

economic literature has established that ex-ante competition often fails to eliminate rents that firms can extract from locked-in customers (and even when it does, it may do so via socially inefficient marketing that results in “bargain-then-ripoff” pricing). Second, ex ante competition itself is only effective to the extent the products are good substitutes (and .ORG, .INFO and .BIZ do not have very close substitutes for many registrants). Third, we explained that opportunistic pricing may be difficult for registrants (and registrars) to detect and/or act upon.¹¹⁸ Prof. Carlton does not address those arguments from our Second Report.

137. Moreover, in his May 2019 report for ICANN, Prof. Carlton seems to have taken a position that is more in line with our view, and which appears to be somewhat different from the one he took in 2009 (and he seems to be taking in his report on this matter). In that report he underscores that competition between .COM and .WEB for existing — i.e., locked-in — registrants may be muted:¹¹⁹

Existing registrants likely face costs when switching registries because the TLD is a component of the domain name which, by definition, cannot be ported across registries. For example, if the registrant that operates the website CARS.COM wants to switch to .WEB, then it must register CARS.WEB (if available) or adopt another .WEB domain name. An existing registrant that switches TLDs might incur “switching costs,” such as having to spend money to inform and remind consumers that its domain name has changed, and the registrant may lose consumers who are unaware of the change. If these switching costs are large, then .WEB could not be a good substitute for .COM from the perspective of existing .COM registrants as existing registrants will prefer to renew with .COM rather than switch to .WEB, even if the .COM price is higher.

138. He then goes on to say:¹²⁰

The DOJ recognized these same switching costs for existing registrants and in 2008 concluded that “new gTLDs, while providing a desired choice for some registrants, are unlikely to restrain the exercise of market power by the .com registry operator.” If, as these materials suggest, there are many existing registrants for whom switching costs are high, then .WEB would not provide a significant competitive constraint on .COM as to existing registrants.

139. The same arguments would apply to switching away from ORG, .INFO, BIZ and any other TLD. In our Second Report, we explained that many registrants indeed have relatively high switching costs,¹²¹ and Prof. Carlton does not contest the evidence we set out in that regard. Instead, he refers back to his discussion of why, in his opinion, .INFO and .BIZ face competition from other TLDs.¹²² That discussion we address in Subsections 5.5.3.1 and 5.5.3.2; regardless, Prof. Carlton does not present any direct evidence that switching costs for the registrants on .INFO and .BIZ are sufficiently low to exclude the possibility that these TLDs enjoy significant market power with respect to their existing customers.
140. Therefore, while we do not necessarily disagree with Prof. Carlton’s claim that “[t]he existence of switching costs alone does not imply that .INFO and .BIZ can exercise significant market power to raise price significantly above the levels *allowed by the prior price controls*”¹²³, we maintain that the switching costs in question are likely sufficiently high for .INFO and .BIZ to exercise

¹¹⁸ This is a non-exhaustive list of our argument – for more details see our Second Report, ¶ 131.

¹¹⁹ Report of Dennis W. Carlton (2019) in *Afilias Domains v. ICAAN*, ICDR case No. 01-18-0004-2702, ¶ 49.

¹²⁰ *Ibid.*, ¶ 51.

¹²¹ The evidence we put forth includes statements from the 2001 analysis by ICANN’s general council, 2018 CCT&CC Review Team and our own comparison between potential costs and benefits of switching – for details, see our Second Report, ¶ 127-129.

¹²² Carlton Report, ¶ 63.

¹²³ Carlton Report, § III. B. 2 (b) (5), emphasis added.

considerable market power on existing customers to raise price significantly above the levels that would have resulted *in competitive conditions* without switching costs.¹²⁴

5.5.4 Number of different TLDs and shares of .ORG, .INFO and .BIZ in total registrations, as well as the evolution of these shares, are not reliable indicators of market power or lack thereof

141. Prof. Carlton states that “[t]he combined share of registered domain names accounted for by .ORG, .INFO, and .BIZ is small and both the combined number and share of domains have fallen in recent years, indicating that these TLDs are of limited competitive significance.”¹²⁵ This claim is misleading because the share of a TLD in total registrations, and the dynamics of this share, are not reliable indicators of market power of the TLD unless the relevant market in which the TLD belongs has first been correctly defined.

142. As we explained in our Second Report, the problem with market shares as indicators of market power is that these metrics can change significantly, depending on the products that one includes in (or excludes from) the market. If too distant substitutes are incorrectly included (or close substitutes incorrectly excluded), the market shares will overstate (or understate) the extent of market power of the product under scrutiny. Similar caveats apply to the use of market share dynamics for inference on market power. As we explained in our Second Report:¹²⁶

For example, a reduction of market share in a too broadly defined product market may be mistakenly interpreted as intensification of competition when instead a new adjacent, potentially even complementary, market is created. The constant volumes of a firm with market power would automatically imply lower market share due to the inclusion of the volumes satisfying new demand even when these new volumes exert no competitive constraint.

143. By referring to shares of registration in .ORG, .INFO, and .BIZ in total registrations as indicating lack of market power of these TLDs, Prof. Carlton implicitly treats all TLDs as relatively good substitutes of .ORG, .INFO, and .BIZ. This is unfounded for the reasons we have set out at length in our Second Report and restated above.

144. In fact, ICANN has itself recognized that it may not be appropriate to treat all TLDs as belonging to the same single market. Indeed, as we noted in our Second Report, the ICANN Board has in the past considered commissioning an economic study that would analyze the question of proper market definition in the DNS space; specifically, “whether the domain registration market is one market or whether each TLD functions as a separate market”, and relatedly “whether registrations in different TLDs are substitutable.”¹²⁷ While the DoC and DoJ have urged ICANN to carry out such a study, as far as we know, ICANN has not yet commissioned one.

145. Our understanding is that Prof. Carlton interprets the decline in the number of registrations on .INFO and .BIZ as indication of increasing competition that these TLDs face.¹²⁸ This is not necessarily the case. A decline in the number of registrations may also be a sign of a shrinking demand for registrations in .INFO and .BIZ. As a matter of principle, a decline in the number of registrations happens when the number of new customers is smaller than the number of customers

¹²⁴ See subsection 5.4 for the discussion of the relevance of the difference in counterfactuals.

