EX-POST EVALUATIONS AS LEARNING OPPORTUNITIES

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INTRODUCTION

Referring to public policy-making in general, Kovacic (2006) states that "… strong mechanisms for evaluating outcomes and decisionmaking *(sic)* processes are not detached from, but instead are integral to, the creation of sound policy outputs."[2] Competition policy offers a fertile ecosystem in which to apply this thinking. During the last decade, many competition authorities have embraced the practice of reviewing their own work[3], and South Africa has been no exception.

The objectives pursued in ex-post evaluations of competition authorities' interventions reveal a variety of reasons why such reviews are "integral" to "sound policy outputs." Broadly speaking, they divide into the following four categories:[4]

- Demonstrating the external impacts and benefits of enforcement activities (on consumer welfare, other economic policy objectives, or on the macro-economy), to promote or defend the legitimacy of competition authorities, or competition law regimes in general.[5] This also supports the advocacy work in which most competition authorities invest considerable resources.

[1] We thank Dumakude Nxumalo for research assistance. The authors of this paper are employees at Genesis Analytics. The views expressed in this paper are those of the authors and do not necessarily represent the views of Genesis Analytics.
[2] Kovacic, W. E. (2006), "Using Ex Post Evaluations to Improve the Performance of Competition Policy Authorities." The Journal of Corporation Law, Vol. 31, pp. 504-547.
[3] European Commission (2015), "Ex-post economic evaluation of competition policy enforcement: A review of the literature." DG COMP staff paper, pg. 10. Available at http://ec.europa.eu/competition/publications/reports/expost_evaluation_competition_policy_en.pdf. [Last accessed July 2016].
[4] European Commission (2015), "Ex-post economic evaluation of competition policy enforcement: A review of the literature." DG COMP staff paper, section 2. Available at http://ec.europa.eu/competition/publications/reports/expost_evaluation_competition_policy_en.pdf. [Last accessed July 2016]. We do not include in this list additional objectives noted by the European Commission (2015) in section 2.5, which include the promotion of transparent decision-making; understanding the costs to businesses and authorities caused by complex processes; and benchmarking the performance of different authorities through standards-setting and comparisons across authorities.
[5] OECD (2012b), "Evaluation of competition enforcement and advocacy activities: the results of an OECD survey", DAF/COMP/WP2 (2012)7/FINAL, pg. 8. Available online at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2012)7/FINAL&docLanguage=En. [Last accessed July 2016].

- Improving the quality of the overall competition law regime by informing reviews of the law itself, or the introduction or refinement of the guidelines and practice notes that competition authorities occasionally publish.

- Informing a competition authority's internal priorities based on, for example, the previous interventions that have generated the largest impacts.

- Improving the effectiveness and quality of an authority's enforcement activity through improved decision-making, by learning from past decisions. This objective follows from the nature of many if not all enforcement decisions: they are subject to uncertainty, requiring reliance on hypotheses and theories about market dynamics and business behaviour.[6] This is especially true of merger decisions (including the effectiveness of remedies for competition concerns), and it is also true of remedies imposed on firms found to have abused their dominance.

This paper focuses on ex-post evaluations that fall into the last of the four categories described above. This choice is informed by our impression that these kinds of ex-post evaluations have been relatively scarce in South Africa, where most of the studies have focused on the first of the four objectives described above.[7] This activity is certainly to be encouraged, and is also a major focus of ex-post evaluation work in other jurisdictions, but it may not be adequate for assessing the quality of the competition authorities' decision-making. It may also be inadequate as a tool for learning about competitive dynamics in different markets.

This paper starts by briefly characterising the types of studies conducted in other jurisdictions that aim to improve decision-making through learning—to provide some sense of what these studies entail and how they are conducted. The section thereafter presents some potential candidates from recent South African cases that could generate interesting studies of a similar nature to leverage past experience to improve decision making. Mergers in the casino and hospital industries constitute two of these examples; the third example is the consent order entered into between the Competition Commission ('Commission') and Foskor following an investigation into the latter for excessive pricing of phosphoric acid.

The concluding section reflects on the value of these kinds of ex-post evaluations in the context of the Commission's priorities, its resource constraints, and the broader policy context within which it operates. As observed in this paper, versions of this kind of evaluation work can and potentially should be incorporated into investigation processes; additional resources need not always be required.

[6] OECD (2016). "Reference guide on ex-post evaluation of competition agencies' enforcement decisions." See Box 4. Available at http://www.oecd.org/daf/competition/Ref-guide-expost-evaluation-2016web.pdf. [Last accessed July 2016].
[7] Our review of South African ex-post evaluations is contained in the Appendix. As shown there, the focus in South Africa to date has largely fallen on estimating the impact of the Competition Commission's interventions in breaking up cartels, where the studies determine the extent of the overcharge and the benefits that the price reductions post the intervention would have for consumers. The other assessments conducted mostly cover the impact of merger remedies, particularly where the creation of a fund has been imposed as a remedy. In some limited instances, studies are conducted to determine if assumptions made by the Commission were correct.

EX-POST EVALUATIONS TO IMPROVE DECISION-MAKING: OBJECTIVES AND APPROACHES

Ex-post reviews assessing the quality of a competition authority's decision-making tend to focus overwhelmingly on merger decisions. Broadly speaking, they all try to investigate the accuracy of an authority's predictions at the time merger decisions were made by studying the impacts of an authority's decision on "… key market variables that affect consumer welfare …"[8], since most authorities aim to maximise consumer welfare through their work. In addition to price, which is the variable most frequently investigated[9], some studies also assess the impact of decisions on volumes, quality, variety, entry, innovation, the profitability of the merged firms, the profitability of rivals, and so on.

The logic underlying the approach of reviewing the quality of competition authorities' decision making was neatly summed up in 2002 by the then-Chairman of the Federal Trade Commission (FTC), who ordered a series of ex-post evaluations to investigate the reasons why the FTC had failed in its opposition to multiple consecutive hospital mergers in the USA. The purpose of these evaluations was to, "obtain useful real-world information, allowing the Commission to update its prior assumptions about the consequences of particular transactions and the nature of competitive forces in health care." The then-Chairman further noted that, "to the extent ex-post data reveal a real problem in some of these mergers, that data may bolster the Commission's position the next time it seeks a preliminary injunction against a proposed merger in federal district court."[10]

When testing whether a merger approval caused prices to increase (or a change in some other variable), econometric analysis is the most commonly-adopted approach, and offers a handful of different methods depending on the specific objectives and the availability of suitable data. Econometric studies are sometimes supplemented with surveys and interviews of customers and competitors—'triangulation' is generally encouraged.[11] Surveys and interviews can play the dominant role when variables other than price are of specific interest, since these other variables often present measurement challenges.[12]

[8] OECD (2012b), "Evaluation of competition enforcement and advocacy activities: the results of an OECD survey", DAF/COMP/WP2 (2012)7/FINAL, pg. 20. Available online at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2012)7/FINAL&docLanguage=En. [Last accessed July 2016].
[9] OECD (2012b), "Evaluation of competition enforcement and advocacy activities: the results of an OECD survey", DAF/COMP/WP2 (2012)7/FINAL, pg. 29. Available online at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2012)7/FINAL&docLanguage=En. [Last accessed July 2016].
[10] Both quotes may be found in OECD (2016), "Reference guide on ex-post evaluation of competition agencies' enforcement decisions," Box 11. Available at http://www.oecd.org/daf/competition/Ref-guide-expost-evaluation-2016web.pdf. [Last accessed July 2016].
[11] European Commission (2015), "Ex-post economic evaluation of competition policy enforcement: A review of the literature." DG COMP staff paper, pg. 61. Available at http://ec.europa.eu/competition/publications/reports/expost_evaluation_competition_policy_en.pdf. [Last accessed July 2016].
[12] See OECD (2012b), "Evaluation of competition enforcement and advocacy activities: the results of an OECD survey", DAF/COMP/WP2 (2012)7/FINAL, pg. 23. Available online at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2012)7/FINAL&docLanguage=En. [Last accessed July 2016].

