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The impact of unilateral and coordinated conduct on market economics and performance: post- merger analyses

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ABSTRACT

The thesis is an ex-post assessment of two horizontal mergers motivated by the dearth in post-merger analyses in the South African context. The objective is to examine whether market dynamics have changed as stated by the Competition Tribunal. The main theories tested are whether the merged firm post-merger was able to exert market power unilaterally or in coordinated manner. These constructs are examined against the ability of customers to restrain market power, barriers to entry, the effect of the remedies imposed and the financial performance.

The results reveal that the Tribunal leans towards the SCP doctrine and demonstrates the need for a dynamic approach in competitive assessments informed by understanding how competitors and customers may react to a merger. The research findings indicate that the Tribunal's conclusions on both the Nampak/Burcap and Scaw/Ozz transactions were unproven, post-merger. The research also demonstrates the need and importance of ex-post evaluations to improve future decisions on mergers.

Keywords: market power, countervailing power, barriers to entry, remedies

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Lesenda (Grace) Mohamed

Date

The name and the original signature of the student and the date should follow the declaration.

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TABLE OF CONTENTS

ABSTRACT	i
DECLARATION	iii
ACKNOWLEDGEMENTS.....	iv
LIST OF FIGURES.....	viii
LIST OF TABLES	ix
CHAPTER 1: INTRODUCTION	1
1.1 Research Motivation	4
1.2 Research Objective	5
1.3 Scope of the Research	7
1.4 Organisation of Research	7
CHAPTER 2: THEORY AND LITERATURE REVIEW	8
2.1 The Evolution of the study of industrial organisation and competition economics	8
2.1.1 The 1 st Wave – Harvard school	9
2.1.2 The 2 nd Wave – Chicago school	15
2.1.3 The 3 rd Wave – Post-Chicago school	18
2.2 Consumer welfare versus total welfare	21
2.3 The effectiveness of remedies imposed to merger transactions.....	21
2.4 Review of findings of post-merger assessments	23
2.5 Post-merger financial performance of firms	25
2.6. Approach to horizontal merger assessment by the US competition authorities	27
2.7 Approach to horizontal merger assessment by the UK competition authorities	29
2.8 Approach to horizontal merger assessment by the RSA competition authorities	31
2.9 Conclusions drawn from literature.....	32
CHAPTER 3: RESEARCH PROPOSITIONS.....	34
Proposition 1	34

Proposition 2	34
Proposition 3	35
Proposition 4	35
Proposition 5	35
Proposition 6	35
CHAPTER 4: RESEARCH METHODOLOGY.....	36
4.1 Research method	36
4.2 Population and sample size	38
4.3. Unit of analysis	38
4.4 Case selection method	38
4.5 Horizontal merger cases to be assessed	38
4.6 Information gathering process	39
4.7 Research instrument.....	40
4.7.1 Market share and concentration	40
4.7.2 Barriers to entry	40
4.7.3 Coordinated conduct	40
4.7.4 Financial performance	41
4.7.5 Remedies	41
4.8 Data analysis technique.....	41
4.9 Limitations of the research.....	41
CHAPTER 5: FINDINGS OF THE TWO CASE STUDIES	43
5.1 Case study 1: Nampak Products Ltd / Burcap (Pty) Ltd	43
5.1.1 Proposition 1: Mergers between rivals in concentrated markets create or enhance market power arising from unilateral conduct.....	44
5.1.2 Proposition 2: Horizontal mergers in concentrated markets create environments conducive to higher levels of coordinated conduct.	48
5.1.3 Proposition 3: Horizontal mergers in concentrated markets raise barriers to entry.....	49
5.1.4 Proposition 4: Horizontal mergers in concentrated markets are likely to be anti-competitive in the absence of countervailing power.	50

5.1.5	Proposition 5: Conditions imposed on mergers that lessen competition improve competitive dynamics.	52
5.1.6	Proposition 6: Horizontal mergers in concentrated markets improves the financial performance of the merged entity.	53
5.2	Case study 2: Scaw Metals (Pty) Ltd / Ozz Industries (Pty) Ltd	55
5.2.1	Proposition 1: Mergers between rivals in concentrated markets create or enhance market power arising from unilateral conduct.....	55
5.2.2	Proposition 2: Horizontal mergers in concentrated markets create environments conducive for higher levels of coordinated conduct.	59
5.2.3	Proposition 3: Horizontal mergers in concentrated markets raise barriers to entry.....	60
5.2.4	Proposition 4: Horizontal mergers in concentrated markets are likely to be anti-competitive in the absence of countervailing power.....	61
5.2.5	Proposition 5: Conditions imposed on mergers that lessen competition improve competitive dynamics	62
5.2.6	Proposition 6: Horizontal mergers in concentrated markets, improves the financial performance of the merged entity.....	63
	CHAPTER 6: ANALYSES OF FINDINGS.....	65
6.1	Case study 1: Nampak Products Ltd / Burcap (Pty) Ltd	65
6.1.1	Market share and concentration	65
6.1.2	Coordinated conduct.....	68
6.1.3	Barriers to entry	69
6.1.4	Countervailing power	71
6.1.5	Effectiveness of the remedies imposed	72
6.1.6	Post-merger financial performance of Nampak	73
6.1.7	Concluding remarks on ex-post analysis of Nampak/Burcap merger	75
6.2	Case study 2: Scaw Metals (Pty) Ltd / Ozz Industries (Pty) Ltd	76
6.2.1	Market share and concentration	76
6.2.2	Coordinated effects.....	78
6.2.3	Ease of entry into the grinding media market	78
6.2.4	Countervailing power	79

6.2.5	Effectiveness of the remedies imposed	81
6.2.6	Post-merger financial performance of Scaw	82
6.2.7	Concluding remarks on the ex-post analysis of Scaw/Ozz	83
CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS		84
7.1	Synthesis of information	84
7.2	Lessons from Nampak/Burcap transaction	85
7.3	Lessons from Scaw/Ozz transaction	86
7.4	Lessons for the South African competition authorities.....	86
7.5	Recommendations for future research.....	87
REFERENCES.....		88
ANNEXURE A - INTERVIEW GUIDE: NAMPAK (MERGING PARTIES).....		99
ANNEXURE B - INTERVIEW GUIDE: NAMPAK'S CUSTOMERS		104
ANNEXURE C - INTERVIEW GUIDE: SCAW'S CUSTOMERS.....		109
ANNEXURE D - INTERVIEW GUIDE: SCAW (MERGING PARTIES).....		113
ANNEXURE E – NAMPAK JUDGEMENT		117
ANNEXURE F – SCAW JUDGEMENT.....		128

LIST OF FIGURES

Figure 1: Outcome of mergers filled with the Competition Commission	3
Figure 2: SCP framework	9
Figure 3: Grinding media prices Oct 2006 to Sept 2012	58
Figure 4: USD Exchange rate from Jan 2006 to July 2012	59

LIST OF TABLES

Table 1: Mergers by type filled with the Competition Commission 2007 - 2012	2
Table 2: Techniques for ex-post reviews of mergers where remedies are imposed	36
Table 3: Large Horizontal mergers heard and decided by the Competition Tribunal ...	39
Table 4: Profile of respondents interviewed	39
Table 5: Profile of respondents for Nampak/Burcap transaction	44
Table 6: Compilation of responses on relevant market and market power	45
Table 7: Price Index of metal and plastic paint container since 2008	46
Table 8: Compilation of responses on theory of multilateral market power	48
Table 9: Compilation of responses on barriers to enter	50
Table 10: Average Annual PPI for the period 2007 to 2011	51
Table 11: Compilation of responses on countervailing power	52
Table 12: Compilation of responses on the effectiveness of the remedy imposed	53
Table 13: Responses on the impact of the acquisition on Nampak's performance	54
Table 14: Profile of respondents interviewed for Scaw/Ozz transaction	55
Table 15: Compilation of responses on theory of unilateral market power	56
Table 16: Steel Price Index 2006 – 2011	57
Table 17: Compilation of responses on theory of multilateral market power	59
Table 18: Compilation of responses on barriers to entry	60
Table 19: Compilation of responses on countervailing power of mines	62
Table 20: Compilation of responses on the effectiveness of the remedy imposed	63
Table 21: Responses on the impact of the merger on Scaw's performance	64
Table 22: Factors that had an influence on Scaw financial performance	64
Table 23: Scaw's operating profits for the period 2006 to 2011 (US\$ millions)	64

CHAPTER 1: INTRODUCTION

The debate on market concentration and its impact on firms' performance has been ongoing for over four decades (Evans & Padilla, 2005; Fourie, 1996; Samad, 2008; Theron, 2001). The two main competing schools of thought, namely the Harvard school against the Chicago school of thought are largely responsible for the gap in understanding the impact of concentration on firm behaviour (Duso, Gugler, & Yurtoglu, 2010; Fourie & Smith, 1999; Fourie & Smith, 2001). The Harvard school maintains that the market structure of an industry influences the behaviour firms and therefore their performance. The Chicago school on the other hand, postulates that because firms are efficient, they realise greater profits (Samad, 2008; Leach, 1992) and the structure and concentration in an industry does not influence the firm's behaviour.

Despite the differences between the Harvard and the Chicago schools, a new doctrine has emerged, the Post-Chicago School. It places an emphasis on understanding the strategic decisions taken by individual firms in relation to how competitors may react (Audretsch, Baumol, & Burke, 2001). This approach to understanding market economics is cemented on more complex and dynamic theories of oligopolistic structures and game theory (Bishop & Walker, 2010; Carlton & Perlof, 1994; Holland, 2011).

The impasse in the three doctrines partly contributed to the scarcity in the South African scholarly arena with regard to understanding whether market performance is driven by industry structure and how firms behave; or by the increased efficiencies realised by firms (Leach, 1992). This neglect of studies in the field of industrial organisation has been confirmed by Fedderke & Szalontai (2009, p.1) who stated that: "the study of industrial concentration in the South African manufacturing sector has been largely neglected in the past. While notable exceptions exist, concentration has featured less in the debate on South African industry characteristics and performance than the exceptionally high degrees of concentration might suggest it should".

The South African economy is characterised by highly concentrated conglomerate groupings in the mining, manufacturing, and financial sectors (Chabane, Roberts, & Goldstein, 2006; Competition Commission, 2010; Competition Commission, 2009; Fourie, 1996; Fourie & Smith, 2001). This is largely due to the monopolistic economic policies and protection by the previous economic regime (OECD, 2003a & Smit, 2005) and considerations around economies of scale (OECD, 2003a).

Evidence of high levels of concentration is reflected in the increasing number of mergers that occur (Roberts, 2004). On average, horizontal mergers constitute the largest number of transaction filled by type (50%) with the local competition authorities between 2007 and 2012 (See table 1 below). The high levels of merger activity have resulted in increased market concentration in various industries, along with increased vertical integration (Competition Commission & Competition Tribunal, 2009).

Table 1: Mergers by type filled with the Competition Commission 2007 - 2012

	2007/08	2008/9	2009*/10	2010/11	2011/12
Horizontal	263 (56%)	210 (48%)	109 (55%)	117 (54%)	140 (51%)
Vertical	27 (6%)	41 (9%)	24 (12%)	28 (13%)	35 (13%)
Conglomerate	173 (37%)	133 (30%)	40 (20%)	40 (19%)	65 (24%)
Horizontal/Vertical	5 (1%)	57 (13%)	26 (13%)	30 (14%)	35 (13%)
Total	468	441	199	215	275

* The threshold at which transactions become compulsory to be notified with the competition authority was raised as from the 1 April 2009. This resulted in significant decrease in the number of mergers firms had to file mandatory hence, the sharp reduction in total M&A filled

Source: Competition Commission

The competition authority of South Africa (“Competition Commission”) is the regulatory body responsible for the reviewing merger activity. The Commission received 310 merger notifications in the 1999/2000 financial year, and this spiked to 505 in the 2007/2008 financial year (Competition Commission, 2009). Given the rise in mergers and acquisitions, the high levels of concentration in South Africa are not abating.

The Commission approved over 90% of all the merger transactions filed with it (as depicted in figure 1) without any conditions/remedies. This can be an indication that despite the high levels of merger activity, the transactions between direct rivals are not necessarily anticompetitive. While that is, further interrogation of this status quo has indicated high mark-ups and signs of anti-competitive in the South African manufacturing industry (Fedderke & Szalontai, 2009).

Figure 1: Outcome of mergers filled with the Competition Commission



Source: Competition Commission

Competition authorities often impose remedies on transactions that they deem anti-competitive. The importance and relevance thereof relates to the stance by competition authorities that conditions/remedies will restraint any market power the merging firms will accrue post-merger. This area has however been understudied in economic research (Duso, Gugler & Yurtoglu, 2006).

The Commission investigated and settled numerous cartel (coordinated conduct) cases. Some of these cases emanated from the bread, wheat & flower; cement; and steel industries in recent years (Competition Commission, 2010). More telling of the high levels of concentration and prevalence of coordinated conduct endemic in the South African economy is the 79 applications lodged with the Competition Commission by firms seeking leniency from cartel conduct (Competition Commission & Competition Tribunal, 2009; Competition Commission, 2010).

The rise in merger activity and cartel prosecutions is contrary to the core purpose that informed the construction of the competition policy in South Africa. Three of the six reasons that punctuate the purpose of the Competition Act are:

- “(a) to promote the efficiency, adaptability and development of the economy;
- (b) to provide consumers with competitive prices and product choices;

...

(f) to promote a greater spread of ownership, in particular to increase the ownership stakes of historically disadvantaged persons (Competition Act, 1999, page 14 and 15).”

According to Theron (2001), the Tribunal in its considerations of whether mergers and acquisitions will have a substantial impact on competition, applies the Structure-Conduct- Performance (“SCP”) framework developed by the Harvard School. Theron (2001) however did not undertake an ex-post assessment of the Tribunal’s decisions to determine whether the findings of the Tribunal in each of the cases selected were realised in terms of unilateral and coordinated conduct. The instant research focuses on that ex-post assessment.

In light of the increasing levels of concentration and collusive activity, an ex-post assessment of how the decisions of the Competition Tribunal (“Tribunal”) on horizontal mergers affected market structures and addressed the desired outcomes of competition policy is necessary. The objective of the research is supported by Carlton (2009) who states that anti-trust policies need to be examined regularly to ensure that they do not impede competition but promote it in markets. Furthermore, post-merger assessments are necessary as they provide authorities and merging parties an opportunity to verify whether predictions of the market economics were sound and sensible (OECD, 2011 and Whinston, 2007).

1.1 Research Motivation

This research is driven by four factors. First is the need for the South African academy to understand how mergers between rival firms changed the market structure and impacted performance.

Second, is the increase in horizontal merger transactions and coordinated conduct prosecutions in recent years. This necessitates an understanding of whether competition authorities are successful in their mandate, which is to de-concentrate the industries and encourage competition.

Thirdly, this research was propelled by studies undertaken to assess consistency between the decisions by the competition authorities and the actual outcomes in the market. The Office of Free Trading (“OFT”) and the Competition Commission in the United Kingdom (“UK”) commissioned regular studies between 2003 and 2011 to

conduct post-merger assessments of its decisions in order to understand the impact of mergers on competition¹. A study was also conducted in 2007 to review the consistency of the European Competition Commission's decisions with the actual market outcomes (Buccirosi, et al., 2008). Post-merger assessments are widely conducted by independent scholars (Eckbo & Wier, 1985; Deloitte, 2009; Duso, Gugler, Yortoglu, 2011; Friberg & Romahn, 2012; Neumann & Sanderson, 2007; and OECD, 2011) to understand whether market dynamics have changed as anticipated. However, only one document (OECD, 2011) has been identified that suggest that the Commission undertook an ex-post examination of mergers. While that was a step in the right direction, the study presented rather scanty evidence and did not consider the impact of the transactions on firm performance.

Lastly, the instant research is also opportune to test the theories of the three schools' of thought on industrial organisation and contribute to this debate.

1.2 Research Objective

The study aims to determine whether the Tribunal in its decisions on horizontal merger transactions were near accurate in its findings and decisions. This is conducted by examining if possible unilateral and coordinated conduct may or may not have arisen. Two ex-post assessments of horizontal mergers are analysed. The assessment of mergers that involve rivals is important for the following reasons:

- (a) it permits testing of the Tribunal findings that a merger would substantially prevent or lessen competition. This, the instant assessment achieves by studying the impact of the merger on prices, whether firms that exited an industry were due to anti-competitive conduct, and the ability of customers to withstand pricing pressures;
- (b) if there has not been a substantial lessening of competition, the assessment allows for the testing of whether this was for the reasons indicated by the Tribunal; and
- (c) if there has been a lessening of competition, it allows for the examination of how, and how quickly market participants respond to the lessening of competition. For example, whether it prompts new entry, whether it causes buyers to revise their

¹See: http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/our_role/evaluation/. Retrieved on the 22 April 2012.

purchasing strategies (Office of Fair Trading, Competition Commission & Department of Trade and Industry, 2005).

Lastly, the proposed research endeavours to evaluate how the changes in market concentration affected financial performance of the merged entity.

The two horizontal mergers that are being assessed for the purposes of the research are:

i) Nampak Industrial Products (Pty) Ltd / Burcap (Pty) Ltd

In 2007, the Tribunal approved the merger between Nampak and Burcap, subject to various conditions. In its Reasons for Decision, the Tribunal stated that the merger was likely to lead to substantial lessening of competition. As a result, it imposed remedies to reduce the potential anti-competitive effects. The Tribunal indicated that: (1) barriers to enter the industrial plastic container (used for solvent based paint) are high because of a technological innovation that emerged (PET); (2) Nampak has an incentive to increase prices of industrial plastic containers to a level close to the metal container prices, to reduce switching by customers; (3) there will only be two viable competitors in plastic paint container market post-merger.

ii) Scaw Metals (Pty) Ltd / Ozz Industries Pty (Ltd)

In this case, the Tribunal was concerned that the horizontal merger between Scaw and Ozz in 2008 would combine the only two large local firms in the supply of grinding media. The products supplied by both Scaw and Ozz were high chrome mill liners, grinding media, manganese rounds and tumblers and idlers.

The only product that raised competition concerns for the Tribunal was grinding media. As such the focus of the instant research will be narrowed to grinding media. The remaining products did not raise any competition issues.

The Tribunal was of the view that there was great potential of Scaw to increase the prices of grinding media after the merger. Imports of grinding media at the time were not cost effective to constrain the Scaw post-acquisition of Ozz. Barriers to entry in the grinding media market were found to be high, given the kinds of technical skills required.

1.3 Scope of the Research

The study is limited to horizontal transactions that is firms that compete by providing identical or similar products and or services in the same geographic area.

The ex-post assessment is conducted for two Tribunal decisions that have been taken at least three years back. A three-year period is suggested to be a sufficient time for the relevant markets to have adjusted to the dynamics brought to bear by the increased concentration (Buccirossi, et al., 2008). Moreover, for purposes of competition analysis, an appropriate time frame for entry to be deemed to be timely is approximately two years (ICN Merger Working Group, 2006; Office of Fair Trading, Competition Commission & Department of Trade and Industry, 2005; Buccirossi, et al., 2008).

1.4 Organisation of Research

The remaining parts of the research report is structured as follows: Chapter two sets-out the theoretical and literature framework. Chapter three outlines the main propositions that are being tested through the three case studies. This will be followed by an explication of the research methodology employed in Chapter four. Chapter five is a presentation of, the findings of each of the three case studies examined. There, the focus will be on the key factors considered by the Tribunal in its decision. Chapter six is an assessment of whether the market has changed as anticipated by the Tribunal. The chapter also evaluates the financial performance of the acquiring firms in the two case studies, before and after the mergers. Conclusively, Chapter seven highlights the main lessons drawn from research and recommends further research to be undertaken.