¹²⁵ Carlton Report, ¶ 51.

¹²⁶ Second Report, ¶ 142

¹²⁷ www.icann.org. (2006). *Special Meeting of the Board Minutes - ICANN*. [online] Available at: <https://www.icann.org/resources/board-material/minutes-2006-10-18-en> [Accessed 18 Oct. 2021].

¹²⁸ Carlton Report, ¶ 63.

who decide not to renew their registration. The latter customers may indeed choose to register their domain in another TLD (which, as we showed in subsection 5.5.3.3, may be problematic because of high switching costs), but they may also decide to stop using a domain altogether.

146. Prof. Carlton also claims to have discussed market evidence from .INFO and .BIZ pricing and have found support for the statement that these “TLDs face competition from other TLDs both for new and renewal registrations.”¹²⁹ We have not been able to find any discussion of .INFO and .BIZ pricing in his report apart from footnotes 70 and 71 where this pricing is compared to the maximum allowed under prior price controls, and ¶38 where Prof. Carlton claims absolute price levels for domain registrations are modest. In our opinion, neither is indicative of competition that .INFO and .BIZ are allegedly facing. Instead, we show, in subsection 5.5.6.1, that .INFO and .BIZ pricing may indicate the presence of significant market power of these TLDs.

5.5.5 The fact that .ORG’s registry is a not-for-profit entity does not mean that it does not and will not have an incentive to exercise market power and set prices high

147. Prof. Carlton does not seem to contest our view that .ORG likely holds considerable market power. He states, however, that price caps would not be justified on .ORG for reasons other than absence of market power.
148. Prof. Carlton thus argues, first, that .ORG is “operated by the nonprofit entity Public Interest Registry (PIR), which has different incentives than a commercial operator would have.”¹³⁰ While he does not explain what “different incentives” imply for how .ORG would likely set its prices, Prof. Carlton seems to be suggesting that the nonprofit nature of PIR means that it will likely not exploit market power by setting prices above the levels that would prevail under effective competition, including because PIR stated publicly that it “has no specific plans for any price changes for .ORG”.¹³¹
149. Second, Prof. Carlton explains that .ORG has not raised prices in more than five years, despite being allowed to do so under price controls.¹³²
150. Third, Prof. Carlton states that PIR “also recognizes commercial realities that would limit its ability to raise prices, including competition from other TLDs and the fact that registrants can opt for a contract term of up to ten years during which the price paid by the registrant could not be raised.”¹³³
151. In our First Report we explained that the nonprofit status of .ORG’s registry PIR does not guarantee that PIR will not exercise market power by setting the registry prices for .ORG above competitive levels, even if its incentive to do so may be muted:¹³⁴

While not-for-profit organizations cannot distribute profits to owners, they may still pursue objectives other than serving their customers. These objectives may be best served when the organization generates substantial revenues, for example when it distributes its proceeds to charities.

¹²⁹ Ibid.

¹³⁰ Carlton Report, ¶ 66.

¹³¹ Carlton Report, ¶ 66.

¹³² Carlton Report, ¶ 67.

¹³³ Carlton Report, ¶ 68.

¹³⁴ First Report, ¶ 74.

152. The evidence we have reviewed in our Second Report is consistent with the hypothesis that .ORG continues to exercise its market power despite the nonprofit status of its registry.
153. It is true, as Prof. Carlton asserts, that .ORG’s headline price has not increased in over five years. However, .ORG’s price was — and remains — relatively high compared to many popular new gTLDs and ccTLDs. .ORG’s prices are also higher than .COM’s. As explained in our Second Report, such price differentials, absent a credible alternative explanation, indicate that .ORG holds and exercises market power despite its nonprofit status.
154. Moreover, as explained in our Second Report,¹³⁵ and shown in Figure 2, PIR seems to have been increasing effective average registry fees for .ORG — represented by the golden graph in Figure 2 — throughout the whole period between 2012 and 2021 (during the introduction of new gTLDs and after the removal of price caps in June 2019).¹³⁶ Meanwhile, as we also explained in our Second Report, PIR’s costs per .ORG domain have been decreasing since 2018, as depicted by silver graph in Figure 2, apparently on account of a new, more favorable contract for back-end services that PIR has been able to secure by running a competitive tender for registry back-end in late 2016.¹³⁷

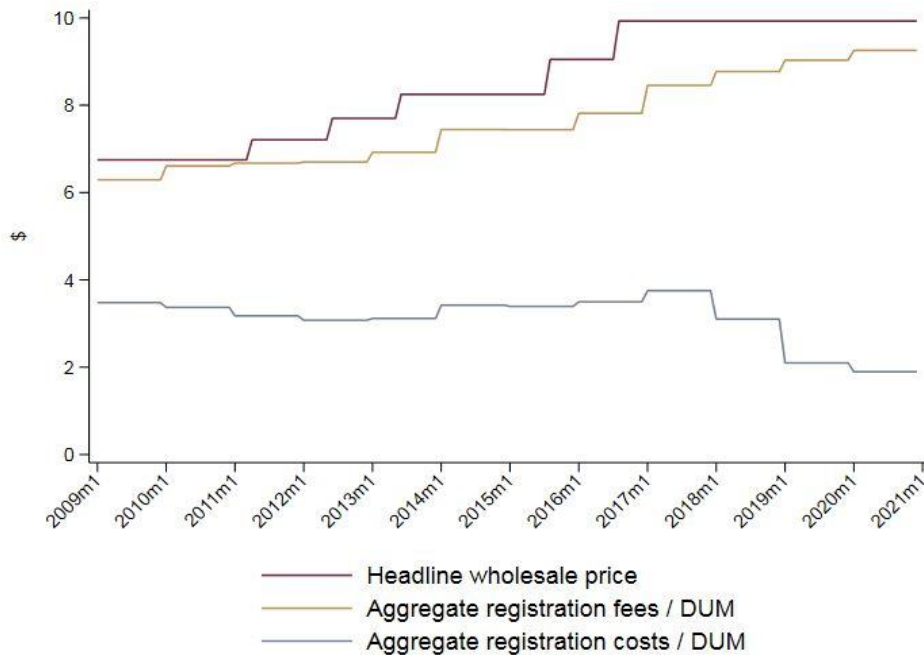


Figure 2: Average revenues per domain under management of PIR

Source: E.CA Economics using Forms 990 of PIR and data from ICANN as provided by Namecheap.