When a study of this nature finds that an approved merger did not cause a price increase, it concludes that the authority was 'correct' in its decision to approve that merger, and that the supporting analysis was accurate and complete.[13]

The primary challenges in all such studies are as follows:

- Accurately identifying and characterising the appropriate counter-factual against which to compare market outcomes following an authority's decision. For example, when assessing approved mergers, the counter-factual is the market scenario that would have obtained absent the merger, which may not necessarily be a continuance of the pre-merger *status quo*.[14]

- Confidently identifying the causal link between the authority's decision and the impacts that followed by controlling adequately for all other factors that contributed to market outcomes (e.g. price increase) following the decision.

A secondary challenge arises when ex-post evaluations generate unexpected conclusions. This is sometimes reflected in the literature: "*It should also be borne in mind that … not all the ex-post studies that obtain 'unwelcome results' (e.g. a price increase after a merger clearance) are necessarily showing that the authority committed an error … It is also possible that the unwelcome result, e.g. a price increase, is outweigh[ed] by other positive outcomes that cannot be quantified, e.g. an increase in quality or variety of the products. Further, unwelcome results may be due to random errors*…"[15] These uncertainties can complicate the estimation and/or interpretation of so-called 'unwelcome results', and obfuscate the lessons the study set out to generate.

Due to complications in estimating and interpreting results, and because econometric studies depend heavily on good quality data, which may not always be available, other methods can be considered. For example, the New Zealand Commerce Commission ('NZCC') recently identified 18 merger approvals between 2008 and 2013; where it determined that a handful of clear, strong, and specific expectations drove the overall decision taken. It tested the accuracy of these predictions through relatively simple ex-post fact-gathering exercises that combined desk research and telephonic interviews of the merged entities, customers, and competitors. The NZCC found the following[16]:

- Too much reliance was placed on imports as a source of competitive constraint to the merged entity, and that the prospects for import competition post-merger should be more thoroughly assessed before approval is granted.

[13] OECD (2012b), "Evaluation of competition enforcement and advocacy activities: the results of an OECD survey", DAF/COMP/WP2 (2012)7/FINAL, pg. 20. Available online at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2012)7/FINAL&docLanguage=En. [Last accessed July 2016].
[14] European Commission (2015), "Ex-post economic evaluation of competition policy enforcement: A review of the literature." DG COMP staff paper, pg. 57. Available at http://ec.europa.eu/competition/publications/reports/expost_evaluation_competition_policy_en.pdf. [Last accessed July 2016].
[15] OECD (2016), "Reference guide on ex-post evaluation of competition agencies' enforcement decisions," pg. 12. Available at http://www.oecd.org/daf/competition/Ref-guide-expost-evaluation-2016web.pdf. [Last accessed July 2016].
[16] Csorgo, L., and H. Chitale (2015), "Targeted Ex Post Evaluations in a Data Poor World". Organisation for Economic Cooperation and Development, paper reference DAF/COMP/WP2(2015)10. Available online at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2015)10&docLanguage=En. [Last accessed July 2016].

- Mergers to duopoly require extra caution. “Given that not all exogenous changes are unforeseeable, greater consideration should be given to the possibility of such eventualities in more concentrated markets.”[17]

- When reliance is placed on future market entry by multinationals, it is important to include the opportunity costs facing multinationals in the set of entry costs or barriers to entry that are identified. This is because multinationals are continually choosing between countries in which to invest.

- Sunk costs are a significant barrier to entry, and where they are found to be low, the probability of entry is higher.

The UK competition authorities have periodically conducted similar appraisals of cleared mergers, to both assess the ‘correctness’ of the decisions taken and whether specific expectations were accurate. Like the NZCC study, these studies eschew econometrics in favour of interviews and desk research that aim merely to gather facts.

- A 2005 study[18] found, *inter alia*, that the UK Competition Commission had more often than not accurately predicted that market entry was likely. It also found that the UK Competition Commission had relied too much on ‘buyer power’ to constrain merged entities—in some cases pre-existing buyer power was found to have been weakened by the merger despite the existence of several credible suppliers.

- A 2009 study[19] found, *inter alia*, that both the Office of Fair Trading and the UK Competition Commission may have over-estimated the strength of barriers to entry into the markets that were reviewed. That is, entry and expansion occurred on a greater scale than the authorities had expected at the time of finalising their decisions. It also found inconsistency across decisions in the manner in which local geographic markets were defined for retail mergers, and the manner in which changes in concentration were measured, indicating a need to clarify in guidelines the circumstances under which the different approaches to these questions were likely to be applied.

Lessons can also be learned by applying this kind of fact-gathering approach to evaluations of the thinking that went into individual decisions. If an authority opposes a merger that was eventually approved, did the reasons for its opposition materialise after the merger was consummated? If not, was the authority’s understanding of the competitive dynamics of that particular market inaccurate? If so, how can an ex-post review be used to refine it?

[17] Csorgo, L., and H. Chitale (2015), “Targeted Ex Post Evaluations in a Data Poor World”. Organisation for Economic Cooperation and Development, paper reference DAF/COMP/WP2(2015)10, paragraph 25. Available online at http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP2(2015)10&docLanguage=En. [Last accessed July 2016].
[18] Office of Fair Trading, UK Competition Commission, and the UK Department of Trade and Industry (2005), “Ex post evaluation of mergers,” pg. 106. Available at http://webarchive.nationalarchives.gov.uk/20140402142426/http://competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/our_role/evaluation/ex_post_evaluation_of_mergers. [Last accessed July 2016].
[19] Deloitte (2009), “Review of merger decisions under the Enterprise Act 2002: A report prepared for the Competition Commission, Office of Fair Trading, and the Department for Business, Enterprise, and Regulatory Reform.” Available at http://webarchive.nationalarchives.gov.uk/20140402142426/http://www.oft.gov.uk/shared_oft/reports/Evaluating-OFTs-work/oft1073.pdf. [Last accessed July 2016].

Alternatively, what aspects of the decision that was eventually taken to approve the merger were deficient?

The same logic can be applied to ex-post reviews of abuse of dominance remedies. What was the authority's reasoning in support of the remedy that was imposed, what were its expectations regarding the impact of the remedy, and how accurate were these compared to what actually transpired in the market after the remedy was imposed? Again, if actual developments diverged from those which were expected, what lessons can be learned?

This approach only seeks to compare an authority's expectations—its theories or hypotheses about how a particular market or a particular remedy will work—against the available evidence concerning how that market or that remedy actually works. Reviews of this kind may be imperfect, but, among other benefits, they offer speed, simplicity, and a relatively low resource burden, without compromising on the main objective—to gather facts that can inform and improve future decision-making.

EXAMPLES OF LEARNING OPPORTUNITIES FROM SOUTH AFRICAN CASES

The purpose of this section is to discuss examples from recent South African cases of potential ex-post evaluations that could inform future decision-making. The first two focus on learning about competitive dynamics in particular markets—the examples we discuss are taken from mergers in the casino and hospital markets. The third focuses on the value of learning about the efficacy of the excessive pricing remedy agreed to by Foskor in the market for phosphoric acid.