CHAPTER 2: THEORY AND LITERATURE REVIEW

The theoretical framework for the research will be set out from a historical lens to give insight into the evolution of theory surrounding the constructs of unilateral and coordinated market power in the context of industrial organisation. This will be followed by an overview of the methodology adopted by United States (US), UK and South African competition authorities in assessing the ability of firms to behave in a unilateral and / or coordinated manner. The chapter will then provide a synopsis of post-merger assessments undertaken. It will be followed by an analysis of the debate on whether competition policy should concern itself with the total or consumer welfare. In conclusion, lessons from the theoretical framework will be drawn to the fore.

2.1 The Evolution of the study of industrial organisation and competition economics

Industrial organisation relates to the study of how firms behave in an imperfect competitive market and the performance and operations of such a market (Church & Ware, 2000; Einav & Levin, 2010). Horizontal merger review has to do with the assessment of competition between rival firms (these are firms that sell products deemed substitutable by their customers in the same geographic area) (Pepall, Richard & Norman, 2010); and the potential impact of the consolidation on welfare (Gellhorn & Kovacic, 2001). Hence, industrial organisation and how it has evolved has a significant impact on competition law (Davies, 2011; Schmalensee, 2008). The intention of competition policy is to prevent the creation, enhancement, or maintenance of market power by firms (Church & Ware, 2000). Given the inherent symbiosis between industrial organisation and competition law, economic concepts pervade merger analysis; whether they are performed by merging partners or antitrust agencies (Kovacic & Shapiro, 1999). The two mainstream economic concepts (also referred to as theories of harm) are unilateral and coordinated effects (ICN Merger Working Group, 2006).

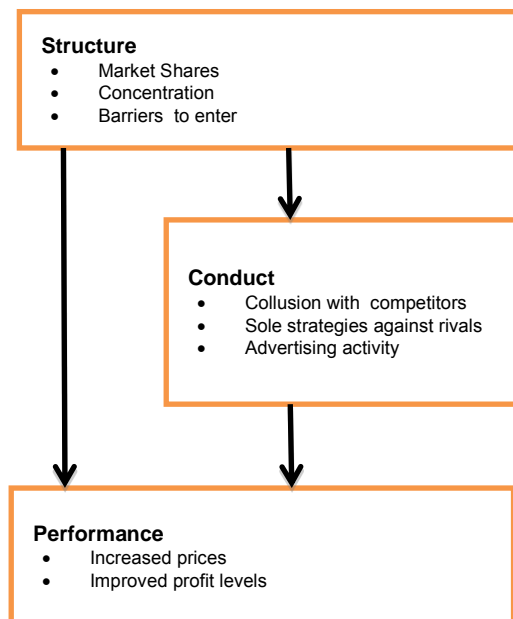
The evolution of the theory of industrial organisation is succinctly surmised by Tirole (1988). He notes that the evolution has emerged through two waves namely the Harvard School (1st wave) and the Chicago School (2nd wave). This had a substantial influence on competition policy and its implementation (Rubinfeld, 2008). In recent years, a game theory approach to understanding firm behaviour and possible anti-competitive conduct in more dynamic manner has emerged (Kaufer, 2008 and Posner,

2001). This can be regarded as the third wave. Discussion shall now turn to the three waves of industrial organisation.

2.1.1 The 1st Wave – Harvard school

The first wave is painted by the seminal work of Bain (1968) and Mason (1953) and is often referred to as the Harvard school of thought (Fourie, 1996; Holland, 2011; Leach, 1992; Porter, 1981). This wave was largely based on empirical work and not cemented in theory (Church & Ware, 2000; Okeahalam, 2001; Tirole, 1988). The bases of the Harvard school gave birth to the SCP paradigm (Bishop & Walker, 2010; Pepall, Richard, & Norman, 2011; Samad, 2008). This paradigm has come to be widely known as the SCP framework. The essence of this paradigm is that a firm's performance depends critically on the characteristics and structure of the industry in which it competes (Porter, 1981; Tirole, 1988). A schematic illustration of the SCP is depicted in figure 2 below.

Figure 2: SCP framework



Source: Adjusted from Shepherd, 1997

The importance placed on structure, conduct and performance requires an understanding of the Harvard school's suppositions for each.

i) Structure

The organisation or structure of an industry has to do with the number of sellers and their respective sizes (Martin, 2010; Theron, 2001). The greater the number the firms in a particular market the greater the likelihood for the firms to behave in a competitive

manner (Carlton & Perloff, 1994). The opposite contestation is that the fewer the number of sellers (increased concentration) in a specific market, the more likely the market performs as a monopoly (Shepherd, 1997). This is however influenced by the nature of the products being offered by competing entities. That is are the products differentiated or homogeneous; and what the barriers of entry are. (Liebenberg & Kamershen, 2008)

ii) Conduct

Market conduct has do with the pricing behaviour (independent or collusive) of firms in an industry (Motta, 2004). Conduct also considers product strategies, promotional activities (advertising, research and development) and whether these are set independently or in coordination with competitors (Liebenberg & Kamershen, 2008 and Theron, 2001).

iii) Firm Performance

According to the SCP framework, firm performance is influenced by the structure and conduct (competitive or anti-competitive) of market players (Theron, 2001). The performance of firms can be measured by profit levels, their level of efficiency and economies of scale (Theron, 2001). Liebenberg & Kamershen (2008) extends performance measurement by also considering the level of technological change in an industry.

The underlying hypothesis of the SCP doctrine is premised on: (i) the exercise of *market power* which should increase as *market concentration* increases, (ii) the greater the *barriers to enter* a market, which translates into a corresponding increase in the ability of firms to exercise *market power* (Church & Ware, 2000).

Given the relationship described, an understanding of what constitutes market power is necessary. It is generally accepted that market power relates to the ability of a firm(s) to profitably raise prices above marginal cost (Bishop & Walker, 2010; Carlton & Perloff, 1994; Motta, 2004). This ability to raise prices at the expense of consumers with no fear of competition from rivals is referred to the ability to act *unilaterally* (Motta, 2004). As such, the concept of market power is pivotal in the economic assessment of competition and the impact of horizontal mergers in changing incentives of firms (Bishop & Walker, 2010). The assessment of market power considers three variables, namely, market share and concentration; barriers to entry (Motta, 2004); and countervailing power (Church & Ware, 2000; Bishop & Walker, 2010). Each of these

propositions as cemented in the various industrial organisation doctrines are examined in the ensuing sections.

2.1.1.1 Market share

The firm's ability to act unilaterally (that is, independently of its competitors) is informed by the size of the firm (market share), relative to its competitors (Bishop & Walker, 2010). Thus understanding what share of the industry a player holds pre and post-merger is an important factor to determine market power (Gaffard & Quéré, 2006; Theron, 2001). As the extent to which a firm can exert market power is constrained by the presence of substitutes for customers (Church & Ware, 2000). The Harvard doctrine is that the larger the share of the market accrued post-merger, the more likely unilateral effects are to arise (Bishop & Walker, 2010 and Shepherd, 1999). Thus, the market share of a firm is the ultimate indicator of the firm's degree of market power (Shepherd, 1999). Market share is typically measured based on the turnover off all or most of the firms in an industry (Harrison & Rude, 2004).

2.1.1.2 Market Concentration

Concentration is concerned with the number and size of all the players in the market (Church & Ware, 2000; Liebenberg & Kamerschen, 2008). Various measures of concentration are used to describe the structure of the market. (Liebenberg & Kamershen, 2008). Turnover is commonly used, however, over the years indicators such as employment, capacity, value added, or physical outputs have also been used to determine market shares (Harrison & Rude, 2004). However, which variable to use to estimate market shares for a given sector is determined by the competitive dynamics in that industry. In the case of the mining sector, market shares are often based on commodity reserves or production volumes. (Harrison & Rude, 2004). Generally, there are three major proxies for calculating concentration. These are: (1) the Lerner index; (2) the Herfindahl–Hirschman index (HHI); and (3) the concentration ratio (CR) (Melnik, Shy, & Stenbacka, 2008). The HHI which is the sum of squared market shares of all firms in the market,) and CR defined as the market shares of the n largest firms in the market are the most commonly used (Bishop and Walker, 2010).

In order to calculate market concentration, the firms need to be located in what is referred to in competition economics as the relevant market or anti-trust market (Liebenberg & Kamerschen, 2008 and Baker, 2007). Market definition helps delineate the markets that are affected by the behaviour of a dominant firm. (O'Donoghue & Padilla, 2006 and Office of Free Trading, 2010). Finding the relevant market enables

the identification of market participants and the measurement of market shares and market concentration (US Horizontal Merger Guidelines, 2010). The relevant market is typically defined along a product and a geographic dimension (O'Donoghue & Padilla, 2006 and Baker, 2007). The relevant product market comprises all those products that impose an effective competitive constrain on the product(s) of the firm (O'Donoghue & Padilla, 2006). The geographic dimension is influenced by customers' willingness or ability to substitute to some products, or some suppliers' willingness or ability to serve some customers (US Department of Justice, 2010). Once the relevant market has been identified both in terms of substitutability of products and the geographical limitation, market shares can be calculated (based on various other indicators such as revenue, production capacity, volume) in order to determine the level of concentration.

The degree of concentration is reflected by the combined share of the few largest firms in an industry (Shepherd, 1999). Because market share has to do with the size of the firms in an industry, market concentration is considered a key element in characterising a market structure (Melnik et al. 2008). For instance, in a “pure competitive market model, there are large numbers of firms, therefore the larger the number of firms, the higher the competition” (Samad, 2008). Conversely, the fewer the firms, the less competitive they will act and this lead to higher prices and higher profits (Bishop & Walker, 2010). Consequently, an increase in the level of concentration due to a horizontal merger is deemed to:

- (a) eliminate competition and this could be significant depending on the size of the firm being acquired;
- (b) enhance market power by decreasing the number of competitors in a market (Gellhorn & Kovacic, 2001); and
- (c) “is likely to encourage one (unilateral) or more firms (coordinated) to raise prices, reduce output, diminish innovation, or otherwise harm consumers” (US Department of Justice & Federal Trade Commission, 1997, p2).

2.1.1.3 Barriers to enter

The ability for a firm to extent its market power by increasing prices above marginal cost is constrained by the presence of barriers to enter a market (Arowolo, 2005 and Church & Ware, 2000). Industries that are characterised by long-run barriers to entry, such as patent, cost advantage, advertising intensity, and economies of scale (Carlton & Perloff, 1997; Hovenkamp, 1985) are unlikely to attract new competition. The SCP

doctrine treats the economies of scale to be achieved as a barrier to enter because any new potential entrant will face cost disadvantages to operate at the required scale (Arowolo, 2005). The Harvard school views the continued high level of profit as an indication of the possible height of barriers a new entrant will face (Bishop & Walker, 2010). Moreover, the speed with which a new potential entrant could enter a market to become an effective competitor to constrain market power is also critical (Carlton & Perloff, 1997).

2.1.1.3 Countervailing power

The concept countervailing power was introduced by John Kenneth Gailbraith in the early 1950's (Ellison & Snyder, 2001 and Brincat, 2011) as part of the SCP framework (Piggot, Griffith, & Nightingale (2000). There are various definitions of countervailing power but there is an agreement in literature (Chen, 2008) that in essence, it refers to the ability of buyers to restraint suppliers from exercising market power (Snyder, 2005; Chen, 2008). This could be in the form of switching to alternative suppliers, they can facilitate entry by sponsoring a new entrant, or they can integrate vertically (ABA, 2008). Bishop & Walker (2010) emphasize that countervailing is about the other (outside) options available for customers. As such, if customers are able to exercise countervailing power in markets that are concentrated, it is unlikely that firms can exert market power (Competition Commission & Office of Fair Trading, 2010).

2.1.1.5 Coordinated conduct

Coordination takes place when competitive constraints are reduced (ICN Merger Working Group, 2006) and competing firms charge a price higher than a competitive price (Motta, 2004) or by reducing output (Bishop & Walker, 2010).

When a few firms control a large percentage share of a market, collusive behaviour is more commonly evident (Samad, 2008). The fewer the number of competitors active in a market, the more symmetry exist. It therefore becomes more effective to *multilaterally* create market power by colluding. As such, there is a positive correlation between the degree of market share concentration and the firm's performance (Samad, 2008; Wang, Pinsonneault, & Oh, 2011). Conversely, in non-concentrated industries where there are greater numbers of firms active, coordination is cumbersome and therefore, aggressive competition is more likely to take place (Church & Ware, 2000; Motta, 2004). The incentive to coordinate behaviour is based on the proposition that the monetary gains from doing so, greatly outweigh competing against each other (Church & Ware, 2000).

The proposition of the Harvard school is that in markets characterised by a structure with relatively few firms and high barriers to entry, firms will behave with the primary objective to achieve joint profit maximization through collusion, price leadership or other tacit pricing arrangements (Samad, 2008; Saeed & Kent, 2009; Stiegert, Wang & Rogers, 2009).

This deemed causal relationship between the economic structure of a market and the ability to exercise market power was believed to be sufficient to identify industries that may be prone to anticompetitive conduct and inform merger policy (Church & Ware, 2000). This is evident in the early decisions taken on whether or not to allow horizontal merger transactions (Rubinfeld, 2008). An increase in merger activity (mostly horizontal mergers) in the United States due to “weaknesses” in the Sherman Act and the economic and judicial environment (Church & Ware, 2000; Gelhorn & Kovacic, 2001; Motta, 2004) raised concern in the US Congress (the Senate and House of Commons) (Gelhorn & Kovacic, 2001). The concern related to the level of horizontal mergers resulting in highly concentrated industries with large dominant players and the possible undesired behaviour (Gellhorn & Kovacic, 2001) of higher prices or reduced output. The US Congress was of the view that mergers should only be allowed in markets that are un-concentrated in which players’ share of the market remain evenly distributed, barriers to enter are low and customers have the ability switch to other suppliers (countervailing power).

2.1.1.5 Studies in support of SCP

Samad (2008) refers to several empirical studies that were conducted in the 1970s and 1980s that yielded support for the SCP. These studies were focused primarily on the banking sector and included work by “Rose and Fraser (1976), Heggstad and Mingo (1977), Spellman (1981), Rhoades (1982), Podenda (1986), Lloyd-Williams et al. (1994) and Bajtelsmit & Bouzouita (1998)” (Samad, 2008 p. 3).

More recent research that also support the Harvard doctrine includes Jansen & Bielak (2006)’s application of the SCP in the higher education sector in the US; Chirwa (2001)’s study of the Malawian financial sector. Forsman (2004) and Devaraj et al. (2006) also found that there is a significant link between the structure and how firms conduct themselves. Saeed & Kent (2009) analysed the banking industry of the Arab Gulf Cooperation Council and the SCP framework best explains the performance of the banks.

2.1.1.6 Limitations of SCP framework

The SCP relied on empirical studies that used large samples of cross-sectional industry data and estimated regression models (Tirole, 1988). The greatest limitations or problems with estimating the SCP framework related to market definition, which for purposes of competition analysis, may not be same as the market defined by statistical agencies (Church & Ware, 2000). Market definition considers all the firms and their products that interact to determine prices (Motta, 2004). Statistical agencies on the other hand consider markets based on Standard Industrial Classification (“SIC”), which is usually concerned with the activities of firms at a national level (Church & Ware, 2000). For instance, the SIC may consider all vehicles as part of the same market or industry. The economic market relevant for competition assessment may however be delineated further into passenger vehicles, heavy-duty vehicles and buses because the absence of substitutability. Even the classification of buses maybe too broad because commuter buses and long distance busses may not place a competitive constrain on each other (MAN/VW, 2012). In order to calculate market concentration, it is therefore important that a narrower and relevant economic market is considered (Baker, 2007; Liebenberg & Kamerschen, 2008) and not the industry as defined or classified by statistical agencies (Church & Ware, 2000).

The SCP framework is also criticised for simplifying the casual relationship between structure and performance in a uni-directional manner (Bishop & Walker, 2010).

2.1.2 The 2nd Wave – Chicago school

The SCP approach by competition authorities in US has seen a number of mergers disallowed was met with criticism by Chicago scholars (Gellhorn & Kovacic, 2001). They argued that the correlation between market concentration and performance should not and cannot be interpreted as causal. These scholars included George Stigler, Harold Demsetz, Aaron Director and Richard Posner (Holland, 2011; Kauper, 2008; Pitofsky, 2008; Tirole, 1988).

This gave birth to the second wave of industrial economics (Tirole, 1988) known as Chicago or efficiency hypothesis school (Hovenkamp, 1985). This second wave influenced the consideration of horizontal merger transactions away from market concentration to one that required presenting compelling evidence other than the structure of a given industry that may raise anti-competitive conduct (Baker & Shapiro, 2008). It is premised on the theory that high profits are positively influenced by how

efficiently resources are managed irrespective of the industry structure in which a firm finds itself (Evans & Padilla, 2005; Gellhorn & Kovacic, 2001; Rubinfeld, 2008; Tirole, 1988). The principal theme of the Chicago school rest with the argument of net allocative efficiency which means that as long as gains from efficiency makes one party better off and no other party worse off, there should no concern (Hovenkamp, 1985).

2.1.2.1 Market share and concentration

The bases of the Chicago school is that higher earnings derived by large firms (market share) in concentrated markets are due economies of scale and the efficiencies employed by firms. These factors allow firms to capture a share of the market from competitors that are less efficient in terms of cost and technology (Samad, 2008). As such market power derived from efficiency should be encouraged (Shepherd, 1999).

If a firm enjoys a higher degree of efficiency than its competitors through relatively low cost of production structure, it can maximise profits and increase its size. This will enable it to increase its share of the market even at the current market price. It is on this basis that the Chicago school maintains that an increase in profits and market share are the result of efficiency and are not products of coordinated conduct (Rubinfeld, 2008 and Samad, 2008).

The Chicago school argues that the nature of the cost structures of markets dictate the minimum efficiency scale (“MES”) at which firms need to operate. From this contention flows the view that if an industry is characterised by large economies of scale relative to demand, then that industry is likely to be concentrated (Bishop & Walker, 2010). Therefore, the profitability that translates to market share is unrelated to market structure (Posner, 2001) but due to efficiencies derived from scale.

2.1.2.2 Barriers to entry

The efficiency hypothesis dispels the argument that economies of scale serves as a catalyst to the creation of barriers to entry. This is, because incumbents of an industry also face the same cost pressures when they decide to enter a market (Arowolo, 2005). An added consideration is the ability of firms already in market to expand (Bishop & Walker, 2010). They aver that even if barriers to enter are higher the possibility for incumbents to expand their production will deter market power abuse. Therefore, an erroneous decision on the ability of firm to raise prices could be arrived at if the possibility for expansion is not considered (Bishop & Walker, 2010).

If an industry is marked by high profits, it will attract entry (Rubinfeld, 2008). This is so because a new entrant that has observed high or excess profits over a long period of time assumes that these profits are perennial. The assumption therefore serves as a strong incentive to market entry (Bishop and Walker, 2010).

The role of Chicago school in competition policy became apparent in the kinds of merger judgements issued by the Lower Courts in the US (Hovenkamp, 1985). These courts created a trend of approving mergers in relatively concentrated markets and relied on the ease with which competitors could enter a market (Baker & Shapiro, 2008; Gellhorn & Kovacic, 2001).

2.1.2.3 Countervailing power

The presence of the alternative suppliers is not dispositive that customers can switch in the event that a firm wields market power (Ravhugoni, 2011). The possible substitute suppliers should have the capacity to meet the volume demand by customers, should they decide to switch (Bishop & Walker, 2010). In order for countervailing power to be effective, the costs of changing suppliers should not be inhibitive and should happen with relative ease and speed (Bishop & Walker, 2010). Thus, the ability to switch is a more significant source of countervailing power (Ellison & Snyder, 2001).