¹³⁵ Second Report, ¶ 159.

¹³⁶ For the average revenue per domain of PIR, the total registration fees of PIR in a calendar year are divided by the "Accredited" .ORG domains under management in January of the same year. Data on PIR’s registration fees is taken from its annual "Return of Organization Exempt From Income Tax" (also known as "Form 990"), a financial statement that contains - among other information - its annual revenues and expenditures (See .ORG. (n.d.). *990 and Annual Report*).

¹³⁷ Second Report, ¶ 164.

155. The seemingly increasing effective average registration fee for .ORG and contemporaneous reduction in average costs per registration indicate that PIR’s effective margins were increasing over the whole period. Increasing margins, in turn, indicate that .ORG’s market power has not been decreasing throughout the period, and may have been increasing. Indeed, changes in markups are used by competition authorities to measure changes in market power and are thought to be a more reliable indicator than changes in concentration.¹³⁸ More importantly, increasing margins indicate that PIR has been exercising its market power in relation to .ORG, contrary to what Prof. Carlton seems to expect from PIR.
156. We also note that the scope for price caps to improve the economic outcomes increases with increasing margins. This is because the range over which the price caps can constrain pricing without inefficiently limiting the registry incentives increases with an increase in the margin.¹³⁹
157. Prof. Carlton does not engage with this evidence and arguments as we set them out in our Second Report.

5.5.6 .INFO and .BIZ score high on reliable indicators of market power

158. In 5.5.4, we explained why market shares are not a reliable indicator of market power in the DNS space. In our view price differentials and margins are likely better indicators, and we used those in our Second Report. Prof. Carlton engaged, although in a cursory way, with some of our arguments regarding the latter indicators. Below, we explain these arguments again in light of Prof. Carlton’s engagement.

5.5.6.1 Large and persistent price differentials indicate lack of effective competitive interaction in the absence of a credible alternative explanation

159. In the Second Report we explained that, absent a credible alternative explanation, a persistent and significant difference in the level of registry fees between two distinct TLDs may indicate that they do not intensely compete. Prof. Carlton dismisses this argument without explaining the reasons except by stating that our reasoning is “overly simplistic”. Below we explain why we reject this Prof. Carlton’s characterization.
160. When we say that two products are close substitutes and effectively compete, we mean that a sufficiently large fraction of customers can quickly and effectively direct their demand to the cheaper product. Consequently, if the more expensive seller did not match the price of its rival closely enough, it would promptly lose a considerable share of its sales and profits.¹⁴⁰ In other words, it is not generally profitable for sellers to set prices for their product or services much above the prices of independently sold close substitutes of comparable quality levels.
161. When assessing whether two TLDs compete for new registrations, the most relevant prices are those for one year registrations and renewals. Indeed, Namecheap data indicates that more than

¹³⁸ OECD (2021). *Methodologies to Measure Market Competition*. [online] Available at: <https://www.oecd.org/daf/competition/methodologies-to-measure-market-competition-2021.pdf> [Accessed 2 Feb. 2022], p. 21).

¹³⁹ See Figure 1 and discussion in ¶¶ 100 – 102.

¹⁴⁰ Second Report, ¶ 133.

95% of registrants purchase a 1-year contract.¹⁴¹ Figure 3 shows that the most popular new gTLDs set prices for new registrations at relatively low levels compared to .ORG, .INFO, or .BIZ. This is not consistent with the hypothesis that the new gTLDs intensely compete with this group of legacy gTLDs. At the same time, the lower prices of .INFO, and .BIZ compared to .ORG are consistent with the hypothesis that these two TLDs hold less market power over registrants seeking to register new domains compared to .ORG, as we noted in our Second Report.¹⁴²