Competitive dynamics in casino markets—expectations versus reality

A considerable amount of analysis of how competition actually works in South Africa's casino markets has taken place in the past five years or so, starting with the acquisition of Gold Reef Resorts by Tsogo Sun, which was approved by the Competition Tribunal ('Tribunal') without conditions in 2011.[20] It is clear from the debates that have emerged over this period that competitive dynamics in casino markets are unconventional, and that a considerable degree of uncertainty clouds predictions of the specific impacts of casino mergers.

The Commission opposed Tsogo Sun's acquisition of both of the two Gauteng casinos belonging to Gold Reef Resorts, namely Gold Reef City just south of Johannesburg, and Silverstar casino in Krugersdorp on the West Rand. The Commission argued that the merger should only be allowed if Silverstar casino was divested. Tsogo Sun owns Montecasino, which is located in Fourways, north of Johannesburg.

In its investigation, the Commission found a 'central Gauteng' market for casino complexes that excluded all other forms of entertainment, and also excluded the Emerald and Morula casinos, which are located in the far south and far north of Gauteng, respectively. The

[20] Tsogo Sun Holdings (Pty) Ltd and Gold Reef Resorts Limited, Competition Tribunal case number 26/LM/May10. The casino complexes in Gauteng affected by this merger were Gold Reef City and Silverstar Casino (belonging to Gold Reef Resorts), and Montecasino (belonging to Tsogo Sun).

Commission's main contention was that, in this central Gauteng market, the two Gold Reef Resorts casinos provided the strongest competitive constraint on Montecasino, because they are located closest to Montecasino. The other two central Gauteng casinos, Emperors Palace and Carnival City, are located further away, and therefore, in the Commission's view, provided a weaker constraint.

The Commission posited that the prices of a casino's gaming services[21] are constrained by other casinos, particularly those closest to it, as are other important variables, such as the level of effort expended on developing gaming and marketing innovations, and the level of capital invested in refurbishments, upgrades, and expansions. The Commission further held that the overall offering at casino complexes is not determined in any significant way by non-casino entertainment options in the surrounding areas.

On the basis of these views, the Commission believed that the Tsogo Sun-Gold Reef Resorts merger would lead to increased prices in the central Gauteng market. Another expectation held by the Commission was that the investment effort of Tsogo Sun across all three properties would be lower with the merger than the combination of the separate investment efforts of Gold Reef Resorts and Tsogo Sun, and that the same would apply to innovation effort.

These expectations were thoroughly contested in the Competition Tribunal, along with a multitude of hypotheses concerning consumer behaviour, in particular the willingness of consumers to travel regularly to casinos outside of their local areas of work or residence—debates that were and still are relevant to determining the extent of the geographic markets in which Gauteng casinos operate. Despite significant amounts of evidence and analysis being presented by the Commission and by the merging parties, few conclusive views emerged.

The Tribunal concluded its decision as follows: *"Although the Tribunal accepts the Commission's hypothesis that the merging parties' casinos in central Gauteng theoretically may be each other's closest competitors we conclude, based on the available qualitative and quantitative evidence, that there is no sound evidential basis to find that the proposed transaction is likely to substantially prevent or lessen competition in a central Gauteng casino gaming market and therefore that the divestiture of Silverstar is warranted. In particular we find independent merger-specific evidence to be lacking in regard to casino customers' preferences and likely post merger behaviour. The Commission has a higher burden in terms of the Act than simply criticising the merging parties' hypotheses; it must provide evidence that the merger under consideration is likely, on a balance of probabilities, to substantially prevent or lessen competition in a specific relevant market."*[22]

The "sound evidential basis" required by the Tribunal could be generated through an ex-post evaluation of the impact of the Tsogo Sun-Gold Reef Resorts merger on key variables such as price. Such an evaluation would prove useful should another merger in the casino industry be proposed. It would also be relatively easy to carry out, because the merger itself has been

[21] In the casino industry the 'prices' over which casinos have some control are the so-called 'hold percentages' set on slot machine games. These percentages indicate the theoretical value of each bet placed by a customer on a slot machine over an infinite number of bets on that slot machine. The actual hold percentage applicable to a slot machine in any time period will diverge from this theoretical value, and part of the reason for this divergence is the existence of payouts to customers (customer winnings), and the structure of bonus systems. The hold percentage for a whole casino is the weighted average of the hold percentages of each slot machine. Large Gauteng casinos operate thousands of slot machines.
[22] Tsogo Sun Holdings (Pty) Ltd and Gold Reef Resorts Limited, Tribunal case number 26/LM/May10, paragraph 169.

the only major change to the Gauteng casino industry in the past five years. To the best of our knowledge, the Gauteng Gambling Board ('GGB') has introduced no changes to casino regulations since 2011 (for example, to the maximum theoretical hold percentage regulation), and no entry has occurred (although a form of expansion will occur when the new Pretoria casino opens, in 2017). The only potentially-relevant change between 2011, when the merger was approved, and now, has been growth in electronic bingo operations and limited payout machines[23], and this can be factored into the analysis as required.

The period since the consummation of the merger thus provides an ideal 'laboratory' in which to develop a richer factual basis for understanding competitive dynamics in Gauteng's casino markets (and possibly casino markets in other provinces), and upon which to consider alternative theories of competition in these markets. What follows is a brief analysis of publicly-available information germane to this objective, to provide a sense of what could be achieved.

Investment

Subsequent to the approval of the merger and integrating the Gold Reef Resort business in 2012, Tsogo Sun has embarked on major investment programmes at both Silverstar casino and Gold Reef City. According to the Tsogo Annual Reports:[24]

- The Gold Reef City refurbishment and expansion is a R630 million project which will include an increased casino offering, cinemas and additional restaurants at the casino and additional food and beverage outlets, as well as improved access systems at the Theme Park with an improved linkage to the casino complex, and an expansion of the Apartheid Museum.

- The Silverstar expansion and redevelopment is a R560 million project which includes additional dining options, an outdoor events area, cinemas, ten-pin bowling alley, laser tag games, an expanded and enhanced casino floor and parking. The project was scheduled for completion by September 2014.

This behaviour does not indicate that investment incentives are driven by the presence of rival casinos, nearby or not, nor does it indicate that the merger weakened Tsogo Sun's incentives to invest, or overall investment incentives in the central Gauteng market. If anything, it indicates that Gold Reef Resorts had under-invested in its properties, or perhaps ran its business according to a different model than does Tsogo Sun.

It is possible that, had the merger been prohibited, Gold Reef Resorts would have made similar investments in its properties to those made by Tsogo Sun. But the merger could be said to have generated a negative impact on investment only if the investments Gold Reef Resorts would have made exceeded those that Tsogo Sun did make. An ex-post evaluation that included interviews with former Gold Reef Resorts' management may have been able to determine what their investment plans would have been had the merger been prohibited.

[23] Electronic bingo machines are similar to casino slot machines in the way in which they work and the way in which a customer interacts with them; and 'limited payout machines' are slot machines accessible in non-casino venues (e.g. bars) that are subject to strict maximum bet and maximum payout regulations.
[24] Tsogo Sun's 2014 Integrated Annual Report, Tsogo Sun's 2011, 2012 and 2013 Annual Reviewed Preliminary Financial Results.

Reviews of Gold Reef Resorts' business planning documents would also have provided insight into this question.

Clear conclusions on the motivations for and results of the investments casino operators make in their properties would greatly improve our understanding of competitive dynamics in casino markets.