2.1.2.4 Coordinated conduct

The Chicago school holds the view that market power obtained through coordinated conduct will dissipate quickly (Shepherd, 1999). This is because since the Sherman Act made cartels illegal, they were largely eliminated and some started operating underground. The outlawing of cartels rendered them unsustainable, owing to the difficulty of monitoring, enforcing, or punishing deviations from the agreements (Posner, 2001).

2.1.2.5 Studies in support of the efficiency hypothesis

Samad (2008) studied the banking industry in Bangladesh and found evidence in support of the Chicago school of thought. Lieberberg & Kamershen (2008) found no relationship between the structure of the South African auto insurance industry and the profits that were recorded. Aguirre, Lee & Pantos (2008) in their research titled Universal versus functional banking regimes: The Structure Conduct Performance Hypothesis revisited found that support for the Chicago school. They studied the regulatory framework that financial institutions in Canada, France, Germany, Italy,

Spain, Switzerland, and the UK operate in and concluded implies that efficient banks gain higher market shares and earn greater profitability.

2.1.2.6 Limitations of Chicago school

Similar to the SCP empirical studies, the experimental research conducted to substantiate the efficiency theory was found to be weak (Kauper, 2008; Samad, 2008). The efficiency theory received criticism for negating the argument that markets are imperfect (Shepherd, 1999). Hovekamp (1985) in a scathing criticism of the Chicago school indicate their principal statements are based on faith of the market and its ability to self-correct. He further submits the “market efficiency model is itself too simple to account for or to predict business firm behaviour in the real world. The model has proved to be particularly inept at identifying many forms of strategic behaviour. In large part this is so because the market efficiency model is static and dwells too much on long-run effects. In the real world, short-run considerations are critical to business planning.” (Hovenkamp, 1985, p 284).

2.1.3 The 3rd Wave – Post-Chicago school

The difference between the SCP and the efficiency schools has seen the emergence of the third wave of the industrial organisation namely the New Industrial Organisation (NIO) and New Empirical Industrial Organisation (NEIO) approaches (Fourie and Smith, 1999; Holland, 2011; Porter, 1981). The lack of theoretical models and bases for the preceding methods (Harvard and Chicago) encouraged the emergence of new theoretical methodology (Eivan & Levin, 2010) also referred to as the Post-Chicago school. In the main, the “new” approach in application adopts more sophisticated and dynamic oligopolistic and game theory (Fourie and Smith, 1999; Holland, 2011) methods. These methods focus less on market concentration and more on the conduct of firms which is alive to how a competitor may react (Church and Ware, 2000, Posner, 2001). The third wave draws from the SCP by positing that in order to understand the strategic decisions a firm will take, it is important to understand the structure, concentration and post-entry competition in the market (Arowolo, 2005) and the general evolution of markets (Audretsch, Baumol & Burke, 2001).

The game theory approach is premised on the proposition that a firm’s strategy will determine the level at which it will produce, the prices it will sell at, the level of advertising it can invest, and decisions to expand its productive capacity (Bishop & Walker, 2010). This behaviour by firms informs the strategies that competitors will

adopt. Therefore, competition among firms should be viewed as a game of strategies (Carlton & Perlof, 1994). This dynamic approach has progressed from static focus on competition based on price and output to an approach that considers the impact of product and process innovations on firm reactions (Audretsch et al., 2001; Gaffard & Quéré, 2006). Accordingly, competition laws should consider this dynamic nature of industries and less on the number of firms in a market (Audretsch et al., 2001).

What follows outlines the perspective of the third school when it comes to market share and concentration, barriers to entry, countervailing power, and coordinated conduct.

2.1.3.1 Market share and concentration

According to the new industrial organisation theory, an increase in market concentration due to a horizontal merger may not necessarily give rise to unilateral effects because competitors will react in some form in response to the likely market power (Bishop & Walker, 2010). This could be through the expansion of capacity and / or change in the product offering (Bishop & Walker, 2010). Consequently, unilateral effects in concentrated markets should not be a foregone conclusion. Importantly, the contribution of the game theory application is based on the proposition that endogenous forces affect market concentration and that structure is as much dependent on conduct, as conduct is on structure (Audretsch et al., 2001).

2.1.3.2 Barriers to entry

Contrary to both the SCP and Chicago schools, the new industrial theory argues that the decision to enter a market by a potential new entrant is based on the possible strategic decision that will be adopted by incumbents (Arowolo, 2005; Audretsch et al., 2001). Also, a new entrant will assess whether the sunk costs (cost of putting up plant to realise MES) that will be incurred upon entry can be recovered post-entry by being cognisant of the intensity of price competition in the market (Bishop & Walker, 2010).

Furthermore, Bishop & Walker (2010) state that barriers to expansion by competing firms even in the presence of high barriers to entry is important in restraining unilateral power. In addition any entry to deter market power whether by customers, new players, and / or players in adjacent markets it has to be (a) *likely* - amongst other factors it has to be profitable, (b) *timely* – meaning rapid, and (c) *sufficient* - able to duplicate scale and quality (ABA, 2008; ICN Merger Guidelines Workbook, 2006; US Horizontal merger guidelines, 2010).

2.1.3.3 Countervailing power

The concept of countervailing power when introduced by Gailbrath did not receive much attention and had been heavily criticised (Engle-Warnick & Riffle, 2002). It however emerged with the advent of the oligopolistic game theory models (Engle-Warnick & Riffle, 2002).

The reliance of the large size customers as a measure of countervailing power may result in less scrutiny of merger transaction that may be anti-competitive and harm competition (Ellison & Snyder, 2001). Over the years, competition authorities increasingly interrogated the role of customers (Engle-Warnick & Riffle, 2002) apparent in the merger guidelines of US and UK competition authorities’.

The large size of the customers is not dispositive of countervailing power (Ellison & Snyder, 2001) because the ability of small customers to switch is also important (Bishop & Walker, 2010). Imperatively, countervailing power needs to be present before and after a merger (ICN Merger Guidelines Workbook, 2006).

2.1.3.4 Coordinated conduct

By using a game theory analogy, the incentives for firms to collude are not as straight forward as postulated by the Harvard economists. This is because in as much as the pay-off from colluding is greater than from competing, by cheating a firm will also derive high profits (Bishop & Walker, 2010). Thus for collusion to be sustainable, the ability of firms to detect and punish deviation from the agreements by members of the cartel is critical (Church & Ware, 2000). The third wave prescribed three conditions to be met for coordinated conduct to be feasible. These are: (i) firm should be able to reach an agreement, (ii) it should be possible to monitor adherence to agreement and (iii) deviation from the agreement should be punished timely (ABA, 2008, Bishop & Walker, 2010).

Unlike the SCP and Chicago empirical studies that aimed to extrapolate the theory to other markets, the post-Chicago doctrine focuses on a single industry and long-run competition between firms (Church & Ware, 2000). The rationale behind such a focus is that individual industries are distinct from each other (Eivan & Levin, 2010).

2.1.3.5 Studies in support of post-Chicago

Lee & Mahmood (2009) found that the SCP and the efficiency doctrines are too simplified and that firms’ strategic investment choices are responsible for improved

profit levels. Similarly, Iwasaki, Seldon, & Tremblay (2008) include game theory principles in their model tested the beer market in the US. Harrison and Rude (2004) also postulates the use of estimation models that consider behavioural (game theory) aspects.

2.2 Consumer welfare versus total welfare

It is accepted that there are divergent views between competition law practitioners and the authorities on what the purpose of competition policy is or should be (Bishop & Walker, 2010; Kirkwood & Lande, 2008; Van Sinderen & Kemp, 2008). Most competition authorities concentrate on the effects of competition policy on consumer surplus, while the opposing views postulate that competition law is primarily concerned with economic efficiency (Van Sinderen & Kemp, 2008; Whinston, 2007). According to Kirkwood & Lande (2000), case law in recent years has focussed on protecting the welfare of consumers and not increasing economic efficiencies. While that is, Duso, Neven & Roller (2007) have found that competition agencies are not only driven to safeguard consumer welfare. To them, competition agencies are the stalwarts of other aspects, such as politics and the environmental issues.

The South African competition law that can be traced back to 1955 (Regulation of Monopolistic Conditions Act of 1955) was largely focused on conduct that is not in the public interest (OECD, 2003a). The legislation enacted in 1998 however exhibits considerable consideration for total welfare. Assertions relating to “economic efficiency and consumer benefits leave room for flexibility in application. The term “efficiency” is not necessarily to be understood in the sense of static welfare analysis, although that reading is possible. Rather, coupling it with adaptability” implies a greater concern for dynamic considerations about entry and mobility. The additional concept of promoting “development of the economy” also shows the breadth of the economic perspective. And the provision about consumer interests mentions both prices and choices, implying that preserving outlets or brands might be considered important, even if that meant a somewhat higher price level.” (OECD, 2003a, p20)

2.3 The effectiveness of remedies imposed to merger transactions

Remedies or conditions are provisions competition regulators impose on those transactions that are deemed to raise concerns (Ngwenya & Robb, 2010). It is expected that competition authorities only consider imposing conditions on mergers if there will be harm to competition (OECD, 2003b). By imposing remedies to mergers,

competition authorities' primary objective is to maintain competitive dynamics in the implicated markets (Halverson, Ewing, Steptoe & Johnson, 2004/05). There are however occasions when competition regulators are satisfied with the conditions despite the relevant merger's effect of reducing the level of competition; provided these are not substantial or create a dominant firm (OECD, 2003b).

The OECD further posits that the effectiveness of a remedy should be the principal concern. A study prepared for the Federal Trade Commission (FTC) in 1999 found that ordering the divestiture of an entire business is more likely to be successful than the divestiture of parts of a business (Baer, 1999). This is partly because buyers of part of a business are likely to be weak due to information asymmetry² and thus become more vulnerable. Duso, Gugler & Yurtoglu (2006) found that the remedies were not properly imposed in the EU. They further assert that conditions that were levied at phase 1 were more effective than conditions imposed after the phase 2 investigations. This was largely an output of an event study, which found that abnormal profits to rivals were lesser than when conditions were imposed during the phase 2 of the EU's investigations.

According to the OECD (2003b) in order for a condition to be effective, it may require the need to go further than maintaining levels of competition as pre-merger. In the same vein, it should also not create a competitive situation that is better than before the merger.

In the most recent study on the effectiveness of remedies (September 2012), the UK Competition Commission found that behavioural conditions are "more complex and resource-intensive than divestiture remedies but that they can operate satisfactorily in limited circumstances, especially where the company operates in a regulated environment and where there are expert monitors" (UK Competition Commission, 2012. P2). The review also revealed that for structural/divestiture conditions to be effective, authorities:

" need to be clear about the constituents of the divestiture package and ensure that it is maintained until the divestiture is complete; the importance of a thorough assessment of potential purchasers; and the importance of including provision for sale of the package by divestiture trustees at no minimum price" (UK Competition Commission, 2012. P2).

² Such as whether the assets are functional and up to date

2.4 Review of findings of post-merger assessments

The synopsis of the studies reflected in the preceding paragraphs demonstrate that competition agency (i) employ mainly qualitative methods for post-merger studies (ii) examine at least two transactions for that purpose (iii) independent scholars typically employ quantitative methods, and (iv) ex-post evaluations report mixed results with respect to of competition authorities' decisions how markets subsequently changed.

The UK Office of Fair Trading (OFT) commissioned ex-post evaluations of two horizontal mergers in 2005. The study found that the authority's decisions with respect to competitive dynamics of (especially) barriers to entry and threat of potential entry to constrain anti-competitive were relatively on par with market developments. It was however not the case for the authorities decisions on countervailing power.

The most recent study conducted by the UK Competition Commission in 2011 for the post-merger assessment of two horizontal transactions also found consistency in the decision of the authority and the market developments post-merger. The assessment was however not conclusive as to whether the consumer welfare that was seemingly gained that resulted in lower prices was offset by a reduction in choices for customers (Aguzzoni et al., 2011).

Neumann & Sanderson (2007) in their assessment commissioned by the Canadian competition authority, evaluated three horizontal transactions, and concluded that the authority was correct in its decisions. The ex-post evaluations however identified market dynamics such as a surge in international demand for products that could not have been predicted at the time that the transactions had been analysed by the competition authority.

Buccirossi et al., (2008) were commissioned by the European Competition Commission to assess the merger involving *Pirelli and BICC*. They concluded that the decision to approve this merger was appropriate and that the analysis was correct and almost complete.

The South African authority undertook ex-post evaluations of three mergers namely:

(i) *Astral/Natchix* active in the poultry and animal feed industry wherein a divestiture and behavioural conditions were imposed. The outcome of the assessment found that the structural condition was key to ensure competition in the form of an independent feed supplier was realised. The behavioural conditions were however; less successful

with indications that Astral was potentially in breach of the remedy by price discriminating in the downstream market in favour of its own operations. Furthermore “(t)he review also revealed that the Tribunal’s decision did not fully consider the implications of the unilateral control which Astral gained in the Elite JV through the acquisition of Natchix (and its share in the JV). The Commission has since found that this allowed the JV to be operated to undermine the emergence of effective rivalry in breeding stock” (OECD, 2011 p.140).

(ii) *Murray & Roberts/Cementation*, active in the construction/mining service industry was approved with no remedies. This was on the basis that the products were part of bidding markets. The findings of the ex-post evaluation were contrary to the Tribunal’s assertion that entry is unlikely given customers preference for reputable suppliers. The ex-post analysis observed entry post-merger of competitors in related markets. In relation to the coordinated conduct, whilst the Tribunal was of the view that collusion is unlikely given the bidding nature of construction equipment, a series of cartel activity has since been uncovered.

(iii) The last case reviewed by the Competition Commission in South Africa involved *Trident/Dorbyl*, who are both active in the steel processing sector. The merger was approved based on efficiencies brought about by the merger (OECD, 2011). The post-merger review found that the Tribunal was on the mark with respect the constraints that would be faced by the merged entity, but underestimated the substantial power of buyers.

Unlike the post-merger assessments commissioned by competition authorities that typically employ two research methods (quantitative techniques complemented by interviews with market participants), similar studies completed by independent scholars are usually based on quantitative techniques such as event studies, difference-in-differences (DiD) and regression analysis (Eckbo & Wier, 1985, Duso, Neven & Roller, 2006; Kemp & Severijnen, 2010; Friberg & Romahn, 2012).

In one of the earlier studies undertaken to understand the correctness of the competition authorities’ decisions, Eckbo & Wier (1985) in their assessment of 62 horizontal mergers found that a considerable number of mergers were prohibited that. In their analysis, these are shown to be competition-enhancing transaction.

Kemp & Severijnen (2010) in their ex-post analysis (employing the DiD method) of two hospital transactions in the Netherlands exclusively focused on the effects of prices on

hip surgery. They concluded in the one transaction (Gooi hospital merger) that the authority may have wrongly assumed patients would travel to other hospitals in the event of a price increase. Their assessment found price increases significantly above the national average prices after the merger and no divergence to competitors by patients. In the second transaction, the DiD did not reflect significant prices-increases. Noteworthy is that Kemp & Severijnen (2010) refrained from a definitive conclusion on whether the Dutch competition authority was correct in its decisions of the two transactions.

Similarly, Haas-Wilson & Garmon (2009) also examined two hospital transactions using the DiD method in the US. Their analysis established drastic price increases after the merger, for the one hospital transaction (*Evanston Northwestern Healthcare/Highland Park Hospital*). This was largely due to increased market power that was transferred by the merger. The authors are however silent on whether the competition authorities were correct in approving the transaction. Inference can however be drawn from subsequent enforcement remedies sought by the FTC that the decision to approve the merger was incorrect.

The post-merger assessment of a second hospital transaction showed no significant price increases subsequent to clearance from the competition authority (Provena St. Therese Medical Center/Victory Memorial Hospital). This suggests that the US authority was correct in approving the merger citing unlikely competition concerns that may arise from the transaction.

Duso, Neven & Roller (2007), in their review of 164 EC decisions using DiD on mergers, found instances (28%) where certain transactions were blocked. These transactions were deemed pro-competitive by the stock market (Type 1 error). Conversely, type 2 errors were made in which case the competition authority cleared mergers (23%) that were regarded as anti-competitive.

2.5 Post-merger financial performance of firms

The rationale for mergers are generally carefully considered by the competition authorities, mainly because of the likely increase in concentration levels that will induce anticompetitive behaviour (Nguyen & Ollinger, 2006). However, from the merging parties' perspective, acquiring rivals provide firms with the ability to grow without investing in capacity (Agarwal & Bhattacharjea, 2006). Other reasons advanced for why firms engage in mergers include enhancing efficiencies, market power, reaction to economic shocks and weakening competitors (Andrade, Mitchell & Stafford, 2001;

Mantravadi & Reddy, 2008; Pepall et al., 2010). However, according to Mantravadi & Reddy (2008) the principal reason is to increase revenue and profitability. On the contrary, the recent work by Maksimovic, Phillips, & Prabhala (2011) finds that acquiring firms' primary reason is to enhance market power therefore they often dispose of at least 27% of the entire target business and close 19% of the plants of target firms within three years of the acquisition. To this, Gugler, Mueller, Yurtoglu, & Zulehner (2003) submit that transactions that enhance efficiency of firms merging should increase both their profits and their sales. Mergers that increase market power on the other hand should increase profits and reduce sales (Gugler, et al., 2003).

The gains from mergers are however mixed and dependent on the assumptions employed (Pepall et al., 2010). Martin (2010) states that mergers are often not profit creating because the perceived cost efficiencies expected to be derived are not large enough. Conversely, Healy, Palepu, & Ruback (1992), in their study of the post-merger performance of 50 firms in the US found that the merged entity financial performance in terms of operating cash flow improved substantially, especially for mergers between direct rivals. Krug (2009) posits that mergers fails because acquirers do know buy the executives that have the know-how, industry specific knowledge and long developed relationship with stakeholders. Goedhart, Koller & Wessels (2010) espouse that unless an acquisition is based on either (i) improving the performance of the target company (ii) removing excess capacity, (iii) creating market access for the targets products (iv) acquiring skills or technologies more quickly or at lower cost, (v)and picking winners early and helping them develop; they are likely to destroy shareholder value.

The appropriate method for estimating or calculating the financial performance of mergers has also been under contestation (Andrade et al., 2001; Duso. et al., 2010). The event study methodology has received criticism for its limitation and reliance on efficiency and financial markets. The accounting method of testing pre and post-merger performance has also received disapproval (Andrade, et al., 2001; Church & Ware, 2000). However, Duso, et al. (2010) found use for both methods in understanding profitability. Mantravadi & Reddy (2008) measured pre and post-merger performance by analysing the averages key financial ratios over a six-year period (3 years prior and 3 years after merger completion). This method of assessing pre-merger and post-merger performance is condoned by Smit & Ward (2007) and acknowledged by Krug (2009).

2.6. Approach to horizontal merger assessment by the US competition authorities

The practise of merger review started in the US as far back as the 1890 and much later in other countries (Whinston, 2007). The UK introduced legislation to review mergers in the 1960's and Germany in 1970 (Motta, 2004; Whinston, 2007). The European Union first legislation on merger control only emerged in 1990 (Bishop & Walker, 2010). There has however been a convergence in merger assessment largely towards the US's method (Whinston, 2007). This is primarily due to globalisation and the global reach of practitioners and academics (Competition Commission & Competition Tribunal, 2009). As such, the methods adopted by the pioneering competition authorities (US and UK) in examining the effects of mergers are reviewed.