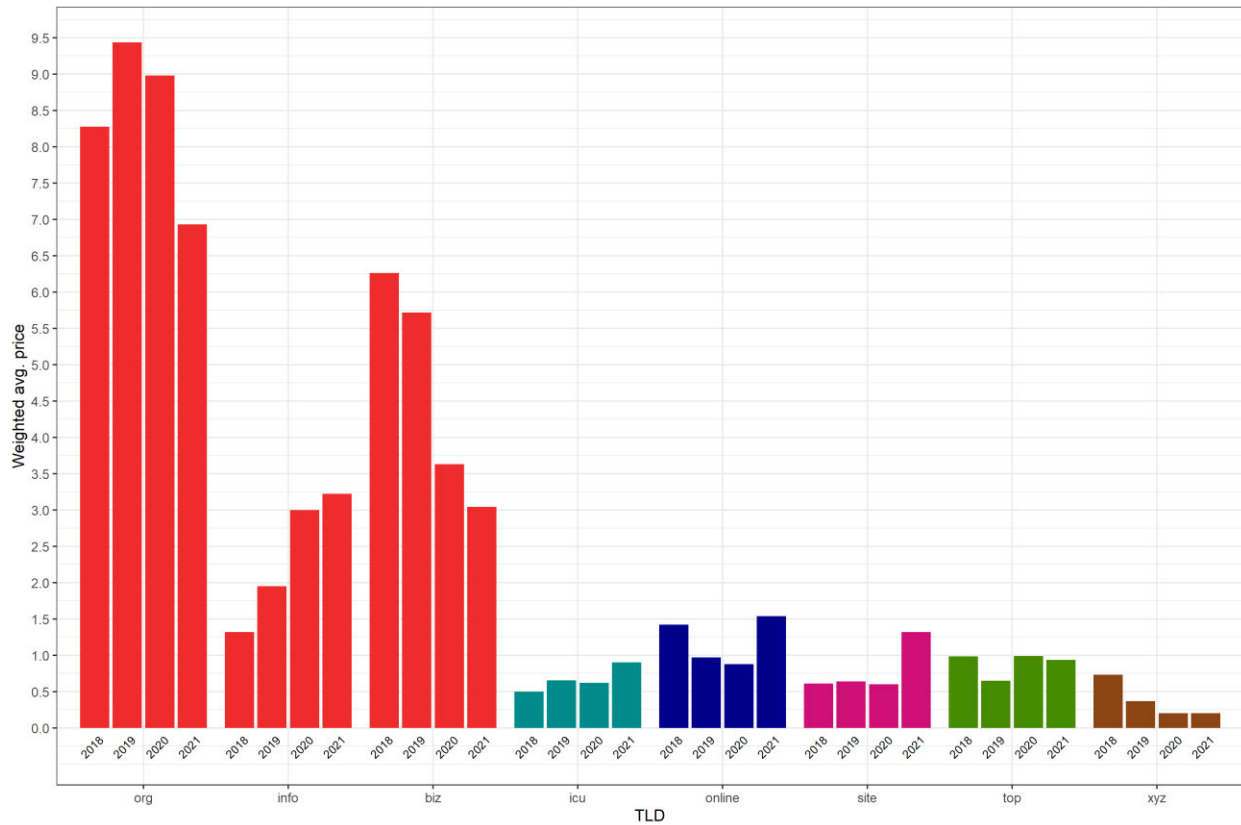


Figure 3: Average wholesale price for new registrations

Source: CompetitionSphere using Namecheap data

Note: The values are for one-year registrations and the weights are the number of sales.

162. We also get an indication that the price differentials presented above are not generally attenuated by the differences in prices for renewals. Indeed, in Figure 4 we observe consistently higher renewal

¹⁴¹ Specifically, in Namecheap’s data across all TLDs from 2016 till 2021 the registrations for only 1 year represent around 97% of all new registrations, whereas the 5-year new registrations represent only around 0.5% of all new registrations. The 10-year new registrations represent only 0.17% of all new registrations. Analysis of separate TLDs also shows a similar picture. For example, almost 98% of new registrations on .BIZ had duration of 1 year in the abovementioned period; only 0.35% of new registrations had a 5-year duration. .INFO had over 99% of new registration for 1 year and .ORG around 95%.

Similarly, around 97% of all renewals in Namecheap’s data across all TLDs from 2016 till 2021 are represented by one-year renewals, whereas the 5-year renewals represent only around 0.5% of all renewals. The 9-year renewals represent only 0.13% of all renewals. Analysis of separate TLDs also shows a similar picture. For example, .BIZ had around 98% of all renewals for 1-year in the abovementioned period and only 0.29% for 5 years. .INFO had around 98% of renewals for 1 year and .ORG around 97%.

¹⁴² Second Report, ¶¶ 165 and 178.

prices of .ORG, .INFO and .BIZ compared to those of .ICU, .TOP and .XYZ. At the same time, renewal prices of .ONLINE and .SITE are somewhat higher than those of .ORG, .INFO and .BIZ, which, one could in principle argue, may compensate for lower prices for new registrations to make the overall prices of .ORG, .INFO and .BIZ (new registration plus renewal) comparable to those of .ONLINE and .SITE. However, a relatively small proportion of registrants in .ONLINE and .SITE¹⁴³ renew their subscription (and thus renewal prices seem less relevant to the majority of registrants on .ONLINE and .SITE), and many of those registrants who do renew it, likely face significant switching costs. The high renewal prices of .ONLINE and .SITE are therefore more likely indicative of the market power that these TLDs have over the existing registrants who would like to renew their subscription rather than of the effective competition between .ONLINE and .SITE on the one hand, and .ORG, .INFO, and .BIZ, on the other.

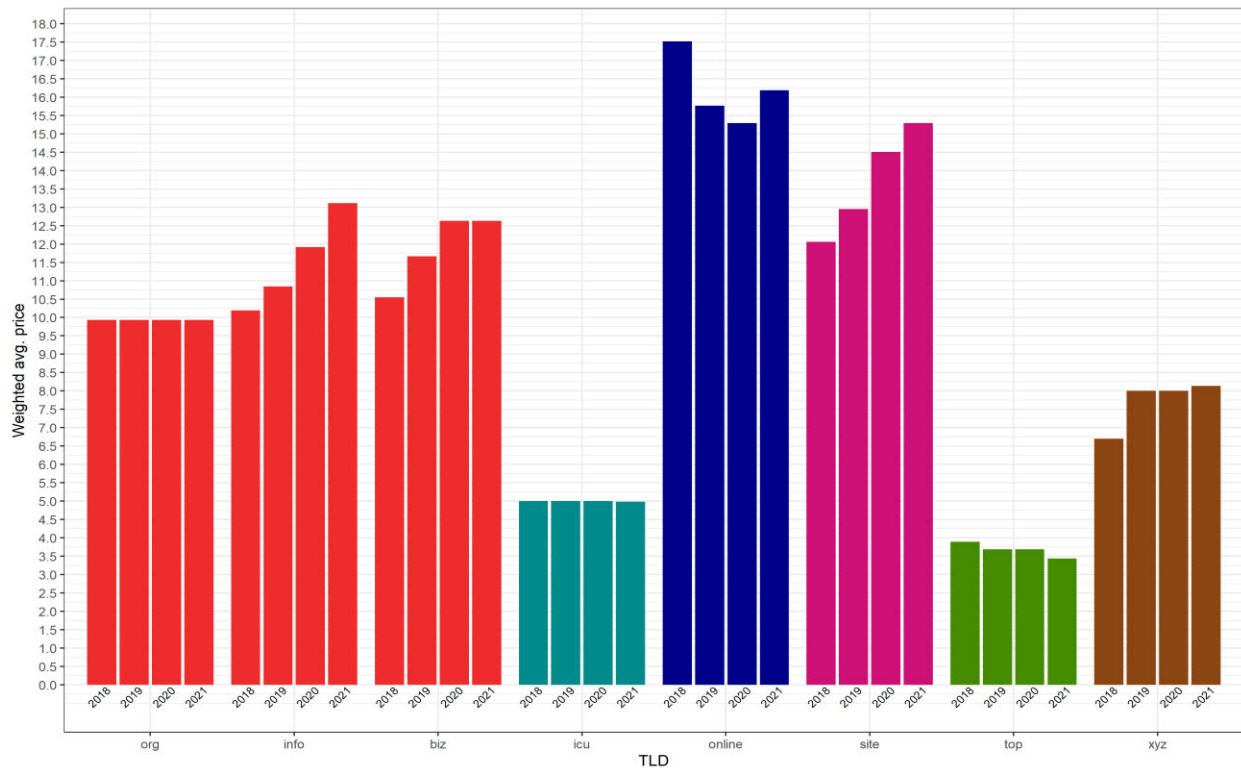


Figure 4. Average wholesale price for renewals

Source: CompetitionSphere using Namecheap data.