For example, if investment is not primarily a function of rivalry between casino complexes, but instead a function of the basic requirement of 'being attractive' to consumers, this opens an interesting question on the extent to which casino complexes—which in South Africa offer a large array of non-gambling entertainment (theatres, movies, retail, etc.), food, and accommodation services—have regard for other entertainment venues (such as shopping malls) in their immediate surrounding areas when determining their overall service offering. It may well be that these aspects of a casino's business are primarily determined with reference to non-casino alternatives, since in South Africa it is typically the case that no two casino complexes are located very close together, allowing each to benefit from a relatively captive 'catchment area' (this was a conscious choice made by the gambling boards when issuing licenses).

In a model of casino competition that only considers other rival casino complexes to be relevant to the investment decisions each casino complex makes, none of these non-casino dynamics can be taken into account or adequately explained.

Prices

The GGB reports aggregate data that allows for the estimation of average prices for casino gambling services (slot machines and table games) over time. Specifically it reports, for all seven Gauteng casinos, gaming revenue generated (also known as the 'house win'—this is the revenue kept by the casino from gaming activity), slot machine 'handle' (the total value of money bet on slot machines), table 'drop' (the total value of chips purchased for the playing of table games), as well as casino tax paid.

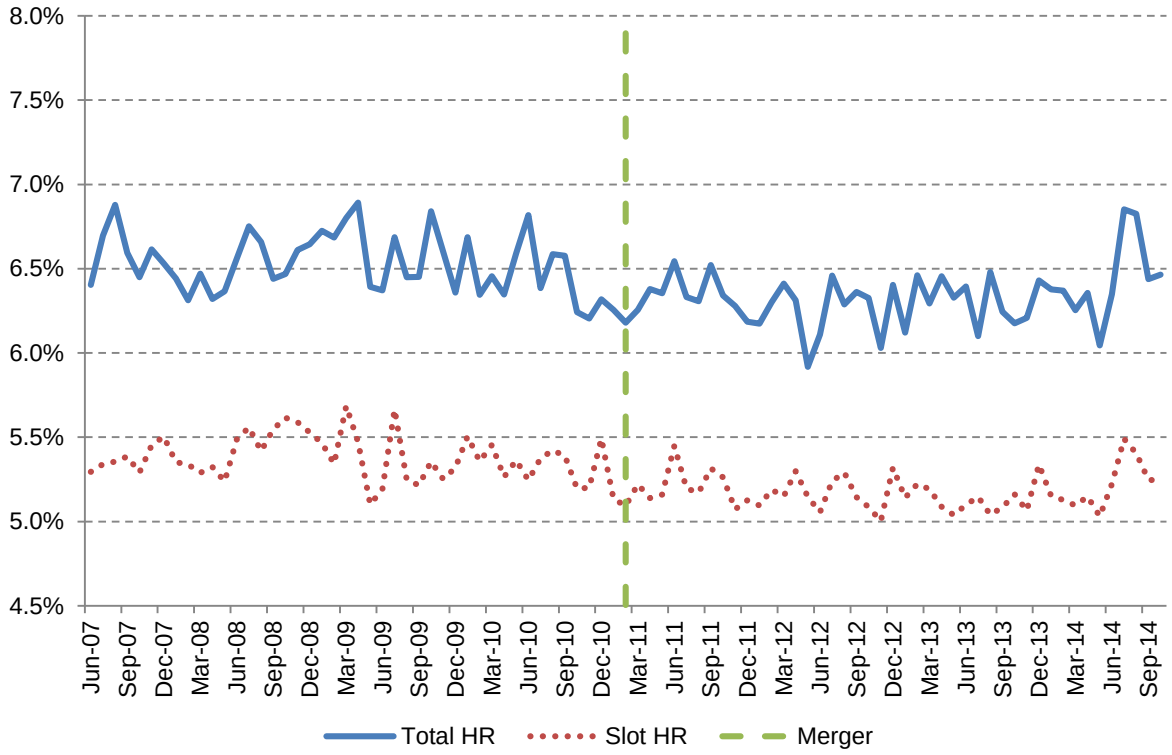
From this, one can determine the average net hold percentage of all seven Gauteng casinos, since this is the gaming revenue generated for the casinos, less tax, divided by the combination of the total slot machine 'handle' and total table 'drop'.[25] This net hold percentage is the average price for all seven casinos. Because the GGB publishes time series data, one can also investigate how this average net hold percentage has changed over time.

This analysis is provided in the figure below, covering the period from mid-2007 to late-2014, on a monthly basis. It shows net hold percentages for slot machines separately, as well as an aggregate 'price' of slot machines and tables.[26] The figure indicates that the average net hold percentage for Gauteng in the period before Tsogo Sun acquired Gold Reef Resorts was effectively the same as they were in the period thereafter—if anything, they were marginally *lower* than in the post-merger period. On a weekly basis, the average net 'hold percentage' of

[25] A net hold percentage in this instance means the hold percentage after casino tax paid.
[26] As table 'drop' is the total value of chips purchased, it does not show the gaming revenue generated for a casino by table games. When combined with machine 'handle' (the value of bets placed on slot machine games), the resulting aggregate 'price' will be slightly inflated, since the value of chips purchased will exceed the value of gaming revenue generated for a casino.

the casinos as a whole was 6.3% across 193 weeks after the approval of the merger, in comparison to 6.5% for the 193 weeks prior to the approval of the merger. For slot machines separately, the average net hold percentage was 5.1% for the 193 weeks post-merger, compared to 5.4% for the 193 weeks prior to the merger.

Figure 1: Average Gauteng net hold percentages monthly 2007-2014 (total casino and slots only)



Source: GGB Financial Statistics.

Note: Total HR = the net hold percentage for slots and table games combined. Slot HR = the net hold percentage for slot machines separately.

This indicates that the Tsogo Sun-Gold Reef Resorts merger did not result in an increase in prices of casino gaming in the central Gauteng casino market. If a casino's pricing is constrained primarily by the casinos nearest to it, and secondarily by more distant casinos in the same region (e.g. 'central Gauteng'), Tsogo Sun's acquisition of the two Gold Reef Resorts casinos, which are the two closest to Montecasino, should have relaxed price competition in the central Gauteng market.

It is possible that this result was driven by price decreases at the four other casinos in Gauteng, while the prices at the three Tsogo Sun-controlled casinos increased. This seems unlikely, however, since two of these four (the Emerald and Morula casinos) are much smaller than the other five Gauteng casinos—they are therefore unlikely to create significant impressions on averages that reflect all seven Gauteng casinos. The data shown above is driven by Tsogo Sun's three casinos, as well as Emperors Palace, and Carnival City.

Perhaps more to the point, the Commission is empowered to gather pricing data from these market participants to test the possibility mentioned above. That is, the Commission would not

be forced to rely on publicly-available data—it could either ask the GGB for the individual submissions of each casino group, or ask the casino operators directly. This would reveal whether prices at any of the Tsogo Sun casinos increased or not, regardless of what happened elsewhere.

Such an investigation would provide valuable insights into questions surrounding product and geographic markets (and underlying consumer behaviour), and related competitive dynamics. In a sense, such an investigation would shed light on revealed consumer preferences, and for that reason be more valuable than consumer surveys or the views of casinos themselves on what drives consumer decision-making.