The influence on competition assessment by the various schools of industrial organisation can be seen in the approaches adopted by the Federal Trade Commission ("FTC") and the Department of Justice ("DoJ"), the two government authorities tasked with regulating merger control in the US.

The 1968 DOJ Merger Guidelines clearly favoured the SCP hypothesis (Martin, 2010 and Schmanlensee, 2008) that indicated that a horizontal merger will be challenged even if the market shares are lower than four percent and the industry was not highly concentrated (Posner, 2001). However by the 1980s the guidelines were much changed to a more relaxed merger review regime with less focus on market power (unilateral) and coordinated conduct (Gellhorn & Kovacic, 2001).

The 1992 Horizontal Merger Guidelines (revised in 1997) published by the FTC and DoJ prescribed a positive weighing to efficiencies (Schmanlensee, 2008) and pointed to five steps the agencies considered in making a determination on a merger. Contrary to the 1968 guidelines that scrutinised a merger between rivals holding four percent of the market, the 1992 guidelines set thresholds for mergers that fell below a certain level in terms of revenue to be exempted from competition review (Posner, 2001).

The analytical framework that consisted of the five steps entailed: (i) whether the merger significantly increased concentration and result in a concentrated market; (ii) whether the market structure raised concern about potential adverse competitive effects such as coordinated conduct or unilateral market power; (iii) whether entry was possible in timely and sufficient manner to constrain the merging firms; (iv) whether the merger brought about *efficiency gains* that reasonably could not be achieved by the

parties through other means; and (v) whether either of the parties exited the market without the merger (US Department of Justice & Federal Trade Commission, 1997). The inclusion of efficiency assessments in horizontal merger analyses in the 1997 Guidelines suggests the influence of the Chicago school of thought on competition policy.

In August 2010, the FTC and DoJ released new Horizontal Merger Guidelines that indicate the change in approach adopted by these agencies. The 2010 guidelines suggest a move towards a more post-Chicago doctrine that is principally focused on understanding firm strategy. Part of the introductory brief to the 2010 guidelines reads, “(t)hese Guidelines principally describe how the Agencies analyze mergers between rival suppliers that may enhance their market power as sellers” (US Department of Justice & Federal Trade Commission, 2010, pp.2). The 1997 guidelines state that “(t)hroughout the Guidelines, the analysis is focused on whether consumers or producers “likely would” take certain actions, that is, whether the action is in the actor’s economic interest” (US Department of Justice & Federal Trade Commission, 1997, pp.2) is more centred on efficiencies.

Extracts from the Overview of the latest guidelines that sets out the analytical approach adopted by the authorities for horizontal merger review reads: “These Guidelines should be read with the awareness that merger analysis does not consist of uniform application of a single methodology. Rather, it is a fact-specific process through which the Agencies, guided by their extensive experience, apply a range of analytical tools to the reasonably available and reliable evidence to evaluate competitive concerns in a limited period of time” (US Department of Justice & Federal Trade Commission, 2010, pp.1). Compared to the 1997 Guidelines which read: “The Guidelines are designed primarily to articulate the analytical framework the Agency applies in determining whether a merger is likely substantially to lessen competition” (US Department of Justice & Federal Trade Commission, 1997, pp.1) which are the abovementioned five steps.

Despite the 2010 guidelines’ assertions not to adopt a single analytical framework and explicitly outline as in the 1997 merger guidelines the step approach; the 2010 merger guidelines discuss consideration for concentration level in the an industry, barriers to entry, countervailing power and the ability to coordinate as part of the determination whether a horizontal merger will lessen competition. It therefore appears that there is recognition for considering strategic behaviour among competitors over time (new

game theory approach); but they nonetheless apply a framework that heavily is informed by structuralism, together with the consideration of possible efficiencies.

Descriptive of the FTC main approach to merger review (which leans towards SCP) is the merger *between Koninklijke Ahold N.V./Safeway Inc* in 2012. The FTC found that the “market for the sale of retail food and groceries in supermarkets is already highly concentrated, and would become significantly more so post-acquisition. The acquisition would reduce the number of supermarket competitors from three to two, creating a duopoly between Giant and Acme Markets.”

Possible entry by new competitor(s) was also dismissed. The concentrated structure of the retail food and groceries market and price transparency observed also made it susceptible to collusion. The FTC’s consideration of the time it will take entry to be feasible is indicative of incorporation of the post-Chicago doctrine in its merger assessments.

2.7 Approach to horizontal merger assessment by the UK competition authorities

Competition policy in the Europe emanated later (1900) compared to the US that started as far back as the 1890 through the Sherman Act (Bishop & Walker, 2010; Duso, et al., 2011) and is govern at a country level (national) and European Union level (supra-national) (Motta, 2004).

Prior to the 2010 Merger Guidelines released jointly by the Office of Fair Trading (“OFT”) and the Competition Commission (“CC”) in the UK, the respective authorities published their individual guidelines separately. The OFT individual guiding document titled *Mergers: substance assessment guidance* document published in 2003, which set out the approach adopted by the OFT in deciding whether to refer a merger assessment to the CC for consideration. The CC can only investigate mergers referred to it by the OFT or the Secretary of State and has no legislative power to unilaterally investigate a merger (Competition Commission & Office of Fair Trading, 2010). Mergers referred by the OFT to the CC are deemed to raise potential competition concerns both unilateral and coordinated as such required more detailed assessments. Consideration will be restricted to the approach adopted by the CC and not the OFT, for purposes of the instant research.

The joint guidelines to merger review state that: “Competition is viewed by the Authorities as a process of rivalry between firms seeking to win customers’ business

over time by offering them a better deal. Rivalry creates incentives for firms to cut price, increase output, improve quality, enhance efficiency, or introduce new and better products because it provides the opportunity for successful firms to take business away from competitors, and poses the threat that firms will lose business to others if they do not compete successfully” (Competition Commission & Office of Fair Trading, 2010, pp.19).

Unlike the US guidelines, the 2010 merger guidelines of the UK competition authorities implement the SCP framework by assessing: (a) market definition; (b) measures of concentration; (c) unilateral effects; (d) coordinated effects; (e) efficiencies; (g) entry and expansion; and (h) countervailing buyer power.

Similarly to the US, the UK in their latest merger guidelines acknowledge the need to understand rivalry among firms over time which is informed by the study of industrial organisation that is premised on game theory (Davies, 2010). Yet, in determining whether a horizontal merger will substantially prevent or lessen competition a framework that heavily is informed by the SCP school is adopted but cognisance of efficiency considerations. This was also confirmed to be case by Audretsch et al.(2001) on the European Union’s application of competition law.

The 2006 merger between Pan Fish ASA (Pan Fish) and Marine Harvest NV (Marine Harvest) is illustrative of the UK authorities’ application of the merger guidelines. After determining the relevant market being the European wide market for salmon, the Competition Commission assessed whether the merged entity could profitably increase prices or restrict output in the long or short term with market share of approximately 37%. The investigation concluded that rivals have sufficient capacity and the ability to expand production to replace any output withheld by the merged entity. The relatively fragmented nature of the salmon industry and the associated low margins provided a fertile environment for increased consolidation. However, the presence of competitors to restrain any market power likely accrued by the Pan Fish was adequate to rest that the acquisition of Marine Harvest by Pan Fish is unlikely to raise unilateral market power to the detriment of competition. With respect to coordinated conduct, the volatility in supply and demand of the salmon (makes it difficult to reach an agreement and to monitor), the asymmetry among players and the long production lags (that delays punishment for any deviation from the agreement) made multilateral conduct improbable.

The review of the acquisition by Pan Fish by the UK Competition Commission demonstrates a synthesis approach of the various waves of industrial organisation. This is evident in the analysis of the structure of the salmon industry, the inability to coordinate given the un-concentrated nature of the industry and the examination of the various conditions postulated by the school of thought that advances game theory.

2.8 Approach to horizontal merger assessment by the RSA competition authorities

The South African competition policy in construction heavily drew from competition policies of the European Union, Canada and Australia (Competition Commission & Competition Tribunal, 2009).

However, unlike the UK and US, the competition authorities have not published any guidelines to their approach in assessing horizontal mergers. Nonetheless, the competition statute clearly state which factors the authorities should consider in their determination of whether the merger between competing firms will substantially lessen competition or not. Section 12 A (1) of the Competition Act states that:

“When determining whether or not a merger is likely to substantially prevent or lessen competition, the Competition Commission or Competition Tribunal must assess the strength of competition in the relevant market, and the probability that the *firms* in the market after the merger will behave competitively or co-operatively, taking into account any factor that is relevant to competition in that market, including –

- (a) the actual and potential level of import competition in the market;
- (b) the ease of entry into the market, including tariff and regulatory barriers;
- (c) the level and trends of concentration, and history of collusion, in the market;
- (d) the degree of countervailing power in the market;
- (e) the dynamic characteristics of the market, including growth, innovation, and product differentiation;
- (f) the nature and extent of vertical integration in the market;

- (g) whether the business or part of the business of a party to the merger or proposed merger has failed or is likely to fail; and
- (h) whether the merger will result in the removal of an effective competitor.”
(Competition Act, 1999 p.30-31).

Importantly, the Act states that should harm to competition likely arise, the authorities should determine;

“whether or not the merger is likely to result in any technological, efficiency or other pro-competitive gain which will be greater than, and offset, the effects of any prevention or lessening of competition, that may result or is likely to result from the merger, and would not likely be obtained if the merger is prevented ”
(Competition Act, 1999 p.30).

Theron (2001) found that the Tribunal applies the SCP in its assessment. However, a closer inspection of the factors indicated in the Competition Act reveals that the policy evidently incorporates approached of the three schools of thought (Harvard, Chicago, and Post-Chicago). The factors of market concentration, coordination, the need for consideration of whether firm will behave in cooperative or competitive manner rests in the Harvard school. Whereas the concerns with ease of entry and specifically efficiency rests with the Chicago school of thought. The attempt to synthesise the Post-Chicago doctrine in merger assessment is evidenced in the stated need for understanding the dynamic characteristics of the market.

2.9 Conclusions drawn from literature

Despite the marked evolution that economic analyses for competition review have undergone, there remain contestations regarding the ability either of firms to exert market power post-merger unilaterally or in a coordinated manner (Gellhorn & Kovacic, 2001). Competition authorities have however progressed to a more synthesised approach in merger assessments that incorporate all three schools of thought. The literature review also suggests that there is convergence in the analytical framework employed by competition authorities around the world. Part of this is apparent in the horizontal merger guidelines released by the UK and US competition authorities that are strikingly similar.

Evidence from numerous ex-post assessments indicate in the main, that competition authorities are on the mark with the prediction of possible market outcomes. There are

however, incidences in which market dynamics had not changes as anticipated by the authorities.

Given the severe limitations associated with the various methods available to conduct ex-post evaluations, independent scholars lean towards the use of DiD, structural models and event studies that do not rely on information from market participants and are less onerous to conduct. Draw backs of structural models relate to the lack of understand the dynamic nature of competitor behaviour. Authorities on the other hand rely on in-depth interviews with market participants and increasingly combine such interviews with DiD models. In instances where in-depth interviews are used to analyse post-merger effects, these cases were restricted to mainly two transactions.

The debate however remains on whether the focus of competition regimes should be total welfare, which considers both economic efficiency and consumer surplus. Alternatively should be advocating for one over the other. The impact of horizontal mergers on the financial performance of firms' is also under contestation.

CHAPTER 3: RESEARCH PROPOSITIONS

The previous chapter gave account of the theoretical framework that underpins the research project. Chapter 3 sets out the research propositions drawn from the Harvard School of thought in light of the Tribunal's leanings in application towards the SCP framework (Theron, 2001). The research will test empirically whether the premises advocated by the Harvard school manifested in how the market behaved post-merger; or whether the principles espoused by the Chicago and Post-Chicago school are evident.

The ex-post assessment considers two mergers approved by the Tribunal subject to conditions. Next, research propositions are outlined.

Proposition 1

Transactions between direct competitors that provide the same good and/or service based on customer demands increase the level of concentration in a particular market (Motta, 2004); which facilitates the ability of acquiring firm to behave in an anti-competitive manner by either raising pricing and or reducing output (Bishop & Walker, 2010).

- (i) Mergers between rivals in concentrated markets create or enhance market power arising from unilateral conduct.

Proposition 2

When a few firms control a large percentage share of a market, collusive behaviour is more commonly evident (Samad, 2008). Therefore, an increase in the level of concentration due to horizontal mergers eliminates competition and depending on the size of the firms is likely to create a platform for firms to coordinate their conduct collectively by raising prices, reducing output, diminish innovation to the detriment of customers and consumers (US Department of Justice & Federal Trade Commission, 1997). The incentive to coordinate behaviour is because the monetary gains from coordinating conduct greatly outweigh competing against each other (Church & Ware, 2000).

- (ii) Horizontal mergers in concentrated markets create environments conducive for higher levels of coordinated conduct.

Proposition 3

Industries that are characterised by a structure with relatively few firms and high barriers to entry (such as economies of scale and patents) will primarily aim to maximization profit (Samad, 2008; Stiegert, et al., 2009). The third proposition thus tests whether in the mergers that led to high concentration levels inhibited the ability of new firms to enter a market.

- (iii) Horizontal mergers in concentrated markets raise barriers to entry.

Proposition 4

This proposition rests on the premise that powerful buyers may constrain the ability of the merging parties to raise prices by either switching with relative ease to alternative suppliers, threatening to sponsor entry or vertically integrating (US Department of Justice and Federal Trade Commission, 2010).

- (iv) Horizontal mergers in concentrated markets are likely to be anti-competitive in the absence of countervailing power

Proposition 5

Competition authorities should only consider imposing conditions on mergers if there will be harm to competition (OECD, 2003b). The primary objective of a condition is to maintain competitive dynamics in the implicated markets (Halverson et al., 2004/05).

- (v) Conditions imposed on horizontal mergers that lessen competition improve competitive dynamics

Proposition 6

The last proposition analyse whether mergers between competitors improve the financial performance of the firm post-merger. Mergers are said to allow firms to grow rapidly and provide an alternative to investing in capacity for expansionary purposes (Agarwal & Bhattacharjea, 2006) but the primary reason is to increase revenue and profitability Mantravadi & Reddy (2008).

- (vi) Horizontal mergers in concentrated markets, improves the financial performance of the merged entity.

CHAPTER 4: RESEARCH METHODOLOGY

Given the research propositions outlined in the preceding chapter, this chapter presents the research method employed and reasons for why the method is suitable for the research project. This is followed by the sampling method used for the selection of the cases; the process of information and data gathering, the instrument that was used to collect qualitative information. Lastly, the limitations of study are outlined.

4.1 Research method

The inquiry was done adopting a qualitative research approach through case studies. The nature of the research makes a case study an appropriate method to use. Importantly as stated by Yin (2003) case studies are appropriate to address “how” and “why” research question. This is befitting in the context of this proposed study as the primary objective of the research is to understand *how* horizontal mergers changed market economies in terms of unilateral and coordinated behaviour assumed by the Tribunal in its Reasons for Decision; and *how* the performance of firms have been affected post-merger.

Buccirossi et al. (2006) identified four techniques for conducting ex-post-merger assessments. These are:

- Surveys (telephone interview, face-to-face interview and self-administered questionnaire);
- Structural models and simulations;
- Evaluations methods; and
- Event studies.

Table 2: Techniques for ex-post reviews of mergers where remedies are imposed

Survey	Can always be used, but the more hypothetic the scenario the more biased the responses	Relies on the expectations of well-informed market players
Event studies	Can be used if firms are quoted on stock market	Relies on the expectation formed by stock market when remedies were proposed
Structural models	Can be used if all necessary data is available and if remedies are structural and easy to model	Simulates effects of the merger using ex-ante supply data and ex-post demand data

Source: Buccirossi et al. (2006)

The empirical methodology employed by the both the Chicago and Harvard schools have come under severe criticism (Leach, 1992; Theron, 2001). The disapproval relates to the inappropriate pooling of data from different industries (Iwasaki, Seldon, & Tremblay, 2008); the assumption of a linear uni-directional influence of concentration on firm performance and its ignorance of possible reverse influence (Fourie, 1996; Liebenberg & Kamerschen, 2008). According to Buccirosi et al. (2006), empirical methods such as structural models and simulations demand high quality reliable data on price and quantity, which are often difficult to access. They furthermore advise that these tools are not adequate for post-merger assessments in which remedies were imposed. Instead, they advise that: “(g)iven the flexibility of these tools, surveys can be employed for any type of decision and may be the only available technique to appropriately assess the impact on the market development of a decision that authorised a merger subject to some behavioural remedies or a prohibition” (p.196).

The OECD confirms the extensive data requirement of structural models and need for specialised econometric skills (OECD, 2011).

Event studies consist of analyses of the changes in stock prices of competitors when a merger between rivals is announced. This method is however most useful for ex-ante assessments (Duso, Gugler & Yurtoglu, 2010). The market expectation is based on information available at the time of the event only and, thus; it does not really reflect the additional information provided by the actual post-merger market evolution” (Burrocisoi, 2006).

Different from structural and DiD models, event studies do not have extensive data requirements and is easier to run, however the methods is generally less reliable and not recommended (OECD, 2011).

Unlike the more empirical methods, the use of case study in this context will provide the reader with insight into the practical and real-life context of a merger based on facts which cannot be captured by merger simulation or estimation models (Tirole, 1988). Research on the similar topic conducted in the UK used a case study approach but supplemented the case study with quantitative methods through the use of simulation models (Deloitte, 2009). Similarly, the OFT commissioned Price Waterhouse Coopers (PwC) in 2005 to conduct post-merger analyses, which was based on 10 merger cases, based on in-depth case interviews. Neumann and Sanderson (2007) in their ex-post review in Canada also adopted a case study. They examined three cases through in-depth interviews with market participants.

In South Africa, the lack of availability of concentration, ratio data series severely constrain research in this field (Fedderke & Szalontai, 2009). The lack of publicly available industry concentration ratios at either provincial or municipal level renders employing econometric models rather impossible. As such, a qualitative approach in the form of case studies, maybe more appropriate. There are however, some caveats of using information provided by market participants through interviews in that the answers might be strategic in view of future mergers that they may get involved in (OECD, 2011). Nonetheless, the use of in-depth interviews for the purposes of research is most suitable in view of the severe data limitations.

4.2 Population and sample size

The Tribunal since its inception adjudicated 870 merger transactions of which 690 were decided upon by December 2009. A sample of two horizontal mergers decided upon and for which Reasons for Decision were issued are used for the instant research.

4.3. Unit of analysis

The unit of analysis for the purposes of the proposed study is the conduct of a firm (s). The research aims to understand how the economics of a particular market changed subsequent to a decision.

4.4 Case selection method

Two horizontal merger transactions heard before the Tribunal were selected by applying the judgemental sampling technique; namely

- Large or intermediate horizontal transactions heard by the Tribunal before 2009. Decision on the merger cases were issued more than three years ago to allow market effects to have taken place.
- The cases comprise of mergers approved subject to conditions.
- A range of analytical issues such as barriers to entry, concentration, countervailing power and market power emanated from the merger.

4.5 Horizontal merger cases to be assessed

The table below outline the merger transactions and the main theories of harm that emanated from the Tribunal's decision.