Note: The values are for one-year registrations and the weights are the number of sales.

163. In our Second Report we noted that significant differences in prices between competing products or services can sometimes be explained without invoking market power. One credible explanation

¹⁴³ To approximate the share of customers that renew their subscription, we calculated, from the Namecheap data, the share of 1-year renewals in a given month in the total number of 1-year registrations (both new and renewals) in the same month of the previous year. We then averaged these monthly shares over years 2019, 2020 and 2021 (till October 2021). For .ONLINE and .SITE, this share is 0.17 and 0.09 respectively, whereas it is 0.19 for .INFO, 0.68 for .BIZ and 0.75 for .ORG .

can be differences in quality, provided that the higher quality of the more expensive product is a result of greater innovation effort, or that it is more costly to produce the more expensive product of higher quality.

164. Therefore, when interpreting prices as indicators of market power, we assumed — and stated so — that the unit costs of registries of .ORG, .INFO, and .BIZ are not significantly higher than those of the registries of the most popular new gTLDs whose prices we compared.¹⁴⁴ We believe this is a reasonable assumption, in particular, because most of those new gTLDs have numbers of registered domains that are lower than those of .ORG, .INFO and comparable to those of .BIZ. Moreover, there is no evidence that registries of .ORG, .INFO, and .BIZ are especially innovative, which could potentially explain their higher registry prices without indicating that the TLDs hold persistent market power. More likely, the source of high margins is a historical endowment that we called a “first mover advantage” in our Second Report. Indeed, .ORG dates back to the origin of the internet, and .INFO and .BIZ have been around since the early 2000s. And none of these TLDs appears very special in terms of innovative marketing or in terms of the innovative registry services it offers.
165. While Prof. Carlton does not challenge the assumption that costs of .ORG, INFO, and .BIZ are unlikely to be significantly higher than the costs of the most popular new gTLDs whose prices we compared, he dismisses our analysis as “overly simplistic”. To that effect he states:¹⁴⁵
- Prof. Dr. Verboven and Dr. Langus’ criteria for identifying markets that would benefit from price regulation is overly simplistic and ignores the costs of regulation. For example, they state that the fact that .ORG, .INFO, and .BIZ charge higher prices than the top three new gTLDs means that .ORG, .INFO, and .BIZ have market power and are candidates for regulation. But it is also true that *many* TLDs charge higher prices than the three new gTLDs mentioned by Prof. Dr. Verboven and Dr. Langus. If, as Prof. Dr. Verboven and Dr. Langus appear to believe, charging a price higher than those three new gTLDs charge is a good indicator of market power and that setting regulated prices is easy and costless, then Prof. Dr. Verboven and Dr. Langus would presumably want to regulate many new gTLDs (in addition to legacy gTLDs such as .ORG, .INFO, and .BIZ).
166. Several statements in this passage are misleading. We have already explained why the statement that our reasoning “ignores the costs of regulation” is false and misleading in Section 5.3.3. As for the rest, nothing in our reasoning in relation to price differentials between .ORG, .INFO, and .BIZ and certain popular new gTLDs implies that we would “want to regulate many new gTLDs”.
167. Indeed, the high prices of *many* new gTLDs can credibly be explained by referring to their higher costs per domain, without relying on market power, as follows. Many of the new gTLDs that set relatively high registry prices target a highly specific groups of registrants. Such TLDs will naturally have relatively low numbers of registered domains, yet — just like .ORG, .INFO, and .BIZ — need to cover their fixed costs. Because the potential customer bases of such new gTLDs are smaller, they must charge higher registry prices. At the same time, these TLDs may be particularly valuable to a member of a small group of registrants precisely because of their highly specific meaning. Their registrants may thus be willing to pay a higher price. The registries of such TLDs will not necessarily be making excessive long-term profits despite higher prices (they may even be losing money), which would indicate that competition is effective.
168. In fact, a number of TLDs that Prof. Carlton gives as examples of potential substitutes for .BIZ likely fall into this category: they have small numbers of registered domains and set relatively high

¹⁴⁴ Second Report, footnote 122.

¹⁴⁵ Carlton Report, ¶ 46.

registry prices, as can be seen from Table 2.¹⁴⁶ In the table we report the weighted average price that Namecheap paid for new registrations, renewals, and a weighted average price across both new registrations and renewals (“wholesale blended fee”) for each TLD in 2021. These prices are generally substantially higher than those of .BIZ, as well as .ORG, and .INFO.

Table 2: Prices of TLDs with smaller customer bases in 2021

TLD	Domains under management¹⁴⁷	Weighted average fee for new registration	Weighted average fee for renewals
<i>menu</i>	6,475	27.82	27.82
<i>limo</i>	1,834	16.26	36.00
<i>cab</i>	2,803	14.89	21.50
<i>florist</i>	1,922	12.33	21.50
<i>consulting</i>	31,055	10.00	21.75
<i>coffee</i>	21,824	6.00	21.50
<i>careers</i>	8,963	5.31	35.50
<i>biz</i>	1,441,390	3.04	12.63

Source: CompetitionSphere using Namecheap data

Note: The values are for one-year registrations and renewals and the weights are the number of sales.