- If such an investigation did show that prices at Tsogo Sun casinos rose post-merger, the Commission's theory that casinos located nearest to each other constrain each other's competitive behaviour would be supported by a strong factual base. It would also suggest that a 'central Gauteng' geographic market is too wide, since the Tsogo Sun casinos were not prevented from increasing their prices by Emperors Palace or Carnival City. Second, and for the same reason, it would indicate that the alternatives to casino slot machine gambling also do not prevent casinos from increasing prices.

- On the other hand, if such an investigation confirmed the inferences one can draw from the GGB data—that prices at the Tsogo Sun casinos did not increase and may have decreased slightly after the merger—the Commission would have a factual basis to revise its understanding of competitive dynamics in the Gauteng casino industry.

Consolidation in private hospital markets—what can we learn from the past?

The hospital sector in South Africa is concentrated, largely as a result of consolidation through mergers. The sector is comprised of three large hospital groups, namely Netcare, Mediclinic and Life, an association of independent hospitals (the National Hospital Network, or NHN), as well as several independent hospitals that are unaffiliated with any association. According to the Council of Medical Schemes, the three large hospital groups increased their combined national market share from 50% in 1996 to 88% by 2006.[27] Since then, the large hospital groups have continued to acquire smaller independent hospitals. For instance, through two separate mergers between 2001 and 2011, Life increased its market share from 10% to 50% in the Greater Durban market[28].

The issue of concentration and its implications for market power in the hospital sector has been an ongoing concern in South Africa. It forms part of the Market Enquiry into Private Healthcare, which is still in progress and has identified concentration in the hospital sector (as well as in medical scheme administration market) as an issue for further examination. This is expressed in the Revised Statement of Issues.

[27] Council for Medical schemes (2008) "Evaluation of Medical Schemes' Cost Increases: Findings and Recommendations": Available online at: http://www.medicalschemes.com/files/Press%20Releases/ReportMedicalSchemeCostIncreases.pdf [Last accessed August 2016], p. 27.
[28] Robb, G. ((2014) "Creeping mergers – should we be concerned? A case study of hospital mergers in South Africa". Available online at http://www.compcom.co.za/wp-content/uploads/2014/09/Creeping-mergers-conference-paper-Final.pdf [Last accessed August 2016]. P. 8

"It is also possible, however, that consolidation - and thus increases in firms' market share - has enabled particular hospital groups to exercise unilateral market power to the detriment of consumers, both by increasing prices unnecessarily or by inducing excessive demand. The former might notionally be achieved through price negotiations with (predominantly) administrators who do not effectively assert a countervailing power. The latter is possible through a systematic avoidance of contractual arrangements that would, for instance, transfer the market risk of excessive demand to the hospital groups. It is likewise possible that market power has arisen, and is exercised, through oligopolistic conduct which - without necessarily involving collusion - enables firms to shadow each other's pricing and other supply behaviour without subjecting each other to intense competition". [29]

The mergers that have contributed to increased concentration in the market over time have been frequently opposed by the Commission and interveners, but have ultimately been approved by the Tribunal, who determined that there was an insufficient basis to block the merger. This is often because the increase in market share was not significant, or there was insufficient evidence to show that the increase in concentration would significantly lessen competition and lead to higher prices relative to the counterfactual position.[30]

Merger analysis in this market is often complex and involves a number of considerations, such as determining the impact of a merger for national bargaining with medical schemes (including the role of regional dominance on such negotiations and the impact the increase in concentration would have on the bargaining dynamics with administrators) and the impact on local competition for specialists and patients. In light of the complexity inherent to most hospital mergers, there is a strong case to conduct an ex-post analysis of how mergers have impacted on the ability of hospitals to exercise market power and how dynamics in the market have changed after each merger. This exercise could yield critical insights that would help inform merger decision-making going forward.

The ex-post analysis could be used to test a number of ex-ante assumptions on competitive dynamics that are intrinsic to most merger assessments in the private hospital sector, including:

- Market definition, particularly geographic market where there has been debate on the scope of the geographic market.
- Understanding how mergers impact on the bargaining dynamics between hospitals and funders and whether there has been any impact on the countervailing power held by administrators, including their ability to conclude alternative reimbursement payment structures and preferred provider agreements with hospitals.
- The impact the mergers have had on local competitive dynamics, including the ability of competitors to compete for doctors' referrals, for example.

[29] Competition Commission Health Market Inquiry, Revised Statement of Issues (11 February 2016). Available online at: http://www.compcom.co.za/wp-content/uploads/2016/02/Revised-Statement-of-Issues-11-February-2016.pdf [Last accessed August 2016], p. 15

[30] Other considerations, like failing firm also feature in the decisions. See Felet, A., D Lishman, D. and F. Fiandeiro (2012) "Do hospital mergers lead to healthy profits?" Paper presented at the 6th Annual Conference on Competition Law, Economics and Policy hosted by the Competition Commission of South Africa. Available online at: http://www.compcom.co.za/wp-content/uploads/2014/09/Hospital-profitability-paper-Final-draft.pdf [Last accessed August 2016]

Importantly, the ex-post assessment could also assist in determining whether the mergers did in fact lead to higher prices. It is particularly difficult to compare prices in the hospital sector given the differentiated nature of most procedures (which will range in complexity depending on the nature of each case), the application of different reimbursements methods, the extent of risk sharing between funder and hospitals, etc. We are, however, aware of at least two studies in the US and the Netherlands that have tried to determine whether mergers have led to higher prices in the hospital sector:

- The FTC considered the effect that two hospital mergers had on prices negotiated with managed care organisations (MCOs). The study found that in respect of the one merger, large post-merger price increases were observed for almost all of the MCOs that could not be explained by other factors. However, in respect of the second merger examined, there was no empirical evidence to suggest that prices had increased post-merger[31].

- The Netherlands Competition Authority reviewed the impact that two mergers involving Dutch hospitals had on prices for hip surgery. Linked to the price analysis, the study also assessed how patients responded to price increases and whether they switched to other hospitals in response to a price increase. The assessment revealed substantial and statistically significant price increases for one of the mergers, but the results for the second merger were not statistically significant. The study also found that while the travel time of patients increased marginally after both mergers, in respect of the hospital where a price increase was observed, patients did not respond to price increases by switching to other hospitals and the insurers did not seem to channel the patients to other hospitals either. This observation was inconsistent with the prior assumption held by the authority that patients would travel in response to price increases.[32] In this way, the observed price increases could be linked to an assumption that did not materialise in reality.

There is a strong case to be made that ex-post assessments of hospital mergers would be of value for South Africa[33]. The issue of increasing concentration in the South African private hospital sector in the context where private healthcare costs are also increasing has been recognised by the Tribunal as a concern[34] and is identified as an issue in the market enquiry. There has been significant merger activity in this sector and it is likely that further potential mergers will need to be assessed by the competition authorities which would benefit from the type of ex-post assessments described here.