Table 3: Large Horizontal mergers heard and decided by the Competition Tribunal

Parties to the transaction	Tribunal Decision date	Implicated markets	Main theories of harm	Decision
Scaw /Ozz	4 June 2008	Grinding media	Unilateral (countervailing power, barriers to entry, market power)	Conditional Approval
Nampak /Burcap Plastics	26 March 2007	Plastic containers	Unilateral (Barriers to entry, countervailing power, market power)	Conditional Approval

Source: Competition Tribunal website

4.6 Information gathering process

The 2005 and 2007 ex-post reviews conducted on behalf of the OFT and UK CC relied heavily on the interviews held with especially customers and other market participants for their findings. Neumann and Sanderson (2007) also draw heavily on customers' opinions. This suggests that customers in particular are considered best placed to share insights in terms of competitive constraints in a particular industry, and their ability to constraint unilateral or coordinate conduct by firm (s). For each of the two horizontal merger case studies selected, face-to-face or telephone interviews were conducted with the following individuals and entities:

- Customers;
- Industry expert / market analyst; and
- Representative of the merging firms only in the Nampak transaction;

In total nine interviews were conducted as part of the assessment, see table 4 below. Respectively, five and four interviews were held for the Nampak/Burcap and Scaw/Ozz transactions.

Table 4: Profile of respondents interviewed

Nampak / Burcap respondents	Scaw /Ozz respondents
1. Market participant	1. Customer 1
2. Customer 1	2. Customer 2
3. Customer 2	3. Customer 3
4. Market Analyst 1	4. Market Analyst 2
5. Market Analyst 2	

The research examined financial ratios operating profit, operating margin, revenue, and net profit of the firms selected for the case study as in the case of Mantradi & Reddy (2008). Financial ratios were considered for period prior to the merger (3 years) and

period after merger (2 or 3 years). In order to access financial information that is publicly available the research was limited to mergers that involve listed entities.

4.7 Research instrument

An open-ended interview guide was composed for each of the parties interviewed (See Annexure A to D). The interview guide was divided into the three main sections as per the main constructs namely, market share and concentration; barriers to enter, countervailing power and coordinated effects. This was applied for all the groups to be interviewed. The scope of the questions per section is:

4.7.1 Market share and concentration

The question under this section will endeavour to obtain insight into which firms compete with each other; how it views itself in terms of size compared to its competitors. Who are the largest four firms in the industry? What is their combined share of the market? Which firms in the industry are performing well and what underlines this performance? Which economic factors impact the industry; how did these impact the industry? What factors influence competition in the market (price versus non-price factors). What was the rationale for the merger? How many mergers have taken place?

4.7.2 Barriers to entry

Are there barriers to enter the market? What are these barriers? Are they exogenous or endogenous factors? How many firms have exited the market in the past two or three years? Why have they exited the market? How many new entrants are there in the market? How did the firm respond to new entry? Have the firm changed its strategy (product offering, production capacity) due to new entry? Any investment in production capacity and product development? The rationale for the investment and kinds of investments undertaken. How has the investment influenced cost of productions and pricing of products?

4.7.3 Coordinated conduct

Description of the implicated products and how different they are from competitors' products? How are pricing strategies determined? Are prices publicly available? What are the current production capacities and what are the maximum production capacities? How have the firms behaved when prices increased? When are price increases announced? Have prices remained stable over a period of time? Is the firm a

price taker or price leader? Is there an industry association? What are the objectives of the association? What kind of information is shared?

4.7.4 Financial performance

Revenue figures over a five-year period. How has the firm performed since the merger/s? What economic factors influenced the financial performance of the firm? How did the economic factors impact the performance of the firm? What were the actual gains from the merger? How does the firm measure success?

4.7.5 Remedies

a) Nampak/Burcap transaction

How many suppliers/competitors are active in the market? How many firm use PET technology? Are PET technology licenses exclusive in the industry?

(b) Scaw / Ozz transaction

By how much did prices increase per year? Was the condition effective? What is the difference in price between imports and locally produced grinding media?

4.8 Data analysis technique

The information obtained through the in-depth interviews was analysed employing the thematic analysis technique to search for certain themes or patterns across an (entire) data (Braun & Clarke, 2006). For each of the case studies, the main themes emanating from the respondents is categorised and tabulated around key theories of the harm ventilated in the literature chapter. This is done for each of the cases.

4.9 Limitations of the research

A case study approach was adopted for the research question given the nature of the research topic. By nature, case studies renders them susceptible to sampling error as the decision of which cases to select are not empirical (Yin, 2003). The fact that horizontal merger transactions are reviewed restricts the inferences to the selected cases. The findings cannot to be extrapolated to non-horizontal mergers. Since two cases in different industries are used for the instant research, caution should be exercised on drawing inferences for all horizontal mergers. In addition, the study considered only large horizontal transaction decided upon by the Tribunal and excluded intermediate horizontal transactions (these have lower turnover and asset

threshold) over which the Competition Commission have jurisdiction. Given that the two cases selected are of a part of listed firms, inference cannot be extrapolated to horizontal mergers that involve private entities.

Competition authorities by virtue of their mandate usually have access to confidential information and the ability to summons such information from market participants where necessary. This enables them to obtain accurate information that is not available in the public domain. This however, will not be the instance for the research. Since interviewees are under no obligation to provide information. There is also significant risk of response bias given the background of the interviewer (Economist for the competition authority) respondents may be cautious in their responses.

The research findings will however still provide useful insights into how accurate the Tribunal decision on market economics were. It provides a base for future multiple case studies; and whether financial performances improved in view of the increase in concentration.

CHAPTER 5: FINDINGS OF THE TWO CASE STUDIES

This chapter outlines the findings of the interviews based on the methodology indicated in chapter four. The presentation of the findings for each of the case studies is set out by first providing a brief synopsis of the different theories of harm identified and discussed by the Tribunal in its decision. The Tribunal's Reasons for the Decision for each of the mergers is enclosed as Annexures E and F. Secondly; the findings of the in-depth interviews are sketched for the various theories of harm and constructs.

The information gathered from the interviews is categorised around the main themes for each of the research proportions and tabulated. The responses from the interviews are then pooled around each of the themes. For ease, information extracted from interview notes is referenced by indicating the profile of the respondent. The quotations from the interviews are also numbered for orientation purposes.

The presentation of the findings for the two cases commence with the Nampak/Burcap transaction followed, by the Scaw/Ozz merger.

5.1 Case study 1: Nampak Products Ltd / Burcap (Pty) Ltd

Before detailing the findings of the interviews, a brief background to Nampak Products Limited and Burcap (Pty) Ltd is provided.

Nampak Products Limited (“Nampak”) is a wholly owned subsidiary of Nampak Limited. Nampak Products Limited is primary trading arm Nampak Limited in South Africa. Burcap Plastics (Pty) Ltd (“Burcap”), was a private company which was 50% controlled by Nampak Products Limited. Two independent persons equally held the remaining 50% shareholding.

Nampak Products Limited manufacture a wide range of metal and plastic products such as drums, food containers, can for cool drinks, metal closures / twists and metal paint containers. Burcap was only a plastic products manufacturer and made mainly big containers and plastic paint containers (also referred to as paint buckets)

The table below presents information on the respondents interviewed for the purposes of the research. The interviewees are profiled as either customer, market analyst or market participant in order to protect their identities.

Table 5: Profile of respondents for Nampak/Burcap transaction

Profile	Designation
Market participant	Group Executive
Customer 1	Procurement Manager
Customer 2	Senior Executive: Marketing
Market Analyst 1	Market Analyst
Market Analyst 2	Industrial Analyst

5.1.1 Proposition 1: Mergers between rivals in concentrated markets create or enhance market power arising from unilateral conduct.

(a) Tribunal’s reasoning on relevant market

The Tribunal differed from the Commission and the merging parties in its definition of the relevant product market. The Tribunal was of the view that: “...that the two technologies can be regarded as substitutes and hence are capable of disciplining one another’s prices. ... But in the near future, plastic containers will become complete substitutes (emphasis added) for metal as new plastic technologies have been developed, presently in use in overseas markets, which will allow plastic containers to store solvent based paints, without deterioration. ...plastic and metal containers can no longer be considered as functionally distinct products. We can thus conclude that the relevant market comprises ...metal and plastic containers for the storage of liquids (solvent or water based) for industrial use” (para 24-28, 31&32).

(b) Findings from ex-post interviews on relevant market

1. “The majority of our [metal container] customers are solvent paint manufacturers with very small percentage manufacturing water-based paints” (market participant).
2. “[we] use metal just to store solvent based paints and plastic paint just to store water based paints. Except if it’s to a maximum of 5 litres, we do still store solvents in [plastic containers]. If it goes above [5litres] we use metal. We believe the friction in 5litres is acceptable but the moment if reach above we don’t believe the risk is good enough to put in a plastic bucket” (customer 1).
3. “There [is] a small minority of customers who do store water based paint in plastic containers. They perceive plastic to be less expensive than metal and there are issues [of] rusting and opening in metal containers” (market participant).
4. “At this moment, solvent based paint cannot be stored in plastic containers” (customer 1).

5. "...lost market share of those water based customers who converted to plastic. So we produce less metal containers today than we did in 2005/2006. This is mainly because of the conversion to plastic containers. We do have some capacity because of the customers that moved to plastic" (market participant).

Table 6: Compilation of responses on relevant market and market power

Themes	Main theories	Responses from interviews
Theme 1	Metal containers can be substituted with plastic containers for solvent based paint	<ul style="list-style-type: none"> - Metal is mostly used for solvent-based paint whilst the plastic is mostly used for water based paint.(market participant). - Due to technical reasons, solvent-based paint is not stored in plastic containers. The chemical permeates – so you cannot put solvent-based paint into plastic containers (market participant). - Plastic containers do compete with metal containers that are lacquered for water based paint but not for solvent based paint (market participant).
Theme 2	Metal containers can be substituted with plastic containers for water based paint.	<ul style="list-style-type: none"> - There are still few customers that use metal containers for water- based paint but the majority use plastic containers (market participant) - Some of our metal containers are lacquered for the small proportion of customers who store water based paints in metal containers.(market participant)
Theme 3	The price difference between plastic and metal containers facilitates switching away from metal.	<ul style="list-style-type: none"> - The reluctance to change to plastic despite the lower price is due to history. (customer 1) - There are a lot of solutions in the market currently, but big customers such as Plascon and Dulux will not take the reputational risk. (customer 1)
Theme 4	The merged entity is a price leader and therefore can raise prices unilaterally.	<ul style="list-style-type: none"> - Other than the raw material prices fluctuations, the prices have been stable. (customer 1) - There has not been a big divergence in price over years between metal and plastic. (market participant)
Theme 5	The merged entity is a dominant player and does not face any constraint.	<ul style="list-style-type: none"> - We source from three metal suppliers and there is not one particular supplier whose pricing is out, to give us a real concern (customer 1)

c) Tribunal’s reasoning on market power and concentration

The Tribunal did not make a definite finding onof the size of the market or the size of the respective players in the metal and plastic container markets. It however indicated that there are few players in the market and stressed the importance of the ability to deliver. In its judgment, the Tribunal noted that:

“Not only must a supplier be capable of providing the volumes and service levels required by a major customer, but it must also have the technology to make a container that meets customer’s standards” (para 35).

A critical consideration of the Tribunal was Nampak’s ability to exert unilateral market power. Excerpts of the judgement read: “Nampak dominant position in metal containers or the soon to be established plastic substitutes for the metal.... Nampak would be able to prevent customers arbitraging between the two products, as they are presently, by raising the prices of plastic containers so that they are priced closer to their metal counterparts and thus protect its dominant position in metal containers.... To the extent that Nampak is able to raise the price of plastic containers, closer to those of metal, these firms benefit as higher plastic container prices may slow down migration from plastic to metal.” (para. 34).

(b) Findings from ex-post interviews on market power

6. “Price differences of products for 1 litre plastic areis about R4.46 and metal is about R7.44. We pay R35 for 20 litre plastic [bucket] and R50 for 20 litre metal, [container] which is even more than the 20%” (customer 1).

The price index in table 7 reflects the difference in relative prices between metal paint and plastic paint containers since 2008. It shows that in the period April 2009 to April 2010, the average price of plastic declined. The reverse trend is observable for metal containers.

Table 7: Price Index of metal and plastic paint container since 2008

PACKAGING	PLASTIC			METAL		
	20 LT BUCKET	5 LT BUCKET	1L BUCKET	LACQUERE LINED 20 LT TIN	5 LT TIN	1 LT TIN
OCT 08	100%	100%	100%	100%	100%	100%
JAN 09	100%	100%	100%	100%	100%	100%
APR 09	92%	92%	92%	100%	129%	123%
JUL 09	94%	94%	94%	134%	129%	123%
OCT 09	94%	94%	94%	134%	114%	115%
JAN 10	94%	94%	94%	120%	114%	115%
APR 10	99%	98%	98%	120%	118%	119%
JUL 10	103%	103%	102%	117%	118%	119%
OCT 10	103%	103%	102%	123%	118%	119%
JAN 11	103%	103%	102%	123%	118%	119%
APR 11	113%	113%	102%	123%	124%	119%
JUL 11	113%	113%	102%	130%	124%	125%
OCT 11	113%	113%	113%	130%	131%	129%
JAN 12	109%	108%	113%	142%	131%	129%
APR 12	109%	108%	113%	142%	134%	132%
JUL 12	109%	108%	113%	139%	134%	132%
OCT 12	115%	114%	118%	139%	134%	132%

Source: customer 2

7. “There is a lot more water based paint today than there is solvent based paint being manufactured. Solvent based paint is being displaced by water based paint. This is mainly due to technology developed by paint manufacturers that make more water based paint. It is driven due to environmental issues and cost issues” (market participant).
8. “It is an international trend to move towards plastic because it’s much easier to recycle” (customer 1).
9. “The migration is not necessarily storing the solvent based paint into plastic but to re-formulate the solvent based paint to a water based paint. It is mainly to re-engineer the solvent product into a water product” (customer 2).
10. “For metal we have three main suppliers, namely, Nampak, Rheem and GBA metal. There are lots of other suppliers in the market. We have not used them because they cannot deliver on the quantities. For plastics, Pailpac is our main supplier and then we also use Koogans. There are hundreds for plastic suppliers but we not interested. It is about guarantee of supply, because for any given month I can use more than 200 000 tin and more 500 000 plastic but most do not have capacity (customer 1).”
11. “There are at least two big plastic paint container manufacturers, namely Pailpac who is by far the largest player, Rheem who manufactures both metal and plastic, and there is a smaller player called Khoogan in the west rand” (market participant).
12. “Nampak holds at least 70% of the metal market and Pailpac holds at least 90% of the plastic market” (customer 1).
13. “Pailpac is by far the biggest plastic manufacturer (market participant).
14. “The big four [then] are still the big four” (customer 1).
15. [Nampak has increased capacity and] “this was accompanied by improved quality and better pricing. I am more than willing to pay a premium for good quality” (customer 1).

5.1.2 Proposition 2: Horizontal mergers in concentrated markets create environments conducive to higher levels of coordinated conduct.

(a) Tribunal’s reasoning

The Reasons issued by the Tribunal do not consider the potential for coordinated conduct arising from the transaction. The judgement does however indicate that the merger will reduce the number of viable suppliers from three to two.

(b) Findings from ex-post interviews on possible coordinated conduct

16. “We acquire through a tender system once year” (customer 1).

17. “Prices are not public information because it is contained in the supply agreement” (customer 2).

Table 8: Compilation of responses on theory of multilateral market power

Themes	Main theories	Responses from interviews
Theme 1	Price increases from suppliers occur simultaneously.	- Prices across competitors move at the same time because price increases from raw material suppliers are announced to all at the same time. (market participant)
Theme 2	Competitors in production capacity are similar.	- Nampak and Rheem in terms of size are substantially different (customer 1). - Nampak manufactures at two sides and its one facility is larger than that of Rheem. (market participant) - Nampak is 10 or 12 times the size of Rheem. (customer 1) - Pailpac have at least 50 times the capacity of any other player. (customer 1)
Theme 3	The prices of metal container suppliers are similar.	- There is 2-3% difference in price. - Nampak is price leader to customers.
Theme 4	The prices of plastic containers suppliers are similar.	- Khoogans is about 8-10% cheaper than Pailpac. - Pailpac is price taker from customers.
Theme 5	The plastic container market is concentrated	- There hundreds of plastic container manufacturers - Pailpac holds at least 90% of the paint container market
Theme 6	The metal container market is concentrated.	- There are many suppliers in the market. We have not used them because they cannot deliver on the quantities. - I am more than willing to pay premium for good quality. - Nampak hold at least 70% of the metal market.

5.1.3 Proposition 3: Horizontal mergers in concentrated markets raise barriers to entry.

(a) Tribunal's reasoning

According to the Tribunal, barriers to entry to the plastic container manufacturing industry appear to be low, based on the ability of Pailpac to enter and capture market share. Barriers to entry refer to a firm's need to access technology and patents in order to be effective. Part of the Reasons for the Decision stipulate that "At present the only firm, which enjoys access to this new technology, is Nampak, via its exclusive licence to PET technology from PCC ... By acquiring control over Burcap, Nampak also gains control over another plastic container patent - the Bocan that Burcap enjoys as a result of an exclusive licence with a Danish company...In contrast, Pailpac not only does not have such a licence, but also is vulnerable to losing its present competitive advantage over its non-solvent plastic containers as they are not subject to a patent and can be readily copied by a rival" (para. 41).

(b) Findings from ex-post interviews on ease of entry

18. "The technologies [are] always changing so not necessarily an advantage" (market analyst 2).

19. "The PET technology at that stage was about 10 years old. The market did not move to PET" (market participant).

20. "Threat of substitute products or services – Has created some of the opportunities for the plastic packaging industry i.e. moving from glass or metal to plastic, but this also represents a risk if technology evolves or pricing of raw materials changes" (market analyst 2).

21. "It will be relatively easy to put a plant – if we choose to do so. It will need to invest about R100 million and it will get the best plant in RSA. A manufacturer has approached us to co-invest for a plastic plant. But we are a paint manufacturer. The company very clear – we make paint not containers" (customer 1).

Table 9: Compilation of responses on barriers to enter

Themes	Main theories	Responses from interviews
Theme 1	Economies of scale is important to operate in the plastic container market.	- It will not be difficult to access the raw material. (customer 1) - the barriers are economies of scale to make a return on the investment.
Theme 2	There have been new entrants into the plastic container market in the past 2 years.	- Not aware of any new entrants in the plastic paint container markets. (market participant)
Theme 3	There have been new entrants into the metal container market in the past 2 years.	- Not aware of any new entrants in the metal paint container market. (customer 1) - There is western cape metal firm that is considering to expand into paint containers. (market participant)
Theme 4	Access to technology is important to operate in the plastic container market.	- The technology (injection moulding machines) is readily available (market analyst 2). - Unless a player has access to a particular licensed technology, for example a patented closure that can restrict the ability of other firms to compete. (market analyst 2).
Theme 5	Access to technology is important to operate in the metal container market.	- Not difficult to enter the metal containers market if player is already active the food-tin market because the technology is not significantly different. (market participant)
Theme 6	The capital costs to set-up a plastic container factory are inhibitive.	- Relatively small capital injection required to start a plastic operation. (market analyst 2)
Theme 7	The capital costs to set-up a metal container factory are inhibitive.	- The capital expenditure is far too high to start metal containers. (customer 1)

5.1.4 Proposition 4: Horizontal mergers in concentrated markets are likely to be anti-competitive in the absence of countervailing power.

(a) Tribunal’s reasoning

The reading of the Tribunal’s Decision suggestssuggest that the authority was not convinced that customers have countervailing power and alternative suppliers to turn to in the event of price increase by Nampak.

(b) Findings from ex-post interviews on customers’ countervailing power

22. “The alternative to Rheem will be imports and the possibility of Plascon to source internationally through its international parent company (Kansai). The question is then will be: *who are global bucket partners?* It could be a strategic consideration [for us] relative to Pailpac. We can tell Pailpac that ‘you bucket costs us R10 or R15 but we can source and transport and have it delivered here on global procurement for R9. It will only require re-configure the bucket slightly but making the base narrow referred to nesting. This will allow to stack buckets into each other” (customer 2).