169. Given the highly specific meaning imbued in these new gTLDs, it is unlikely that they represent a good substitute for many potential registrants in .BIZ. The low numbers of registered domains in these TLDs, and their relatively high prices compared to .BIZ are consistent with this view.
170. Prof. Carlton’s statements above are also misleading because they suggest that we relied solely on price differentials for conclusions on market power in our Second Report. This is not the case. In our analysis we have assessed the characteristics of supply and demand for registry services and used several indicators of market power like margins and evolution of prices. We therefore also reject Prof. Carlton’s characterization of our approach as “overly simplistic”.

5.5.6.2 No strong response in registration volumes to entry of new gTLDs

171. In our Second Report, we also examined whether demand for registrations in .ORG, .INFO, and .BIZ reacted promptly to the entry of new gTLDs, given their significantly lower prices. We motivated this analysis as follows:¹⁴⁸

When an entry of one or more new TLDs does not result in a reduction of the number of registrations in a legacy gTLD, this may indicate that little switching of customers from the gTLD to the new TLD took place.

172. First new gTLDs were delegated in October 2013, but actual registrations only started in February 2014. For our analysis we therefore considered the volumes of registrations in December each year between 2013 and 2020 (at the time of the submission of our report, the figures for December 2021 were not available).

¹⁴⁶ Prof. Carlton listed the following TLDs as potential substitutes for .BIZ: .PRO, .LTD, .LLC, .CONSULTING, .CAB, .LIMO, .CAREERS, .MENU, .COFFEE, .FLORITS, and .STORE, as well as .NET, and .CO.

¹⁴⁷ Domains under management in December 2020

¹⁴⁸ Second Report, ¶ 139.

173. As shown in Figure 5, .ORG’s registration volumes were not visibly negatively affected by the entry of new gTLDs between 2015 and 2016 when registrations in new gTLDs grew fast. This is consistent with lack of .ORG’s response in price, which is why it strengthened our conclusion that new gTLDs do not effectively compete with .ORG.

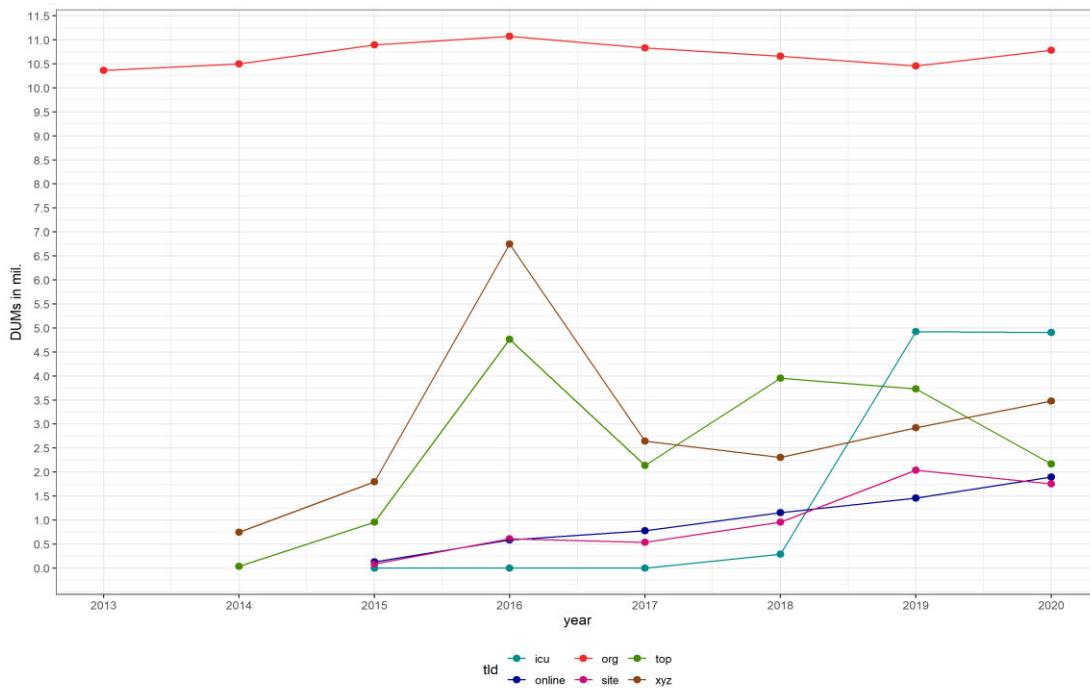


Figure 5: Number of registered domains in .ORG and popular new gTLDs

Source: CompetitionSphere using data by ICANN as provided by Namecheap.

Note: This figure corresponds to Figure 6 in the Second Report, with the addition of .ONLINE and .SITE.

- 174. The evolution of registration volumes in .INFO is consistent with the hypothesis that the entry of new gTLDs has not had a strong competitive impact on .INFO.
- 175. As shown in Figure 6, the volume of registrations in .INFO was falling already before the last wave of the introduction of new gTLDs. This trend continued until about the end of 2015. However, in 2016 and 2017, in the period of fast growth of new gTLDs, .INFO grew in terms of registrations as well. There are therefore no indications that .INFO would be losing registrations to new gTLDs in that period (despite the fast growth of some new gTLDs), which is not what we would expect if these new gTLDs were close substitutes for a large number of registrants in .INFO – i.e., if competition were effective.
- 176. Even though registration volumes on .INFO started declining again after 2017, this seems to have been accompanied by an increasing wholesale fee (see Figure 3 and Figure 4 for the fee dynamics after 2018), which is again not what one would expect if .INFO were facing increasing competitive pressure. This decline in registrations in .INFO is therefore consistent with the hypothesis of .INFO having significant market power.