An ex-post assessment in the hospital sector would allow the authorities to test the assumptions commonly applied in hospital merger assessments to determine if expectations matched reality – much like the Dutch authority did with respect to examining the extent to

[31] Hass-Wilson, D. and C. Garmon (2009), "Two Hospital Mergers on Chicago's North Shore: A Retrospective Study, Federal Trade Commission Working Paper No. 294. Available online at: https://www.ftc.gov/reports/two-hospital-mergers-chicagos-north-shore-retrospective-study. [Last accessed August 2016]
[32] Kemp, R. and A. Severijnen (2010), "Price effects of Dutch hospital mergers", NMa Working Papers, No. 2. Available online at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1769544. [Last accessed August 2016]
[33] Based on limited publically available information for South Africa, a study has shown that increases in market concentration have corresponded with a period of higher profitability. See See Felet, A., D Lishman, D. and F. Fiandeiro (2012) "Do hospital mergers lead to healthy profits?". Better data that would be available to the competition authorities, particularly as part of the Healthcare Enquiry, which would allow for a more robust and comprehensive study to be conducted.
[34] Competition Tribunal of South Africa, Phodiclinics and Protector Group Medical Services, Case No: 122/LM/Dec05, para. 170

which patients travelled in response to price increases. The FTC study also aided learning by allowing the FTC to test assumptions previously applied in cases. For example, it was found that assumptions made regarding the size of the market and competitive constraints were incorrect. Furthermore, and more importantly for learning purposes, the lessons learnt informed the merger enforcement programme going forward – the methodologies applied in the merger assessments were adjusted and as a result, several hospital mergers were either blocked or abandoned since 2008.[35]

The assessment would also help determine if any merger, particularly the mergers that were contested, did in fact lead to higher prices. If there is evidence to suggest that this is what has in fact happened, this ought to compel the competition authorities to re-evaluate the approach adopted to merger control in this sector to improve the quality of the decision-making process going forward. This process could potentially assist the investigation stage in guiding the Commission on the type of evidence to be gathered or identifying which prior assumptions warrant further scrutiny and testing. This in turn would allow for more informed decision making at the Tribunal stage of the proceedings.

Price rules to remedy excessive pricing?

Does the Competition Act require a pricing remedy in excessive pricing cases? The economics literature warns against doing so: "… *price regulation is not always the most efficient remedy to deal with excessive prices … price regulation may highly distort investment incentives and is difficult to implement*."[36] In Harmony Gold versus Mittal, the Tribunal agreed, stating that "… *there are compelling conceptual and practical reasons why a competition authority should eschew a price regulation role*…"[37], and further that, "…*where excessive pricing is alleged to flow from a systematic and systemic abuse of dominance in a complex market, the price setting task becomes … complex and unsuited to the powers and resources of a competition authority*."[38] In the Sasol polymers matter, the Competition Appeal Court ('CAC') also agreed: "*As indicated earlier, some measure of latitude has to be given to firms with regard to pricing. If not, a court will become a price regulator*…"[39]

Nevertheless, a remedy that sets a price has featured in two separate excessive pricing matters since the Mittal case. Although they took different forms in each of these cases, their intent was the same—to equalise domestic factory gate prices with export prices, which were significantly lower than the former.

- In the consent order agreement between the Commission and Foskor[40], Foskor agreed to cease adding 75% of the cost of shipping phosphoric acid from Richards Bay to India to its export price for phosphoric acid—it had in fact ceased doing so from August 2008 after being informed by the Commission of its concerns in respect of Foskor's

[35] OECD (2016), "Reference guide on ex-post evaluation of competition agencies' enforcement decisions," Box 11. Available at http://www.oecd.org/daf/competition/Ref-guide-expost-evaluation-2016web.pdf. [Last accessed July 2016].
[36] Motta, M. and A. de Streel (2007), "Excessive Pricing in Competition Law: Never say Never?" Located in Swedish Competition Authority (2007), "The Pros and Cons of High Prices", chapter 2, page 40. Available online at http://www.konkurrensverket.se/globalassets/english/research/the-pros-and-cons-of-high-prices-14mb.pdf. [Last accessed August 2016].
[37] See Tribunal case number 13/CR/Feb04, paragraph 81.
[38] See Tribunal case number 13/CR/Feb04, footnote 67.
[39] See CAC case number 31/CAC/Jun14, paragraph 184.
[40] Competition Commission versus Foskor, Tribunal case number 43/CR/Aug10

pricing behaviour.[41] This remedy thus explicitly set an export parity price ('EPP') cap on Foskor's domestic price.

- In respect of the domestic poly-propylene prices set by Sasol Chemical Industries ('SCI')[42], the Tribunal adopted the Commission's proposed remedy that SCI be required not to discriminate the price it charged at the factory gate level to different customers regardless of their geographic location.[43] Because SCI is a price taker in export markets for poly-propylene, this remedy would have generated the same outcome as that agreed to by Foskor (an EPP cap), albeit indirectly, had the Tribunal's decision stood.

According to the Tribunal's decision in the SCI polymers matter, the Commission justified this remedy on the grounds that it would reduce domestic prices (presumably, below levels that would be deemed excessive) without requiring the competition authorities to regulate price levels directly.[44] While it is technically accurate that the Foskor and SCI polymers remedies do not require the competition authorities to act as price regulators in the same way that energy or telecoms regulators do, the remedies imposed did nevertheless have the effect of setting a price (or would have had in the SCI polymers case). In other words, the remedies removed (or would have removed) from the dominant firm most or all control over domestic prices for a particular product—this is a form of price regulation.

The above notwithstanding, comments made by the CAC in its judgment in the Mittal matter suggest that the Competition Act actually does not call for or require such remedies in excessive pricing cases. The CAC seems to have argued that no pricing remedy should have been required in either of these two cases.

First, the CAC was very clear that: "*The authorities are not called upon to set a price for a good or service. It is incumbent on the Tribunal, if necessary to determine whether a specific price is 'excessive' in contravention of s 8(a). There is no suggestion in the Act that the competition authorities should regulate and set prices*"[45] (emphasis added).

Second, according to the CAC, a dominant firm found to have charged an excessive price should not need to have that price regulated or set by the competition authorities (directly or indirectly). The firm should be able to comply with the Competition Act, and avoid charging an excessive price again in future, if it is shown by the competition authorities when and to what extent its price was excessive.[46]

Specifically, the CAC said that a firm found to have charged an excessive price is entitled to know, from a court decision, under what conditions its price may be deemed excessive in future. Otherwise, it may find itself, "…*in the anomalous and wholly impractical position of [not knowing] what a non-excessive price would have been, nor of the amount of the excess which*

[41] See Tribunal case number 43/CR/Aug10, paragraph 4.1.
[42] Competition Commission versus Sasol Chemical Industries, Tribunal case number 48/CR/Aug10
[43] See Tribunal case number 48/CR/Aug10, paragraph 507.1.
[44] See Tribunal case number 48/CR/Aug10, paragraph 493.1.
[45] Competition Appeal Court case number 70/CAC/Apr07, paragraph 47, page 50.
[46] The CAC presumably would not condemn behavioural remedies of the sort proposed by the Tribunal in the Mittal case, as long as the they were sufficiently clear and specific, and, more importantly, were additional to clear findings in respect of economic value, and whether the relationship between it and the impugned price was reasonable (i.e., what the CAC considers to be the proper interpretation and application of section 8(a) of the Competition Act).

it was found to have charged, nor any indication of how – in changing market conditions, e.g. where production costs may have risen, or supply and/or demand may have changed – an 'excessive price' would in the future be determined."[47] (emphasis added). In other words, excessive pricing judgments should provide a dominant firm with enough information to determine when its price is excessive given that market conditions including price levels are always changing.

Whether or not the CAC is correct that findings of excessive pricing should not require a price-setting remedy, the Foskor consent order agreement allows for an assessment of such a remedy, since it actually implemented an EPP cap, which has been in place officially since 2011 and in practice since 2008.

A few different objectives could be pursued through such an assessment. It might seek to conduct a full impact assessment, controlling for all of the factors that affected the South African phosphoric acid market and Foskor's price levels and profits since the remedy took effect, to isolate the specific impact of the remedy on market outcomes and also on Foskor itself. This would identify all of the changes that occurred in the phosphoric market that were beyond Foskor's control, and this in turn would inform an assessment of the risks both Foskor and the Competition Commission agreed to take when agreeing to the EPP cap remedy.