23. “They fight tooth and nail during negotiations. They will inform you they have alternatives and even move to the alternative” (market participant).

24. “Price increases are generally below our production costs. Because the price increases are 2 – 3% below CPIX, price increases are not a concern” (customer 1).)

Table 10 shows the producer price index (PPI) for the period 2007 to 2011. Over this period, prices increased by 7.8% on average. Based on customer 1’s response this means that the price of plastic paint containers increased by 4% to 5% on average per year.

Table 10: Average Annual PPI for the period 2007 to 2011

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave	
2007	149,3	150,2	152,5	154,9	157,0	160,5	161,9	162,5	162,9	162,3	162,9	163,3	158,2	Index
	+10,8	+11,3	+12,5	+13,1	+13,2	+12,6	+11,6	+9,6	+9,3	+9,4	+9,0	+9,5	+10,9	%
2008	164,9	167,2	170,6	174,1	182,7	187,5	192,5	193,6	186,7	185,8	183,4	181,3	180,8	Index
	+10,4	+11,3	+11,9	+12,4	+16,4	+16,8	+18,9	+19,1	+16,0	+14,5	+12,6	+11,0	+14,2	%
2009	180,0	179,4	179,6	179,2	177,2	179,9	185,2	185,8	179,8	179,7	181,2	182,5	180,7	Index
	+9,2	+7,3	+5,3	+2,9	-3,0	-4,1	-3,8	-4,0	-3,7	-3,3	-1,2	+0,7	-0,1	%
2010	184,9	185,6	186,2	189,0	189,3	196,8	199,4	200,2	192,0	191,2	192,5	193,0	191,6	Index
	+2,7	+3,5	+3,7	+5,5	+6,8	+9,4	+7,7	+7,8	+6,8	+6,4	+6,2	+5,8	+6,0	%
2011	195,1	198,0	199,7	201,5	202,4	211,4	217,2	219,4	212,2	211,5	212,0	211,9	207,6	Index
	+5,5	+6,7	+7,3	+6,6	+6,9	+7,4	+8,9	+9,6	+10,5	+10,6	+10,1	+9,8	+8,4	%
2012	212,5	214,4	214,1	214,8	215,8	225,4	229,0	230,5	221,2					Index
	+8,9	+8,3	+7,2	+6,6	+6,6	+6,6	+5,4	+5,1	+4,2					%

Source: StatsSA: Producer Price Index for domestic output of South African Industry

25. “We moved within 2 weeks after Burcap was acquired” (customer 1).

26. “Plascon moved their water based paint to plastic and we did not get any of that business. Plascon had a strong relationship with Nampak on the metal side and a strong relationship with the Pailpac on the plastic side. We tried to wedge in between but was not successful. Plascon is also likely tried to spread their suppliers and not have one supplier for both metal and plastic containers” (market participant).)

Table 11: Compilation of responses on countervailing power

Themes	Main theories	Responses from interviews
Theme 1	Customers are price setters and therefore have a high degree of purchasing power.	<ul style="list-style-type: none"> - Suppliers have very little pricing power with their large multinational customers. - Pailpac is price taker from customers. (market participant)
Theme 2	Customers have alternative suppliers to turn to in the event of price increases.	<ul style="list-style-type: none"> - Pailpac is constrained by the presence of Rheem because of its ability to also produce plastic. (customer 2) - Rheem is constrained by the presence of other suppliers and the risk of losing Plascon as a customer. (customer 2)
Theme 3	Customers are large buyers and can constrain the merged entity from unilaterally increasing prices.	<ul style="list-style-type: none"> - Customers are very price sensitive and will not accept any price increase. (market participant) - It is not easy to pass through prices to paint customers. - Plastic container manufacturers are completely price takers. (market participant)
Theme 4	The ability of customers to vertically integrate will constrain the merged entity from increasing prices.	<ul style="list-style-type: none"> - There is also a threat of vertical integration that customers can pursue.
Theme 5	The ability of customers to sponsor rival entry will constrain the merged entity from increasing prices.	<ul style="list-style-type: none"> - We will have to sell buckets to other competitors to get economies of scale it is unlikely. (customer 1)

5.1.5 Proposition 5: Conditions imposed on mergers that lessen competition improve competitive dynamics.

(a) Tribunal’s reasoning

As a condition for the approval of the transaction, the Tribunal required Nampak not to acquire any further exclusive licence agreements for PET paint containers for a period of three years after the merger. The primary reason was to lower barriers to enter the plastic container market.

(b) Findings from ex-post interviews on the effectiveness of the condition

27. “The technologies [are] always changing so not necessarily an advantage. Economies of scale are important to leverage technology” (market analyst 2).

28. “We actually never looked at the remedy/technology at the time of making the decision to exist. The PET technology at that stage was about 10 years old. The market did not move to PET. The remedy was strange because we basically ran the business with the Burcap” (market participant),

29. “The containers were too heavy, too much material and the cost thereof was too high to make it profitable. There was a technology agreement with partners in Scandinavia, but that was part of the problem. The technology was expensive because it was about 5% of turnover. The containers manufactured with the PET technology were heavier than what our competitors were producing. So we experienced a huge cost disadvantage” (market participant).

Table 12: Compilation of responses on the effectiveness of the remedy imposed

Themes	Main theories	Responses from interviews
Theme 1	The condition/s were necessary because the merger lessened competition.	- The merger had no effect on the market. - The market could have realised that the condition imposed by the Tribunal had no bearing and therefore there was no movement in the share price. (market analyst 1)
Theme 2	The conditions improve the competitive dynamics in the market.	- If Nampak could ride it out there would have been a greater competitiveness (customer 1)
Theme 3	The condition/s lowered barriers to enter the market.	-The remedy also did not stimulate entry because there are no new entrants. - Several players entered the market, mainly ex-Burcap employees. Most however, failed after about 6months. (customer 1) - We tried the PET technology but relinquished that because the market was not attracted to it (customer 1)

5.1.6 Proposition 6: Horizontal mergers in concentrated markets improves the financial performance of the merged entity.

30. “The transaction did not have any effect on the share price. Nampak is a very diversified packaging company and the acquisition of Burcap was relatively small. They have in recent years narrowed their focus by selling or closing some businesses in order to enhance returns to shareholders as they did with some of the original Burcap operations. Their strategy was to be the largest most diversified packaging company in the market. They however realised that they had to focus their business onto areas where barriers to enter were relatively higher” (market analyst 2).

31. “There was also no reaction by competitors on the transaction. This could [be] because Nampak already controlled 50% of the business and therefore no change was expected or competitors recognised that Nampak does not have expertise in the plastic paint containers and therefore the deal was likely to fall through or have a negative impact” (market analyst 1).

32. Nampak “[w]as in the joint venture with Burcap for three years and another three years after the merger. We sold the business to Pailpac. Burcap was company of two entrepreneurs and when Nampak took it over as corporate it just did not work” (market participant).

33. The total purchase consideration for the remaining 50% of Burcap was R24 million (Nampak Annual Report, 2008, p171).

Table 13: Responses on the impact of the acquisition on Nampak’s performance

Themes	Main theories	Responses from interviews
Theme 1	The merger allowed Nampak to rapidly expand capacity.	<ul style="list-style-type: none"> - Have not reduced production but it is rather constant (market participant). - Loss of market share of those water based customers who convert to plastic.
Theme 2	The merger improved the financial performance of Nampak.	<ul style="list-style-type: none"> - Likely did not re-coup the price paid for the business. (market participant)
Theme 3	The merger allowed Nampak to acquire technologies and skills.	<ul style="list-style-type: none"> - Nampak bought the factory but not the know-how. That’s why they failed. (customer 1)
Theme 4	The merger allowed Nampak to eliminate rivals.	<ul style="list-style-type: none"> - Level of concentration remained the same in terms the number of players in the metal industry.

5.2 Case study 2: Scaw Metals (Pty) Ltd / Ozz Industries (Pty) Ltd

At the time of the merger, Scaw South Africa (Pty) Ltd (“Scaw”) was 74% controlled by Anglo American. It produced four main products namely: rolled products; cast products; grinding media and wire rod products.

Ozz Industries (Pty) Ltd (“Ozz”) was a private entity and operated from five factories called Eclipse East, Eclipse West in Benoni, Boksburg Foundry in Boksburg and the Dimbaza foundry in the Eastern Cape. Given the names of its foundries in Boksburg, Ozz was also known as Eclipse in the market. It manufactured crusher mill consumable steel wear parts and grinding media. Scaw and Ozz both operate within the broad foundry industry.

The Tribunal’s findings in this merger relied heavily on the Commission’s submissions. There is no explicit pronouncement by the Tribunal on both the Commission and the merging parties’ representation throughout the judgement. It is therefore assumed that unless otherwise stated, the Tribunal was in agreement with the Commission’s conclusion on the various issues raised; which agreement led to the imposition of the condition.

The table below presents profile of respondents interviewed for ease of reference to the excerpts.

Table 14: Profile of respondents interviewed for Scaw/Ozz transaction

Profile	Designation
Customer 1	Senior Category Manager
Customer 2	Anonymous
Customer 3	Procurement Manager
Customer 4	Procurement Department
Market Analyst	Industrial Analyst

5.2.1 Proposition 1: Mergers between rivals in concentrated markets create or enhance market power arising from unilateral conduct

(a) Tribunal’s reasoning

There is no definitive ruling on the relevant market spelled out in the decision by the Tribunal. The judgement does however indicate that in the main the transaction was a two to one (monopoly) merger. Imports were found not to be cost effective alternatives for local customers and neither viable suppliers for the mines.

(b) Findings from ex-post interviews on market concentration

34. According to a mining customer there “were only two real producers of grinding media in South Africa, but only one company that supply any meaningful volumes of grinding media locally that being Scaw. Ozz used to produce approximately 10 000 tonnes of its cylpebs per year compared to Scaw that produce approximately 450 000 tonnes per annum. Therefore what Ozz was producing was always going to be inconsequential” (customer 1) to the market.

35. “Eclipse [Ozz] was not the vehicle that drove prices for Scaw. Scaw generally had a monopoly and they have always been price sensitive” (customer 3).

Table 15: Compilation of responses on theory of unilateral market power

Themes	Main theories	Responses from interviews
Theme 1	Substitutability between Scaw and Ozz grinding media products	<ul style="list-style-type: none"> - The products are substitutable because they both grind ore (customer 1) - Cylpebs (Ozz’s product) often jam in the hobber that flows to the mill where the grinding take place because of its shape. For this reasons steel balls are preferable (customer 2)
Theme 2	There are substitute products to grinding media	<ul style="list-style-type: none"> - There are no substitute products for grinding media (customer 2) - There are substitutes products such as steel rods but mines <u>prefer</u> the steel balls because they are more effective (customer 2)
Theme 3	The merged entity is the only supplier of grinding media in South Africa	<ul style="list-style-type: none"> - Scaw is the biggest local supplier with a number of small competitors (customer 3) - The different options are largely small foundries but because of the high volumes makes it difficult for these to be successful (customer 2) - Imports are coming from China, India, Brazil and Vietnam (customer 1 and 2)
Theme 4	Imports are not viable alternatives to constrain the merged entity	<ul style="list-style-type: none"> - We are currently testing grinding media from China and India (customer 2) - We import approximately 30-35% of our grinding media (customer 1) - We found a reputable Indian supplier and have sourced from them predominantly (customer 1) - As long as the imported product gives a better grind and the steel balls last longer – the supply agreement can change (customer 2).
Theme 5	Imports are not cost effective substitutes for local mines	<ul style="list-style-type: none"> - Imported grinding media is at least 10% cheaper than the locally produced grinding media (customer 1) - Raw material prices (chrome, electricity) in India are about 10 – 12% lower than in RSA (customer 1)
Theme 6	The merged entity could increase prices without being constrained	<ul style="list-style-type: none"> - Scaw was already dominant before the merger (customer 1). - The mines are price takers because of the Scaw’s size (customer 3) - Scaw metals is a big company and has market power that means it can drop prices significantly to drive out competition (customer 2).
Theme 7	The merged entity reduced output to detriment of customers	<ul style="list-style-type: none"> - The merger did not give any more advantage in the market other than the ability to service any additional demand easily. - The merged entity did not scale up production but Ozz had to close some of their foundries.

36. “I get a feeling that prices were quite high in 2007 and there was a steel price increase of about 22%” (customer 3).

Table 16 indicate the steel price index used to determine price increases for grinding media. The table indicate the largely steel price increases in 2008 between July and August 2008. Steel is the main input into grinding media. On average steel prices increased less than 8% for the past three years. The highest steel price increase is recorded for 2008 of 14% on average.

Table 16: Steel Price Index 2006 – 2011

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ave	
2006	134.8	134.9	135.6	136.9	138.7	142.6	145.1	148.3	147.2	148.3	149.5	149.1		Steel PPI
	5.1%	4.7%	4.7%	5.0%	5.9%	7.2%	7.9%	9.9%	9.8%	10.6%	10.9%	10.5%	7.7%	% change
2007	149.3	150.2	152.5	154.9	157	160.5	161.9	162.5	160.9	162.3	162.9	163.3		Steel PPI
	10.8%	11.3%	12.5%	13.1%	13.2%	12.6%	11.6%	9.6%	9.3%	9.4%	9.0%	9.5%	11.0%	% change
2008	164.9	167.2	170.6	174.1	182.7	187.5	192.5	193.5	186.7	185.8	183.4	181.3		Steel PPI
	10.4%	11.3%	11.9%	12.4%	16.4%	16.8%	18.9%	19.1%	16.0%	14.5%	12.6%	11.0%	14.3%	% change
2009	180	179.4	179.6	179.2	177.2	179.9	185.2	185.8	179.8	179.7	181.2	182.5		Steel PPI
	9.2%	7.3%	5.3%	2.9%	-3.0%	-4.1%	-3.8%	-4.0%	-3.7%	-3.3%	-1.2%	0.7%	0.2%	% change
2010	184.9	185.6	186.2	189.0	189.3	196.8	199.4	200.2	192.0	191.2	192.5	193.0		Steel PPI
	2.7%	3.5%	3.7%	5.5%	6.8%	9.4%	7.7%	7.8%	6.8%	6.4%	6.2%	5.8%	6.0%	% change
2011	195.1	198.0	199.7	201.5	202.4	211.4	217.2							Steel PPI
	5.5%	6.7%	7.3%	6.6%	6.9%	7.4%	8.9%						7.0%	% change

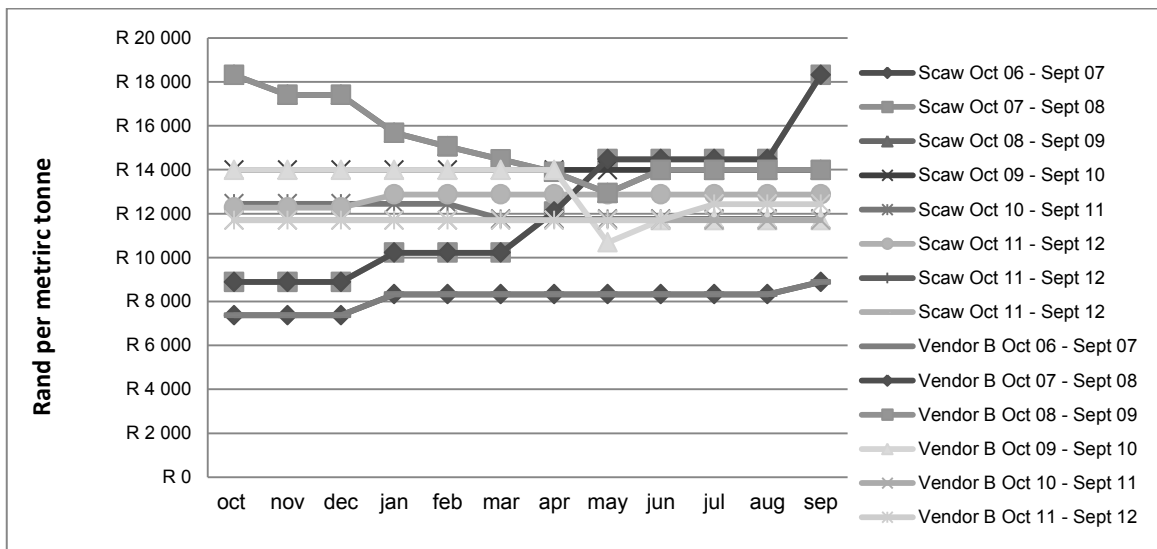
Source: South African Iron and Steel Association

37. “In 2007 they were the only producer and their prices went ballistic. They were maximising profits and were not held in high esteem by anybody who procured grinding media. We had no option but to buy from Scaw. The supply and demand balance was totally skewed in their favour” (customer 1).

38. “Prices were about R7000 per tonne in 2007 compared to R11500 currently. Difficult to say whether it was due to market dynamics or changes in raw material pricing. But not necessarily due to the merger” (customer 2).

Figure 3 show the prices paid for grinding media by Customer 3 since October 2006. The graph show in 2007 to 2008, prices were very high at R18 000 per metric tonne.

Figure 3: Grinding media prices Oct 2006 to Sept 2012



Source: Customer 3

39. “We reduced our purchases from Scaw [around 2008]. “On price discussion with Magotteaux, we were able to get a contract with cheaper price... Scaw prices were about R1000 per tonne more...Vega split from Magotteaux so no longer a Magotteaux foundry. Vega import the steel balls from India and the foundry is located in India”(customer 3).

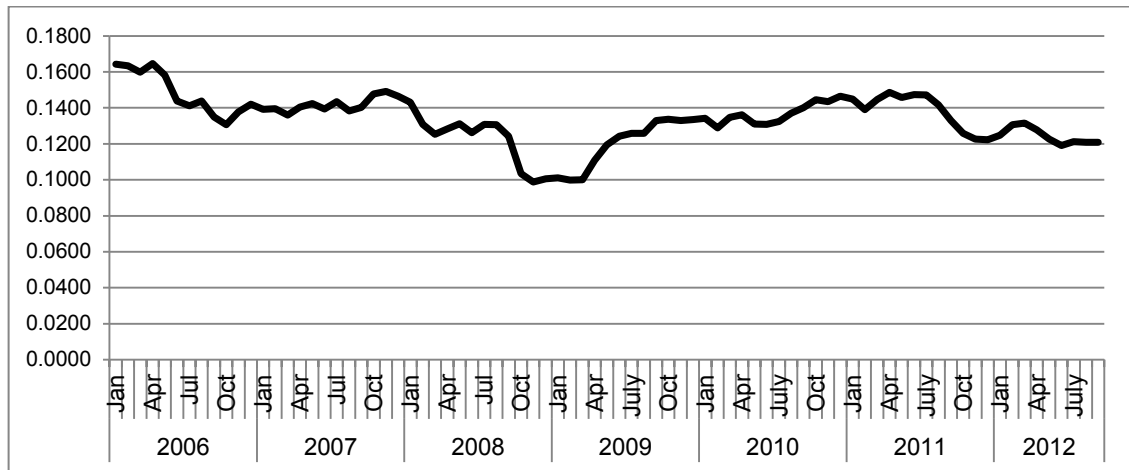
40. “Scaw is [currently] constraint by the market mainly imports” (customer 1).

41. “We were one of the companies that force the price [decrease].In real terms prices have come down. A lot had to do with the recession when prices were negotiated. There was true competition from other suppliers [imports]” (customer 3).

42. “Prices had to come down due to imports. Prices did not come down due to productions efficiencies or the merger. The merger itself had no impact on grinding media efficiencies” (customer 1).