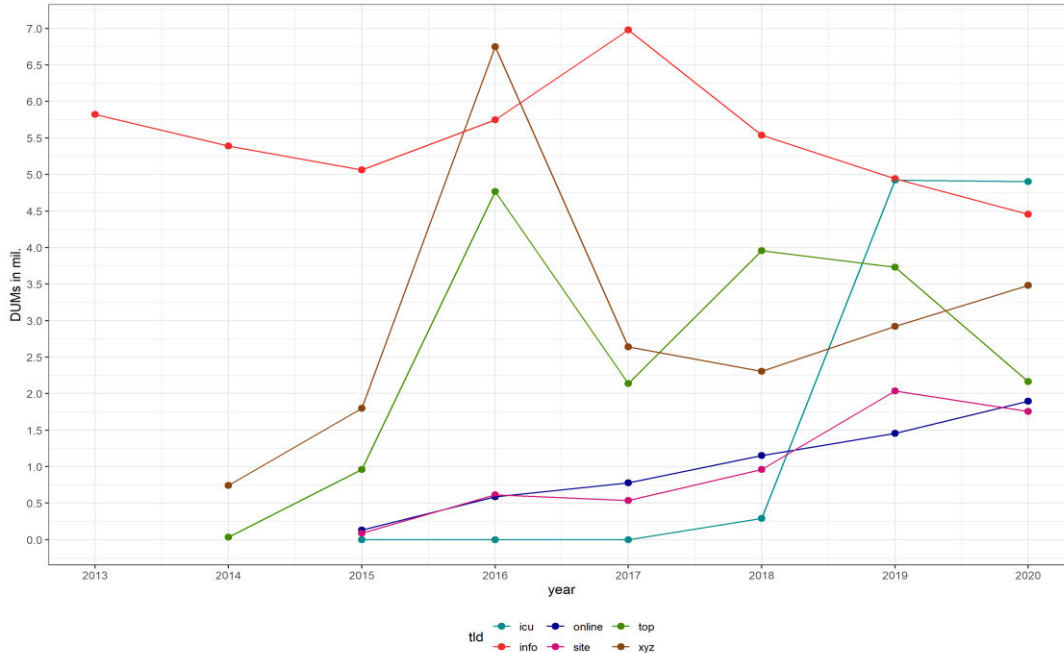


Figure 6: Number of registered domains in .INFO and popular new gTLDs

Source: CompetitionSphere using data by ICANN as provided by Namecheap.

Note: This figure corresponds to Figure 9 in the Second Report, with the addition of .ONLINE and .SITE.

177. Moreover, registration volumes in .INFO appear relatively stable overall, compared to registration volumes in several of the most popular new gTLDs. The most extreme examples in this group are .XYZ and .ICU. The number of domains in .XYZ went from approximately 1.7 million in 2015 to over 6.5 million in 2016 (a 4-fold increase in one year) and dropped again to 2.6 million by the end of 2017. Registrations in .TOP evolved in similarly erratic way as those in .XYZ.
178. Prof. Carlton states that our claim that registration in .INFO only moderately decreased in the period of fastest expansion in new gTLDs is incorrect and misleading:¹⁴⁹

First, their estimate of 5.1 million registered domains in 2014 appears to be an error. .INFO had 5.7 million domains in January 2014 and at least 5.4 million throughout 2014. Second, it is not clear why they start their analysis in 2014 and end it in 2020. The first new gTLDs were delegated in October 2013 and more information exists after December 2020. Updating their analysis, I find that domains registered on .INFO declined from 6,158,549 in September 2013 (the month before the first new gTLDs were delegated) to 4,141,653 in August 2021, a decline of 33%.

179. Prof. Carlton is right that we incorrectly reported the number of domains in .INFO in December 2015 (5.1) as relevant for December 2014 (5.4). However, this error had no impact on our assessment and conclusions. We interpret Figure 6 as indicating that .INFO’s registration volumes responded underwhelmingly to the entry of new gTLDs and their fast growth. Even if some degree of substitution is taking place between .INFO and new gTLDs in the long run, it does not seem to be

¹⁴⁹ Carlton Report, ¶ 62.

sufficient to keep registry prices and margins of the registry of .INFO low as seen when examining the evolution of prices of .INFO.

180. As for Prof. Carlton’s critique of our choice of the relevant period, he is right that the first new gTLDs were delegated in October 2013.¹⁵⁰ However, they were first made generally available in February 2014,¹⁵¹ and started gaining meaningful numbers of registrations during the second half of that year. Therefore, we took December 2014 as the starting date for the analysis and used the figures in December of every year to avoid potential seasonal effects.
181. In our Second Report, we stated the following for .BIZ:¹⁵²
- Moreover, .BIZ DUM figures are *relatively* stable compared to the larger new gTLDs, as Figure 12 illustrates. The stable demand for registrations in .BIZ also indicates that .BIZ holds market power.
182. Prof. Carlton seems to contest our second statement when he states:¹⁵³
- Likewise, Prof. Dr. Verboven and Dr. Langus claim that there has been “*stable demand for registrations in .BIZ*” over the past ten years. Yet domains registered on .BIZ decreased from 2,659,252 in September 2013 to 1,451,393 in August 2021, a decline of 45%. Over the same time period, total domains under management among gTLDs that submit monthly registry reports to ICANN increased by 46%, which means that both .INFO’s and .BIZ’s share of registrations among gTLDs that submit monthly registry reports to ICANN have declined (from 4.1% to 1.9% for .INFO, and from 1.8% to 0.7% for .BIZ).
183. Prof. Carlton chose to only cite, the second sentence of the paragraph where we noted that .BIZ enjoyed relatively stable demand compared to certain popular new gTLDs. This focus on the second sentence gives a false impression that we were suggesting that the number of registrations in .BIZ has not decreased over the past 10 years.
184. Instead, our argument is that registration in .BIZ did not respond much to the entry of new gTLDs (which indicates that these are not close substitutes for .BIZ) as can be seen by the fact that its domains have been, in fact, *relatively* stable compared to many popular new gTLDs.
185. As Figure 7 illustrates, the volumes of registrations in .BIZ are indeed relatively stable compared to the volumes of the most popular new gTLDs. The evolution of registrations in .TOP, .XYZ and .ICU is highly erratic and the contrast to .BIZ is apparent.

¹⁵⁰ See e.g., Newgtlds.icann.org. (n.d.) *Delegated Strings | ICANN New gTLDs*. [online] Available at: <https://newgtlds.icann.org/en/program-status/delegated-strings/> [Accessed 1 February 2022].