Alternatively, an ex-post evaluation of the Foskor remedy could focus only on the latter—building a taxonomy of the risks inherent in applying an EPP cap to a dominant firm in South Africa that has no control over the export price. This could be achieved through desk research, for example into the pricing practices of phosphoric acid producers in other countries where competition law regimes exist; or into the anti-dumping literature in international trade law, which is concerned with large differences between domestic and export prices; and through interviews with market participants, such as Foskor itself, its controlling shareholder (the Industrial Development Corporation), its main phosphoric acid customers, former competitors such as Sasol, potential competitors such as Omnia, who produces phosphoric acid for internal purposes only, and, if possible, potential or actual entrants.

In respect of the last category of potential interviewees, we know that at least one instance of entry in South Africa's phosphoric acid market did occur since the consent order agreement was confirmed.[48] We also know that this entrant exited the phosphoric market shortly after entering. Given that "…*excessive price[s] reflect more a problem in the structure of the market than in the behaviour of the firm* …"[49], and that, "…*the appropriate remedy should change the market structure for the future*…"[50], it is critical to understand what the reasons were for that exit, and the Commission is the only entity with the powers to uncover them. If there is any

[47] Competition Appeal Court case number 70/CAC/Apr07, paragraph 54, pp. 60-61. Mittal and others versus Harmony Gold and another.
[48] Bosveld Phosphates purchased Sasol's mothballed phosphoric acid plant in Phalaborwa, and commenced production of phosphoric acid in November 2011, three years after Foskor had ceased differentiating between its export and domestic price, and approximately six months after the consent order agreement was confirmed by the Tribunal. See http://www.herald.co.za/content/2011/palabora/PWeek46.pdf. [Last accessed August 2016].
[49] Motta, M. and A. de Streel (2007), "Excessive Pricing in Competition Law: Never say Never?" Located in Swedish Competition Authority (2007), "The Pros and Cons of High Prices", chapter 2, page 40. Available online at http://www.konkurrensverket.se/globalassets/english/research/the-pros-and-cons-of-high-prices-14mb.pdf. [Last accessed August 2016].
[50] Motta, M. and A. de Streel (2007), "Excessive Pricing in Competition Law: Never say Never?" Located in Swedish Competition Authority (2007), "The Pros and Cons of High Prices", chapter 2, page 40. Available online at http://www.konkurrensverket.se/globalassets/english/research/the-pros-and-cons-of-high-prices-14mb.pdf. [Last accessed August 2016].

indication that the consent order agreement maintained domestic prices at levels below which the entrant could profitably compete against Foskor, it may be accurate to conclude that the remedy imposed for excessive pricing in this matter generated perverse outcomes.[51]

At the very least, an ex-post assessment could establish factually whether this type of pricing remedy has the potential to deter or prevent entry. This would in turn inform debates on the use of the same remedy in future cases. Specifically, the experience in phosphoric acid would require the competition authorities to explicitly investigate the potential for entry and factor this potential into its final decision as to whether an EPP cap is suitable. This objective echoes those adopted by the NZCC in its review of approved mergers, discussed earlier.

CONCLUSION: THE PROSPECTS FOR EX-POST REVIEWS TO IMPROVE DECISION-MAKING

Ex-post evaluations of competition authorities' interventions serve a variety of purposes. This paper focuses on ex-post evaluations as learning opportunities. These assessments, while reviewing past interventions and outcomes, have a forward-looking purpose of improving the quality of decision-making going forward and therefore have the potential to be enormously valuable to competition authorities. This paper identifies examples from South African cases where ex-post evaluations could inform future decision-making. The first two examples focus on learning about competitive dynamics in the casino and hospital markets for the purpose of improving outcomes for future merger assessments.

In respect of casinos, a valid question may be whether the Commission should dedicate time and resources to understanding casino markets better, since casino services do not fall into any of the Commission's priority sector. However, the assessment highlighted in this paper does not necessarily require additional resources to those already allocated to an investigation. The work required could form part of the next investigation of a casino merger that has implications for Gauteng.

In the instance of hospitals, this is a priority sector which does warrant further scrutiny as identified in the Market Enquiry into Private Healthcare. Further, this is a sector where merger activity happens fairly regularly in South Africa and there is a strong case to argue that a post-merger analysis in the hospital sector would be justified and immensely valuable. The nature of the studies could vary, from the more complex studies as conducted by the FTC and Netherlands Competition Authority – which were relatively resource-intensive but revealed key insights that shaped merger enforcement assessments going forward – to simpler studies that could, for example, examine hospital profitability at different points in time to determine if there has been a shift in market power. Arguably, even relatively simple fact-gathering exercises after a merger would be helpful for testing some of the *a priori* assumptions made when evaluating the merger.

The third example focuses on the value of learning about the efficacy of the excessive pricing remedy agreed to by Foskor in the market for phosphoric acid. While the lessons that may be

[51] Presumably, the entrant understood how the consent order agreement may affect the prices it would be able to achieve for phosphoric acid. But its understanding would have been based on forecasts of export prices, which may have been inaccurate. It is also possible that the entrant was merely mismanaged. All such possibilities would form part of an ex-post evaluation.

learned from evaluating the efficacy of a pricing remedy in one market may not be generalisable across all markets, the evaluation will still generate facts that can inform debates over the appropriateness of a similar pricing remedy being applied in another market. An ex-post evaluation shows which uncertainties present at the time a decision is made turned out to represent risks that should not have been taken. A careful comparison of the facts generated by an ex-post evaluation with the facts of another case in which the same remedy is under consideration would undoubtedly reduce some of the uncertainties facing decision-makers the second time around.

The Commission already has a regime in place that engages in ex-post evaluations on a fairly regular basis. Our impression, however, is that most of the ex-post studies conducted in South Africa focus less on learning from past decisions and are more interested in demonstrating the benefits of enforcement activities. Whilst these impact assessments do have value, they are unlikely to serve as a tool for learning purposes. In fact, several authors have argued that there may be little point to conducting evaluations if they are not used to improve the quality of decision-making in the authority.[52] Extending the ambit of ex-post evaluations to include studies with the specific objective of learning from past decisions would be highly valuable as a tool for improving decision making. Importantly, while it is recommended that such reviews form part of an authority's overall ex-post evaluation regime, versions of them can be done during an on-going investigation – they can form part of the factual base upon which an authority's decision on a new case is reached.

[52] European Commission (2015), "Ex-post economic evaluation of competition policy enforcement: A review of the literature." DG COMP staff paper, pg. 45. Available at http://ec.europa.eu/competition/publications/reports/expost_evaluation_competition_policy_en.pdf. [Last accessed July 2016].

APPENDIX

The table below lists the impact assessments performed by the Commission from 2012. It is based on publically-available information, contained mostly in the newsletters published by the Commission as well as through several articles authored by Competition Commission members of staff. From the table, it is evident that the studies are mostly assessments of the impacts and benefits that enforcement activities have had on the market, with the studies largely focused on cartel and merger remedy assessments.

The vast majority of the studies identified determine the impact that the Commission's intervention in cartel activity has had on the market. These studies mostly determine the extent of the overcharge during the period of the cartel and from this infer the implied consumer savings that would arise from the discontinuation of the higher prices. The effects of cartel remedies arising from the Pioneer settlement agreement, which involved the creation of a Agro-Processing Fund and commitments to price reductions, have also been assessed. Finally, in this category of impact assessments related to cartels, the Commission estimated the effects of announcing fast track settlement programmes on stock market prices of listed companies.