Figure 3 exhibits the value of US dollars reflects the currency until the latter half 2008 favoured locally produced grinding media as it was more expensive to import. The following six months thereafter however show a weakening of the local currency which made imports cheaper.

Figure 4: USD Exchange rate from Jan 2006 to July 2012



Source: South African Revenue Services.

5.2.2 Proposition 2: Horizontal mergers in concentrated markets create environments conducive for higher levels of coordinated conduct.

(a) Tribunal’s reasoning

The Reasons for Decision are silent on the likely ability of coordinated conduct post-merger.

(b) Findings from ex-post interviews on pricing behaviour

43. “Prices are negotiated in terms of the supply agreement and escalations are agreed upon. The suppliers will present how much it costs to produce the product and this is margin they expect to make (customer 1).

Table 17: Compilation of responses on theory of multilateral market power

Themes	Main theories	Responses from interviews
Theme 1	Prices of grinding media among suppliers are similar	-For imported grinding media the import parity price is used as base to negotiate (customer 2) -It appears the Indian supplier set their prices based on Scaw’s price (customer 1) -The prices are generally on cost plus basis (customer 1)
Theme 2	Prices increases from suppliers occur simultaneously	-Prices increase discussions generally happen quarterly but it can also be yearly (customer 1)
Theme 3	Prices of grinding media are publicly available	-Prices are based on weighted international raw material indices (customer 2)
Theme 4	Customers procure grinding media through quotes	-We have supply agreements with grinding media suppliers (customer 3) -All our purchases are contracted, because it is our single biggest concentrator costs (customer 3)

5.2.3 Proposition 3: Horizontal mergers in concentrated markets raise barriers to entry

(a) Tribunal’s reasoning

According to the Tribunal, the barriers to enter grinding media market are high “due to requirements of specific technical expertise in the market and intellectual property.”

(b) Findings from ex-post interviews on ease of entry

Barriers to enter the grinding media market are high because of capital and the scale requirements to run a competitive operation.

44. “Equipment is costly – it will cost about R250-300 million rand to put only one line to produce about 35 000 tonnes per year” (customer 2).

45. “The demise of Ozz has created opportunities for small foundries to grow such as Prim”.

Table 18: Compilation of responses on barriers to entry

Themes	Main theories	Responses from interviews
Theme 1	Economies of scale are important to be compete in the grinding media market	- Economies of scale is vital for any player - The scale requirement make smaller foundries uncompetitive (customer 1)
Theme 2	The industry is characterised by technology license agreements	- Scaw develops the products with Magotteaux through a technology license agreement, which enabled them to perfect the hardness of the steel balls (customer 2)
Theme 3	The capital investment to enter the grinding media market is high	Scaw has sunk that costs because they have back to back arrangement with Samancor (customer 2)
Theme 4	Access to raw material is important for new entrant to be viable	Access to raw material such as chrome – IC3 are constraining in terms of transports costs (customer 2). Electricity availability is very important – more than costs of electricity (customer 1).
Theme 5	A number of competitors have exited the market due to pricing pressures	- Transwerk was de-commissioned (customer 2)
Theme 6	The number of new firms have entered the market in the past 3 years	- Dikunu is relatively new (customer 1) - A new entity approached us recently to supply grinding media (customer 2)
Theme 7	The merger increased the barriers to enter for new firms	- The merger did not create any additional barriers to what was already in place (customer 1). - Scaw was already dominant and had superior technologies and products (customer 2). - Nobody run a foundry as big as Scaw or as competently as Scaw that supply a good ball on the market. Locally that is (customer 3).

5.2.4 Proposition 4: Horizontal mergers in concentrated markets are likely to be anti-competitive in the absence of countervailing power

(a) Tribunal's reasoning

The Reasons for Decision indicate that “...the smaller customers which may consider the price of the product as an important consideration, and which will be impacted negatively should the merging parties decide to profitably increase prices to their customers”

(b) Findings from ex-post interviews on customers' bargaining power

46. “Factors to consider before switching are quality/wear rate and we work very closely with suppliers to understand new technologies and ways to improve the product”. If there is lower prices offer by someone else, we first want to understand what the wear rate is. So we typically work on dollar per tonne model” (customer 1).

47. “They [Scaw] however also lost market share in grinding media from other mines” (customer 1).

48. “If Scaw persist in the unlikely scenario to exert market power, customers can certainly approach the competition tribunal for abuse concerns”(customer 2).

49. “We look at price but also look at process. If you put in a bad ball and your usage goes up, your price will naturally increase [i.e] your rand per tonne. We always on the search for a better price. Same quality better price. As soon as that start happening we start looking where we can find a better priced ball with the same quality” (customer 3).

50. “We have not switched suppliers since 2008 because of limited option. Also there [are] costs of switching to a new supplier and security of supply is important. ... Have to find the right balance between switching to new supplier vs ones current supplier in terms of stock levels of the balls that need to be kept” (customer 2).

Table 19: Compilation of responses on countervailing power of mines

Themes	Main theories	Responses from interviews
Theme 1	Customer are price setters and therefore have high degree of purchasing power	<ul style="list-style-type: none"> - The mines are price takers but negotiate very hard (customer 1). - We are the single biggest consumer of grinding media. This gives us great ability to bargain with grinding media suppliers (customer 1). - Did our own research on raw material prices and would use that to indicate to Scaw whether they are pricing outside market trends (customer 2).
Theme 2	Customers have alternative suppliers to turn to in the event of price increases	<ul style="list-style-type: none"> - We embarked on an initiative to change the grinding media market by starting to import with the primary aim to change the local market and that was very successful (customer 1).
Theme 3	Customers are large buyers and can constrain the merged entity from unilaterally increasing prices	<ul style="list-style-type: none"> - Market dynamics changed with imports which forced a change in Scaw's pricing (customer 1). - We try and maintain the balance in market by making imports viable in order to constrain Scaw (customer 1).
Theme 4	The ability of customers to sponsor rival entry will constrain the merged entity from increasing prices	<ul style="list-style-type: none"> - When I was independent agent few years back I worked with Lonmin on the possibility of starting a foundry that will supply them with steel balls (customer 3).

5.2.5 Proposition 5: Conditions imposed on mergers that lessen competition improve competitive dynamics

(a) Tribunal's reasoning

The Tribunal was of the view that the acquisition of Ozz by Scaw will adversely affect customers through possible price increases post-merger. In order to constrain Scaw from unilaterally increasing prices, the merger was approved subject to conditions. In the main, the remedy requires Scaw not to increase by more than 11% for a period of 5 years. The efficiencies defence evoked by the merging parties was concluded to be insufficient to address the market power concerns.

(b) Findings from ex-post interviews on the effectiveness of the condition

51. "Globally the foundry industry is going through considerable strain due [to] huge environmental and costs pressures" (market analyst). "Ozz would have faced these same issues irrespective of the merger" (customer 1).

52. "Ozz was the only other realistic alternative" (customer 2).

Table 20: Compilation of responses on the effectiveness of the remedy imposed

Themes	Main theories	Responses from interviews
Theme 1	The condition/s were necessary because the merger lessened competition	<ul style="list-style-type: none"> - The merger had no impact on the grinding media market. - If Ozz was not acquired by Scaw it is unlikely that they would have been an effective competitor to Scaw (customer 1). - The transactions changed the grinding media market in terms of removing a player that was independent (customer 2). - Ozz was the only other realistic alternative (customer 1).
Theme 2	The conditions improve the competitive dynamics in the market	<ul style="list-style-type: none"> - Scaw prices dropped by about 40% since 2008. This had nothing to do with the conditions but due to the change in the market dynamics (customer 1). - We were not aware of condition imposed by the Tribunal (customer 1 & 3) - The approach by the Tribunal for price escalation is not new and has been practised in the industry (customer 1). - Ozz currently produce only about 30% of what they used to produce pre-merger and likely lost about 50% of their market share (customer 1)
Theme 3	The condition/s lowered barriers to enter the market.	<ul style="list-style-type: none"> - The demise of Ozz has created opportunities for small foundries to grow such as Prim (customer 1).

5.2.6 Proposition 6: Horizontal mergers in concentrated markets, improves the financial performance of the merged entity.

(a) Scaw’s rationale for the acquisition of Ozz

The reason presented to the Tribunal for its interest in Ozz, Scaw highlighted the acquisition will provide an opportunity to enhance synergies and product ranges.

(b) Findings from ex-post interviews

53. “Ozz used to be a good little company that would react quiet quickly at the time. When it was however purchased ...[they] implemented its method onto a small company which constraint them (Ozz) big time. They were kept separately physically but the management was integrated” (customer 1).

54. “Scaw retrenched about 60% of the Ozz staff. This lost them critical skills which are hard to find today” (customer 1).

Table 21: Responses on the impact of the merger on Scaw’s performance

Themes	Main theories	Responses from interviews
Theme 1	The merger allowed Scaw to expand capacity rapidly	- The merger did not give the merged entity any greater economies of scale - The merger would have enabled Scaw to react to sudden shift in demand (customer 1).
Theme 2	The merger improved the financial performance of Scaw	- Ozz foundries today compared to 2007 is an absolute shadow of its former self (customer 1). - Ozz response time and quality worsened post-merger (customer 1). - The merger had no impact on production efficiencies (customer 1)
Theme 3	The merger allowed Scaw to acquire technologies and skills	- Scaw had superior technology and know-how before the merger (customer 2).
Theme 4	The merger allowed Scaw to eliminate rival	- The transactions removed a player that was independent (customer 2). - Ozz was the only other realistic alternative (customer 3).

Table 22 sequentially outlines key factors that had an impact of Scaw’s financial performance since 2007. Vital issues to highlight by Scaw’s own account its ability to pass on raw material price increase to customers in 2008, which could be reflective of market power. Subsequent years imports, increased raw prices priced squeezed prices. The unfavourable exchange rate in recent years is recognized as compromising its competitiveness.

Table 22: Factors that had an influence on Scaw financial performance

Year	Factors that impacted financials
2007	• Margins remained under pressure owing to significant price increases in key raw materials and import competition.
2008	• Acquisition of Ozz takes place. Margins remained under pressure owing to significant price increases in raw materials and import competition but successfully pass this on to customers.
2009	• Decrease in operating profit due to the difficult economic environment across all operations, with reduced demand in some key markets resulting in downward pressure on prices.
2010	• Attribute to selling price pressure, rising input costs and the effect of a strong rand... Grinding media demand remained strong, albeit with some pricing pressure.”
2011	• Strong performance by grinding media in spite of margin pressure owing to the strong rand.

Source: Compiled from Anglo American’s Financial Report for each financial year.

The financial performance of the Scaw pre and post-merger in terms of its operating profit is reflected in the table below.

Table 23: Scaw’s operating profits for the period 2006 to 2011 (US\$ millions)

	2011	2 010	2009	2008	2007	2006	2005
Operating profit	40	170	131	274	172	160	121
Revenue	931	1,579	1,384	1,927	1,432	1,233	1,029
EBITDA	70	213	172	309	204	188	145
Operating margin	4.30%	10.76%	9.47%	14.22%	12.01%	12.98%	11.75%
Grinding media tonnes	677,400	710,000	693,000	771,000	776,000	481,800	461,400

Source: Anglo American Annual reports for the respective years.

CHAPTER 6: ANALYSES OF FINDINGS

In light of the findings from the interviews presented in chapter 5, this episode endeavours to give insight into whether the market has changed as proclaimed by the Tribunal. This is carried out by symbiotically merging the theory of competitive harm with the discovery from the interviews, juxtaposed with the Tribunal's Reasons for Decision.

The discussion will draw conclusions on each construct before proceeding to the next.

6.1 Case study 1: Nampak Products Ltd / Burcap (Pty) Ltd

The assessment by the Tribunal of the acquisition by Burcap largely adopted the Harvard school's approach. This they have done by considering the structure of the industry and inferring that market power is likely to arise. There is evidence albeit limited that the Tribunal considered the dynamic nature of the industry particularly with respect to the rapid changing technology and innovation. However, an understanding of the strategic interaction among market participants in this instance paint manufacturers and their suppliers of buckets/containers was seemingly not examined by the Tribunal. This confirms Theron (2001) who in studying the Tribunal methodology concluded it applies the SCP framework.

Based on the Tribunal's approach, which heavily leans towards the SCP framework, the ex-post assessment of the Nampak transaction is centred on the Harvard doctrine.

6.1.1 Market share and concentration

The Harvard school postulated that markets that have few players are concentrated and likely to behave in an uncompetitive manner (Motta, 2004). The ability of the firm to act unilaterally is determined by its market share (Bishop & Walker, 2010). As such, the extent to which exercise its market power is constrained by the presence of substitutes products and suppliers (Church & Ware, 2000).

The Tribunal rests that Nampak is dominant and spent an enormous time to determine if Nampak will be constrained by substitute products and suppliers. It concluded that metal containers used to store paint can be substituted with plastic containers. This conclusion was informed by the international trend away from metal containers to plastic because plastic paint containers are cheaper. The transaction will therefore enable Nampak to raise the prices of plastic containers post-merger to discourage switching by customers in order to protect its (Nampak's) dominant position in the

metal container market. The remaining players in the plastic container market were regarded as ineffective as customers require suppliers that have the volume capacity and technology to provide quality containers.

Defining what constitutes the relevant market is critical for determining who the players are in market (US Horizontal Merger Guidelines, 2010). In order to calculate market concentration, the firms need to be located in a relevant market (Liebenberg & Kamerschen, 2008 and Baker, 2007). Market definition helps delineate the markets that are affected by the behaviour of a dominant firm. (O'Donoghue & Padilla, 2006 and Office of Free Trading, 2010).

The research reveals that the customers have not switched away from metal containers to plastic containers. Overwhelmingly, customers' still store water based paint in plastic containers and solvent-based paint in metal containers – excerpts 1 to 4 and Table 6, Themes 1 to 3. There are however a small minority of customers who have switched to store their solvent based paint to plastic containers. The reasons for the switch detailed in excerpts 7 and 9; primarily indicate that paint manufacturers are investing in re-engineering solvent based paint to be more water based. Thus, the change from metal to plastic paint containers is not principally informed by the lower prices of plastic containers. This is largely due to the change in the chemical formulation of solvent-based paint appearing increasingly like water-based paint. Moreover, the price differences between plastic and metal containers remained and even appear to have increased since 2007 – see Table 7 and excerpt 6. The Tribunal thus erred in its conclusion of the relevant market. The interviews indicate that the market did not convergence in terms of substitutability between metal and plastic containers.

Determining the relevant market is important to determine the size of the market and the number of players active in the market. This is considered a key element in characterising a market structure (Melnik et al. 2008). The conclusion on the relevant market in this case whether metal containers can be substituted with plastic paint containers has important implication for determining Nampak's ability to act unilaterally. Post-merger, plastic paint containers are used to store water-based paint as was the case in 2007 (pre-merger) and are not substituted with metal containers. This means the acquisition of Burcap was not horizontal merger and therefore did not change structure of the market. Instead, the transaction qualifies as conglomerate merger. As such, by acquiring Burcap, Nampak did not accrue with any more market power it did not have pre-merger. This is confirmed by customer 1 who avers the “the big four are

still the big four” – excerpt 12. The interviews however confirm the limited number of players that can meet volume demand and quality of paint manufacturing customers (Table 8, Theme 6 and excerpt 10).

Despite the critical finding that the merger was not horizontal in nature, the discussion will further highlights the ex-post findings from the in-depth interviews related concentration, barriers to entry, countervailing power and coordinated conduct.

The Tribunal seemed to be of the view that the in-roads by Pailpac in capturing market share was going be short-lived after the acquisition of Burcap. The market share ascribed to Pailpac currently is about 90% (excerpt 12) a surge from the 41% it had in 2007. This indicates that Tribunal over – estimated the ability of Nampak to attract customers. It assumed that through offering favourable prices Nampak would be able to capture market share from Pailpac. More striking is the view by the Tribunal that Pailpac’s competitive edge will be eroded and will be less important competitor. The dynamics post-merger however indicate the contrary. Pailpac grew into formidable and dominant player in the plastic container market. Paipac’s reaction is postulated by the game theory approach, which espouse that the behaviour by firms will inform their competitors strategies (Carlton & Perlof, 1994). This post-merger interaction in the market suggest a more dynamic behaviour as postulated by the Post-Chicago school opposed to the static approach of the Tribunal.

Conclusion

The assessment by the Tribunal of the acquisition of Burcap with respect to ability of Nampak to raise prices was incorrect. Fundamentally was the perceived reason and speed with which customers will substitute metal containers with plastic containers. Five years post-merger customers’ behaviour in terms of choice of containers has not changed. The findings confirm that metal paint and plastic containers are not competitive substitutes. What however is evolving is the re-engineering of solvent-based paint to have characteristics of water-based paint. Given the flawed conclusion on the relevant market, Tribunal committed a critical error in defining the relevant market. The merger between Nampak and Burcap in 2007 was therefore not a horizontal merger and as a result, there was no increase in market concentration. This means, Proportion 1 could not be tested, as the transaction was not merger between direct rivals. This conclusion, consequently affects the remaining proportions that were also premised on a horizontal merger. Notwithstanding the result with respect to

proportion 1, further insights from the post-merger interviews and the approach by the Tribunal are conferred.

6.1.2 Coordinated conduct

When a few firms control a large percentage share of a market, collusive behaviour is more commonly evident (Samad, 2008). Both the plastic and metal paint containers industry have numerous players albeit small – excerpt 10 to 12. The principle of the theory of coordinated conduct is that the profits from colluding are greater than from competing, (Bishop & Walker, 2010). The existence of the “hundreds” of plastic container manufacturers makes the respective markets less susceptible to coordinated conduct (Table 8, Theme 5).

The Tribunal did not make a pronouncement of the ability of firms to act multilateral. This could be because its arguments that the acquisition would lead to the lessening of competition were informed by the notion that Nampak’s has the ability to act unilaterally.

However, this ex-post analysis with respect to the possible coordinated conduct is evoked by the Tribunal assertion that the market is concentrated. The Reasons for Decision state that the acquisition of Nampak will reduce the number of feasible players from three to two.

The conditions set out by (ABA, 2008, Bishop & Walker, 2010) for collusion to be likely are (i) ability to reach an agreement, (ii) ability to monitoring adherence to the agreement, and (iii) ability to punish deviation from the agreement are improbable. Reaching an agreement in an industry with too many players is difficult in terms of coordinating members. Furthermore, paint containers are procured through supply agreement in which the base price and escalations are negotiated – excerpts 16 and 17. This inhibits competitors to agree on prices given the lack of transparency. The large number of small sized firms could pose a threat to any coordinated agreement in terms of stability (Motta, 2004). Given the vast differences in production capacity of Nampak and smaller rivals (Table 8, Theme 2) there is real threat of being punished through potential predatory pricing by Nampak. This will discourage competitors from colluding with Nampak. Lastly, with a market share of approximately 70% Nampak (Table 8, Theme 6 and excerpt 10) does not need to coordinate its activities with rivals as it already has market power.

Conclusion

The economics of the plastic paint container market in terms of the number of players active and the vast differences in production capacity are unlikely to be conducive for coordinated conduct. The exclusion of multilateral conduct post-merger by the Tribunal was therefore well placed.

On the one hand, the Tribunal's silence on the coordinated conduct appears to be informed by the market power held by Nampak and not the economic realities of the plastic paint container market. Profoundly is that merger between Nampak and Burcap was not one of firms that compete but rather serve more complementary products. Proposition 2, therefore is unlikely to arise as the thesis of the proposition is premised on the horizontal mergers.