¹⁵¹ See e.g., www.iam-media.com. (2013). *Sunrise period for new gTLDs open*. [online] Available at: <https://www.iam-media.com/sunrise-period-new-gtlds-open> [Accessed 1 Feb. 2022].

¹⁵² Second Report, ¶ 189 [emphasis added].

¹⁵³ Carlton Report, ¶ 62.

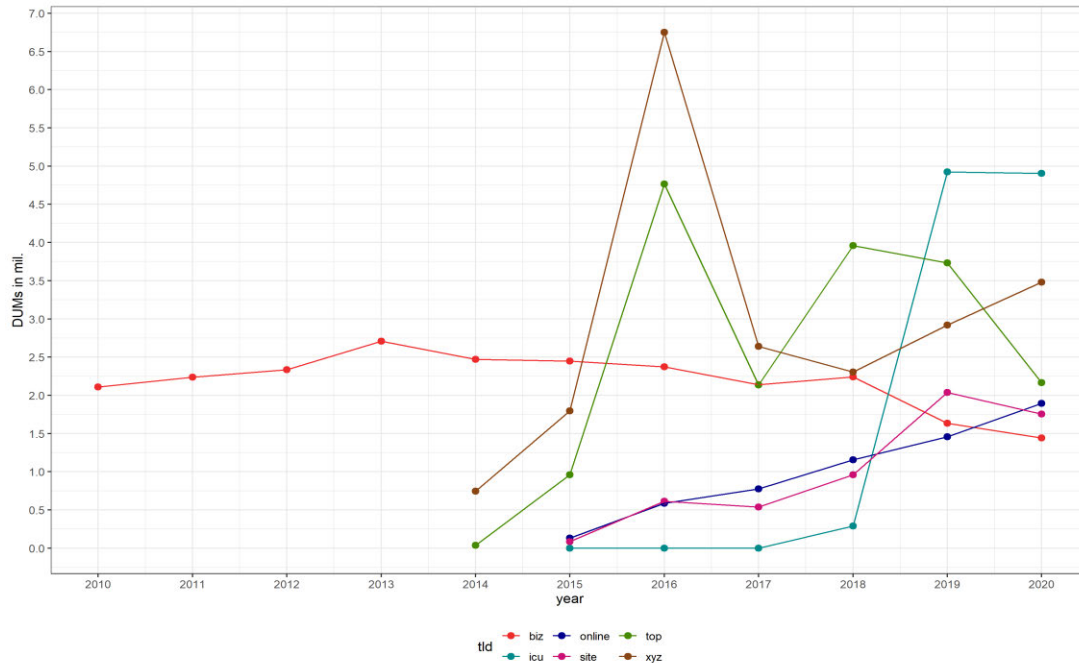


Figure 7: Number of registered domains in .BIZ and popular new gTLDs

Source: CompetitionSphere using data by ICANN as provided by Namecheap.

Note: This figure corresponds to Figure 12 in the Second Report, with the addition of .ONLINE and .SITE.

5.5.7 Ability to lock-in prices cannot eliminate the harm to registrants from future price increases

186. Prof. Carlton argues that the availability of long-term renewal options can protect registrants from significant price increases for registry services. He states:¹⁵⁴

Registrants also have protection because, even if they are locked-in to their TLD, they can respond to a significant price increase by invoking a renewal option to keep pricing at current levels for up to ten years. This limits any harm that could occur if .INFO and .BIZ significantly increased prices in the future.

187. We agree that the availability of long-term registration/renewal options can in principle mitigate the harm from a price increase for existing registrants and those registrants that are considering registering a domain between the time of a price increase announcement and 6-month thereafter.

188. However, as we argued in our Second Report, the long-term registration/renewal option is unlikely to *eliminate* that harm. Such a long-term contract would be associated with a given domain name, and implies a long-term commitment, which may be costly for the registrant. Indeed, as data from Namecheap indicates, only a small fraction of registrants have such long-term contracts today.¹⁵⁵

¹⁵⁴ Carlton Report, ¶ 65.

¹⁵⁵ As explained in note 141 above, 97% of Namecheap’s new registrations between 2016 – 2021 were for one-year. Similarly, around 97% of all renewals in Namecheap’s data across all TLDs from 2016 till 2021 are represented by one-year renewals, whereas the 5-year renewals represent only around 0.5% of all renewals. The 9-year renewals represent only 0.13% of all renewals. Analysis

189. Given that long-term commitments may be costly for a significant share of registrants, it is not clear that they would react to a price increase by purchasing a long-term contract, especially if the registry was exercising its market power by increasing prices gradually over time in the future, instead of by means of a one-time larger price increase. Indeed, the fact that a very small share of registrants purchase two-year or longer contracts upon registering a new domain indicates that many registrants prefer to pay a somewhat higher renewal price at the end of the first year rather than committing to a two-year or longer contract at the time of a new registration.
190. Moreover, long-term renewal options will not protect the registrants in .ORG, .INFO, and .BIZ who will need to register a domain more than 6 months after the announcement of a price increase.

of separate TLDs also shows a similar picture. For example, .BIZ had around 98% of all renewals for 1-year in the abovementioned period and only 0.29% for 5 years. .INFO had around 98% of renewals for 1 year and .ORG around 97%.

Expert Declaration

191. We confirm that we understand that our overriding duty is to the IRP Panel and that we must assist the IRP Panel on matters within our expertise. We believe that we have complied with this duty.
192. The assumptions upon which our analysis is based are reasonable and likely assumptions, corroborated by well-established economic literature, our review of the relevant facts, our analysis of data, and our review of the studies cited in this report.
193. We have no present or past relationship with any of the Parties.
194. We confirm that, as far as the facts stated in our report are within our own knowledge, we have made clear which they are and we believe them to be true, and that the opinions we have expressed represent our true and complete professional opinion.

Signed on 8 February 2022

Gregor Langus



Frank Verboven



Appendix: Scope of Review

In addition to discussion with Counsel and the references taken up in the report itself, we have relied on Namecheap’s estimate of the share of complementary services in its profits (*Domains and Complementary Services Gross Profit by Year (2017-2021).xlsx*) and the associated affidavit of Hillan Klein of 8 Feb. 2022.