In terms of merger assessments, whereas many of the ex-post evaluations conducted by international authorities tend to focus on assessing the impact of merger approvals on prices, the Commission's assessments have so far largely focussed on assessing remedies (in the Wal-Mart/Massmart and the Media24/Natal Witness transactions), although in the case of Wal-Mart, the Commission also examined the effect Wal-Mart's entry has had on suppliers and competitors. Other merger-related assessments seek to support previous decisions made by the Commission, including reviewing how the market developed post the abandoning of a merger (showing that both parties have since grown) as well as confirming a common cause assumption held that a merger (without remedies) would have resulted in anti-competitive effects.

Finally, the Commission has conducted an ex-post review of the outcomes of the Banking Enquiry, focusing on the recommendations that were implemented and the consumer benefits emerging as a result of the enquiry.

Study	Source	Purpose of the study
How has the entry of Wal-Mart affected South African Suppliers and Competitiors, Thulani Mandiriza and Michelle Viljoen (2016)	Competition Commission Newsletter, Edition 54, June 2016	This impact assessment examines the effect of Wal-Mart's entry on suppliers and competitors, with the focus being on the role of import-substitution by the merged entity post-merger.
An ex-post review of the Media24/Natal Witness Merger, Sunel Grimbeek, Katerina Barzeva and Qhawe Mahlalela (2016)	Competition Commission Newsletter, Edition 54, June 2016	This study is an ex-post review of the remedies imposed by the Tribunal on the merging parties. The study's objectives were two-fold: i) to test the impact of the Tribunal's remedies on the dynamics of the cold-set printing market and ii) to assess whether market outcomes could have been better under alternative remedies.
An ex-post review of the abandoned merger between Pick 'n Pay and Fruit and Veg City, Sunel Grimbeek, Khalirendwe Ranenyeni and Kerschyl Singh (2016)	Competition Commission Newsletter, Edition 54, June 2016	This study is an ex-post review of the abandoned merger between Pick ‘n Pay and Fruit and Veg City in 2007. The review aimed to assess the impact that prohibiting the merger had on competitors and customers. In its assessment of the merger, the Commission determined that the merger would result in the removal of an effective competitor, with this ex-post study focusing on the expansion of both parties since 2007 and the impact that this had on the market.
Has the Agro-Processing Competitiveness Fund achieved its objectives, Thulani Mandiriza, Michelle Viljoen and Thembalethu Sithembe (2015)	Competition Commission Newsletter, Edition 52, May 2015	The Commission conducted an assessment of the Agro-Processing Competitiveness Fund (APCF) in order to monitor its effectiveness. The APCF formed part of the administrative penalty imposed on Pioneer Foods for engaging in collusive activities in contravention of the Act. The study sought to determine the impact of the fund on facilitating the entry or expansion of SMEs, the ability for the SMEs to attract co-funding and the extent to which the fund has assisted in promoting job creation.
Massmart Supplier Development Fund, Michelle Viljoen, Thembalethu Sithembe and Thulani Mandiriza (2015)	Competition Commission Newsletter, Edition 52, May 2015	The Commission conducted a review of the implementation of the Supplier Development Fund, the creation of which was one of the conditions imposed in the Wal-Mart/Massmart merger aimed at developing domestic suppliers. The ex-post review considered the performance of the fund since its implementation and the extent to which it had contributed to the promotion of domestic suppliers.
The Impact of the Construction Industry, Hariprasad Govinda (2015)	Competition Commission Newsletter, Edition 52, May 2015	The Commission received multiple leniency and marker applications during the investigation into collusion in the construction sector which prompted a fast track settlement process. The Commission conducted an event study that aimed to monitor the effects of the announcement of the fast track settlement programme on stock market prices of three listed construction companies.
Savings to Customers - Post the Cement Cartel, Siphamandla Mkhwanazi and Hariprasad Govinda (2014)*	Competition Commission Newsletter, Edition 49, June 2014	This study assesses the impact that the uncovering of the cement cartel had on consumers. In particular, the study estimates the extent of overcharges during the period of the cartel and the consumer savings as a result of the Commission's intervention in the market.

Study	Source	Purpose of the study
Cartel overcharges in concrete pipes and wheat flower, and the impact of the interventions of competition authorities, Tapera Muzata (2014)	Competition Commission Newsletter, Edition 48, March 2014	This article reports on the findings of two studies conducted by the Commission on cartel overcharges in the concrete pipes and wheat flour markets and the impact that interventions by the Commission to break up cartel activity has had on consumer savings. The article notes that impact assessments may be used to identify future areas of work and to inform policy recommendations.
Is breast the best? Evaluating the price effects of the Nestle/Pfizer merger in the South African infant milk formula market, Thembalethu Sithebe, Katerina Barzeva and Liberty Mncube (2014)	Paper presented at the Competition Law, Economics and Policy Conference, 4 & 5 September 2014	Using premerger data, this ex-post merger simulation was conducted with the aim of determining whether the 'common cause assumption' held by both the Commission and the merging parties that the merger raised competition concerns (and hence required a remedy) was correct.
The South African Wheat Flour Cartel: Overcharges at the Mill, Liberty Mncube (2014)***	Journal of Industry, Competition and Trade, 14 487-509	This paper estimates the overcharge in the South African flour cartel and the profits of the cartel relative to the period before and after the cartel.
Was the Banking Enquiry beneficial to the consumers?	15 Years of Competition Enforcement - A people's account	This article reviews the impact of the Banking Enquiry in terms of the extent to which the recommendations were implemented and the benefits to consumers. The assessment covered a number of outcomes, including the ease of switching, reduction in fees and other non-price consumer benefits, like the ability to withdraw cash from tills. The review also considered the extent to which the recommendations facilitated innovation in the market.
Harm and Overcharge in the South African precast concrete products cartel, Junior Khumalo, Jeffery Mashiane and Simon Roberts (2013)***	Journal of Competition Law & Economics, 10(3), 621–646	This study discusses the cartel in the market for precast concrete products. The paper covers the cartel's *modus operandi* and also estimates the cartel overcharge. The extent of the overcharge is discussed relative to the fine imposed on the colluding parties for the purpose of determining the adequacy of the fine as a deterrent
Designing Appropriate Remedies for Competition Law Enforcement: The Pioneer Foods Settlement Agreement, Tembinkosi Bonakele and Liberty Mncube (2012)**	Journal of Competition Law and Economics, 8(2): 425-447	The paper assesses the effectiveness of the Pioneer remedies which were implemented as part of settlement negotiations with the Commission for engaging in collusive activities. In particular, the impact of the price reduction commitment remedy, where Pioneer was required to reduce prices of bread and flour to the value of R160 million, was assessed in terms of the impact this had on prices and sales in the market.

* A more detailed discussion of the cartel and the methodology for determining the overcharges and consumer savings can be found in "On measuring the economic impact: Savings to the consumer post cement cartel burst", Hariprasad Govinda, Junior Khumalo and Siphamandla Mkhwanazi (2014) (Paper presented at the Competition Law, Economics and Policy Conference, 4 & 5 September 2014)

** Another version of this study was published in 2014. See Liberty Mncube (2014) Settling for a discount: A review of the pioneer foods price reduction remedy, Agrekon, 53:1, 26-45

*** Studies referenced in "Cartel overcharges in concrete pipes and wheat flower, and the impact of the interventions of competition authorities", Tapera Muzata (Competition Commission Newsletter, Edition 48, March 2014)