6.1.3 Barriers to entry

The Harvard school's treats economies of scale as a barrier to enter a particular market based on cost disadvantages a new firm will face (Arowolo, 2005). The ability of a firm to increase prices above marginal cost is constrained by the presence of low barriers to enter a market (Church & Ware, 2000). In this instance, the ability of Nampak to raise prices in the plastic container market will be constrained if barriers to entry are low. This was the position of the merging parties. The Tribunal nevertheless judged that access to technology by Nampak post-merger, would constrain its competitors from effectively competing. This is explain by Carlton & Perloff (1997) who state that industries that are characterised by long-run barriers to entry, such as patent, cost advantage, and economies of scale are likely to be uncompetitive.

With respect to the economies of scale, in-depth interviews confirm that this is an important factor for a firm to be competitive in both the metal and plastic container markets. Nampak is said to be at least 10 to 12 times the size of its next competitor Rheem in the metal paint container market (Table 8, Theme 2). Pailpac with its 90% market share in the plastic container market is estimated to be 50 times the size of Rheem (manufacturers both metal and plastic containers) and Khoogan – Table 8, Theme 2. Customers procure over 200 000 metal paint containers per month would thus require a supplier who has sufficient production capacity. The large economies of scale required therefore limit the numbers of suppliers of metal and plastic containers that realistically can be considered as effective (Table 8 – Theme 6 and excerpt 10). The Tribunal in this regard was correct.

Given the limited number of effective suppliers and scale requirement, this pose possible entry barriers in both the metal and plastic container market. Based on Bishop & Walker, 2010 this means profit levels should be high in the metal and plastic container markets. With price increases to paint customers of less than PPI (Table 10) it is unlikely that container manufacturers achieve high profits. Given the large volumes sourced by customers – excerpt 10, the plastic container market is a high volume, and therefore likely to report low margins in view of the of very low price increases of below PPI. The lack of new firms in plastic container market could be indicative of the unattractiveness of the industry based on the low margins and may not necessarily indicative of high entry barriers (Arowolo, 2005).

The emphasis on the high entry barriers particularly in the plastic industry was due the PET technology, which Nampak held which was tipped to be the future of plastic paint containers. More so, no other competitor of Nampak and Burcap had such technology at the time. The market participants – excerpts 18 and 19 indicate that the PET technology never took off and competitors had superiors' technology. To this end, the Tribunal's main argument for imposing a remedy was disapproved post-merger. This points to a more dynamic interaction in markets as competitors react to competitive threats. This again illustrates the Tribunal favour for the SCP framework that considers scale as barrier to entry (Arwolo, 2005) and disregards the more vibrant reactions of competitors.

This is most likely an instance where the Tribunal was not aware of alternative technologies, given that testimonies were presented by one customer and the merging parties'. Despite this possibility, innovation is phenomena in the overall plastic industry where glass, cartons and paper is being replaced with plastic – excerpt 18 and 20 and therefore is not necessarily a barrier to enter.

Conclusion

Similar to the conclusions on propositions 1 and 2 above, proposition 3 cannot be tested as the transaction was not merger between direct competitors. The findings on barriers to entry also indicate the need for more dynamic understanding of possible strategies that can be pursued by competitors. A more in-depth understanding of the interactions and possible responses by competitors – which is advocated by the Post-Chicago school may have resulted in a different decision by the Tribunal of low barriers to enter.

When technology is hard to replicate and not constantly changing it could pose a barrier to entry (Carlton & Perloff (1997). On the other hand, if the technology as evident in the plastic industry is common and slow changing it is not a differentiating factor and thus pose less constrain to enter a market (ABA, 2008).

6.1.4 Countervailing power

The horizontal merger guidelines of the US and UK stipulate the need to assess the countervailing power of customers (FTC Horizontal Merger Guidelines, 2010). The post-merger examination of the acquisition of Burcap tests whether paint manufacturers have countervailing power that resist Nampak from unilaterally increasing prices. This was not a significant consideration by the Tribunal in its Reasons for Decision. The Tribunal flagged the need for alternative suppliers with capacity and capability to deliver quality containers as important which is supported by Bishop & Walker (2010). These type of suppliers were however not present in the market according to the Tribunal. The interviews confirm the importance of quality and the inability of the small players to deliver on the volume requirement of the relatively big paint manufacturers such as Plascon and Prominent Paints (Table 8, Theme 6). To this end, the Tribunal is vindicated.

The ability of firms to raise prices to customers is constrained by the capability of customers to (i) switch to alternative suppliers, (ii) sponsor entry, or (iii) vertically integrate (FTC Horizontal Merger Guidelines, 2010).

In relation to the ability of customers to switch to alternative suppliers, the Tribunal under-estimated the effectiveness of Pailpac as a sufficient alternative. The investments planned by Nampak in the plastic container operation were deemed a greater threat to competition post-merger. Contrary to the Tribunal expectations that Nampak will be able to secure the Plascon business, Nampak was unable to secure any Plascon volumes – excerpt 26.

The paint manufacturers such Prominent are part of the global firms. The possibility to source globally through their international parent companies in the event of price increases was and is still reality – excerpt 22. The prospect of integrating vertically as espoused by Bishop & Walker(2010) and the UK Merger Guidelines (2010) was not considered by the Tribunal. This once more paint the Tribunal to be less dynamic in its reasoning.

Suppliers such as Pailpac are price takers both from their input suppliers and from their customers and therefore do not dictate prices to paint manufacturers (Table 11). Of significance is the resistance by paint manufacturers to price increases (excerpt 23). As a result, irrespective the number of plastic paint suppliers and their respective sizes, container suppliers are price takers (Table 11, Theme 1). Evident is the price increases below PPI which is indicative of the bargain power of customers (read Table 7 with Table 10). This ability of customers is sufficient to restrain firms acting unilaterally (Chen, 2008).

Conclusion

Yet again, it is important to highlight that the assessment of countervailing power in the context of the research is premised on its impact on horizontal merger that are presumed to increase concentration. The findings in section 6.1.1 above, clearly articulate that the Nampak/Burcap transaction was not horizontal merger. Proposition four thus cannot be verified. The discussion on the findings with respect to countervailing power thus merely endeavours to assess whether the market economics post-merger in deed reflect the Tribunal assertions.

The large paint manufactures have the sufficient constraining power on container manufacturers through either switching or integrating their purchases with their global parent company. This means that Nampak would not be able to increase the prices of the plastic manufacturers. This is an important aspect in determining exercise of market power. The Tribunal underplayed the strength of customers and emphasised barriers to entry, both found to be wanting ex post. In not examining the role customers play in constraining market power, the Tribunal omitted a pertinent aspect of assessing market power. This forms part of the dynamic assessment deemed necessary by the 3rd wave of industrial economics (Audretsch, et al., 2008).

6.1.5 Effectiveness of the remedies imposed

Competition authorities should only consider imposing conditions on mergers if there would be harm to competition (OECD, 2003b). The primary objective of a condition is to maintain competitive dynamics in the implicated markets (Halverson et al., 2004/05).

The post-merger assessment carried thus of the acquisition in 2007 by Nampak of Burcap was not anti-competitive because it did not raise concentration. Therefore, there was no reason based on the dynamics of the paint container market for the Tribunal to impose a remedy. Central to the Tribunal's decision was the finding that the

PET technology was innovative and competitors will be unable to compete with Nampak. The aim of the remedy was to stimulate entry and allow competitors to acquire equivalent technology. Respondents aver that PET technology was old and did not take effect. The market appears to have embraced technologies that are more effective – excerpt 29. Technology in itself is thus not necessarily a barrier to enter (Carlton & Perlof, 1994) and excerpt 27.

Over and the above the unlikely competitive harm postulated by the Tribunal, the PET technology as a new plastic technology for paint containers did not materialise (excerpt 28 and Table 12, Theme 3). To this end, the Tribunal made two fundamental judgement errors. Firstly, it assumed metal paint containers can be substituted with plastic paint containers. This together with Nampak dominant position in the metal container will provide it with the ability to increase the prices of plastic paint containers. This is shown not to be the case post-merger as discussed in 6.1.1. Secondly, it proclaimed that the PET technology would technology of choice for paint container manufacturers and no other competitor had access to such technology. This is not the reality post-merger. In light of these two main arguments exposed to be bare, the Tribunal imposed a condition on a transaction that was not anti-competitive. This is in contrast with the advocacy of OECD (2003b) that conditions should only be imposed if harm to competition is likely.

Lastly, the condition did also not attract new entry – Table 12, Theme 1 and 3 as desired. The remedy to this extent was not effective (Halverson et al., 2004/05).

Conclusion

Proportion 5 set out to test whether remedies imposed on horizontal mergers improve competitive dynamics. Given that the transaction is not between direct rivals, no horizontal merger was evoked. Therefore, the fifth proportion could not be tested. The post-merger assessment on the effectiveness of the remedy is therefore relevant. Nonetheless, the findings highlight weaknesses in the Tribunal's overall assessment that underlined its bases for imposing the remedy.

6.1.6 Post-merger financial performance of Nampak

As per the Reasons for Decision, the rationale by Nampak for entering into acquisition was part of the shareholders agreement that afford either of the merging parties the opportunity to place a put or call option. The merger however was also said to allow Nampak to fully integrate Burcap into its operations, which will boost product offering.

Agarwal & Bhattacharjea (2006) espoused that by acquiring rivals firms are able to expand without investing in additional capacity. It is not easy to infer whether this was the case with Nampak as it also manufactured plastic products such as drums and food containers. From this perspective, the acquisition of Burcap may have provided Nampak with additional capacity but this is not clear. What is however clear is that the merger would have enabled Nampak to compete for business for both solvent and water based paint. This would be an extension of its products for paint manufacturers.

Maksimovic et al., (2011) find that within three years of acquisition, at least 27% of acquirers' dispose of the entire target business and close to 19% sell-off the factories of the target firms. This is confirmed by the sale of the Burcap business to Pailpac in 2010 (three years) after being acquired by Nampak – excerpt 32. The reasons elucidated during the post-merger interviews were that the PET technology was too expensive, carried high cost disadvantages (excerpt 29) and, Nampak inability to secure business from Plascon (the largest plastic paint consumer) – excerpt 26.

The pay consideration for the Burcap was approximately R24million (excerpt 33). Having sold the business only three years thereafter it is unlikely that a return on investment was achieved (Table 13, Theme 2). The financial performance of Nampak could not be established in part because of the limited information available on Nampak financials. Not acquiring the critical skills of Burcap (Table 12 – Theme 3) is part of the reason for the failed integration. This according to Krug (2009) is essential for acquisition to be success full and to create shareholder value (Goedhart, Koller & Wessels, 2010).

Pailpac's objective for acquiring the asset was likely based on removing the next real alternative from the market allowing it to grow its market share from under 50% to at least 90%.

Conclusion

The acquisition of Burcap did not yield the desired success, as it was disposed within three years. The objective for the transaction though appeared to be driven to improve product ranges. However, by not acquiring the skills and technology which according to Krug (2009) are essential for the successful continuous of the business, Nampak was unable to penetrate the plastic paint container market it setout to achieve. It sold off the business within three years and therefore the merger unlikely generated a return on investment. The financial performance of Nampak as result of the merger could not be established as outlined in proposition 6 for two main reasons. Firstly, it was not

horizontal merger therefore; the last proposition could not be verified. Secondly, financial information was limited.

6.1.7 Concluding remarks on ex-post analysis of Nampak/Burcap merger

The ex-post assessment confirms the Tribunal's bias towards the Harvard school, which does not consider the dynamic nature of an industry, particularly possible reactions by competing firms. An important finding is that the acquisition of Burcap by Nampak in 2007 was not horizontal merger. This meant the research propositions outlined in chapter 3 could not be tested.

The Competition Tribunal conclusion on the substitutability between metal and plastic containers has not occurred 5 years after the transaction. That critical assessment that informed the decision was flawed. This resulted in the inconsistent interpretation of the likely change in the market economics relating to the ability of competitors to acquire technology and customers' ability to restrain price increases. The post-merger reality is that barriers to enter the plastic paint container market are not high because the need for technology but rather due to economies of scale as rightly pointed out by the Tribunal. Central to a complete competitive assessment of a merger rests the theory of countervailing power. This obvious omission by Tribunal contributed to conclusion that Nampak can raise prices of plastic paint containers post-merger.

The reality of plastic paint container ex-post is one of where customers have strong countervailing power and resist unreasonable price increases. The PET technology that Nampak had access to proved to be inferior and did not pose a threat to competitors' ability to compete.

The pedantic application of the SCP framework by the Tribunal in this matter resulted in an erroneous decision. The remedy imposed was not necessary, as the technology in the plastic paint container market is common. The ineffectiveness of the remedy to attracting entry or allow competitors to catch-up is not surprising because the basis for its imposition was flawed. Moreover, competitors had superior and more effective technology that rendered the condition unnecessary from the on-set.

The rationale for the acquisition of Burcap also falls prey to an acquisition that did not realise the desired synergies and economies of scope set-out by Nampak. Largely, because there appear to have been limited understanding of the plastic market and pursued synergies at the expense of critical personnel.

6.2 Case study 2: Scaw Metals (Pty) Ltd / Ozz Industries (Pty) Ltd

The decision by the Tribunal to approve the acquisition of Ozz with conditions was due to its conclusion that it is a merger to monopoly, which will result in price increases. The need for technical skills and the lack of new entrants in 10 years were regarded as an indication of market with high barriers to entry.

The assessment by the Tribunal was largely also informed by the Harvard School. Efficiencies that could address the competition concerns were disregarded, although not ventilated in the judgement. The latter aspect points to an attempt to mesh the competitive assessment with the Post-Chicago doctrine but yet heavily favouring the SCP framework. This approach is also evident from the US competition regulators that acknowledge the new industrial organisation doctrine but lean more towards the Harvard doctrine.

6.2.1 Market share and concentration

A merger to monopoly is typically circumspect in light of the principles of the Harvard school on concentrated markets (Audretsch, et al., 2008). The Tribunal disregarded imported grinding media as viable alternatives for South African mines. The Harvard doctrine's view is that the higher the share of the market a firm holds, the greater its market power (Shepherd, 1997). In particular, the thesis of the Tribunal rests on the view that the market power that Scaw will accrue post-merger would enable it (Scaw) to increase prices. The pre-merger dominance of Scaw is implied to be tamed by the presence of Ozz. It is peculiar that the Tribunal considered Ozz to be an effective competitor despite its size (less than 10%) and inability to capture market share from Scaw over the years. Yet it ignored the role of imports that were also relatively low (approximately 16%) as indicated in the judgement.

Respondents agree that the grinding media market consisted of only two producers (excerpt 34). However, only Scaw is deemed a meaningful player given its size (Table 15, Theme 3). For competitors to be regarded sufficient alternatives, they should be able to meet the volume demands and quality demands of customers (Bishop & Walker, 2010; Ravhugoni, 2011).

The market power of Scaw was evident in its ability to charge very high prices (Table 15, Theme 6; excerpt 30). Figure 3 shows prices in 2006 were relatively low (R 7 367 per metric tonne) but started to increase to highs of R18 308 (per metric tonne) by September 2008. This confirms respondents' view that the merger did not give Scaw

more advantage (excerpt 35 and Table 15, Themes 6 and 7). The reference to high prices is related from around 2007 - excerpts 36 and 37 - but the merger was approved mid-2008. In addition, Scaw on its own account stated its ability to pass on price increases to customers (Table 21). These findings indicate that Scaw's ability to increase prices unilaterally were due pre-merger market power and therefore did not arise due to the merger. The subsequent prices decreased post-merger were not due to production efficiencies but due to increased competition from imports – excerpt 42.

At the time of the merger, it seemed that there were insignificant amounts of importation of grinding media (excerpt 37). According to the Tribunal, imports were found to be more expensive than the domestically manufactured grinding media. The situation is however very different ex-post, with imports being witnessed from India, Brazil, Vietnam and China (Table 15, Theme 4). The Tribunal in this regard was therefore accurate as the levels of imports seemingly only change after 2008 (excerpt 39). Imports post-merger are at least 10% cheaper than the locally produced grinding media (Table 15, Theme 5) and thus serve as cost effective alternatives to the customers. The increased levels of imports post-merger sharply point to the dynamism of industries and that they evolve and are not static; as explained by Audretch, et al. (2001).

The exchange rate that favoured locally produced products (See Figure 3) and the high steel prices (Table 16) during 2007 and 2008 contributed to the perception that imports are costly. However as the rand (local currency) weakened, imports become more attractive. The increased competitively prices imported grinding media (Figure 3) has subsequently constrained Scaw from charging high prices (excerpts 40 to 42). This is what (Bishop & Walker, 2010) warn against, that unless the barriers to expansion are studied to determine alternative suppliers, there is risk of concluding there are insufficient alternatives which may not be the case.

Obvious from the post-merger assessment is that the rate of exchange and steel prices played an important role in determining whether imports could be viewed as cost effective. This had implications for their ability to constrain the merged entity post-merger.

Conclusion

The ex-post analysis reveal that Scaw's conduct around 2007 and 2008 did not arise because of the acquisition of Ozz but points to pre-existing market power. The exchange rate and steel price increases in the years preceding the merger contributed

to Scaw's ability to price high as it was aware customers could not favourably switch to imports. The ability of Scaw to act unilaterally is therefore directly influenced by this dynamic. This suggests market power was not derived from the horizontal merger. The findings of ex-post evaluation largely indicate that market power was present pre-merger as such proposition one does not hold.

6.2.2 Coordinated effects

Coordinated conduct requires a market with few firms (Bishop & Walker, 2008). When there is only a single firm active in the market, the theory around coordinated conduct becomes irrelevant. There are however smaller competitors in the grinding media market such as Dikuna. The exertion of market power is most likely unilateral than coordinated given Scaw's dominance as it does not need to cooperate with competitors to yield higher pay-off. Unless it faces constraints from customers, imports, or potential entry Scaw will be able to act unilaterally.

Prices of grinding media are not publicly available as they are negotiated and form part of supply agreements (excerpt 43 and Table 17, Theme 4); the ability of competitors to reach agreement is inhibited. This market dynamic further restrains the ability to monitor compliance of the agreement or punish deviation, the factors necessary for collusion to be possible and sustainable (ABA, 2008).

Conclusion

Multilateral conduct is unlikely as Scaw is the dominant supplier of grinding media. A realistic outcome is unilateral conduct. The silence of the judgement on coordinated conduct is thus not surprising. Scaw is the only meaningful supplier of grinding media thus proposition two in the context of the over 80% market share held by Scaw is improbable.

6.2.3 Ease of entry into the grinding media market

Competition authorities in their analysis on the impact of a merger consider the ability of other firms to enter the market (Motta, 2004; Ravighoni, 2011). A merger is not likely to raise market power concerns when it is relatively easy for other firms to enter a market (US Department of Justice & Federal Trade Commission, 2010). Critical to the Tribunal's decision was its conclusion that barriers to entry are high owing to the technical expertise that are required.

The interviews with market participants confirmed the Tribunal conclusion. Not only is access to technology important, but the capital investment to start a grinding media production facility is also high (excerpt 45 and Table 18, Theme1). Economies of scale and availability of raw material and electricity is essential (Table 18, Themes 2 and 4). These realities are however not brought to bear by the merger. The focus on economies of scale, borne by the Harvard school has received criticism for ignoring the possibility for expansion by competitors. Imports from countries like India and China that export large volumes of steel products because of the economies of scale and the attractive prices in the domestic market were able to enter the local market. These players are already grinding media manufactures and merely extending their geographic reach. This argument has been advanced by the Post-Chicago camp (ICN Merger Workbook, 2006). This thus suggests that the Tribunal misunderstood the that role imports could play in the future.

Conclusion

Proposition three endeavoured to test whether horizontal mergers in concentrated markets increase barriers to entry. The ex-post analyses confirms the Tribunal's decision that barriers to enter the grinding media market are high but are not increased by the merger. As such, proposition three was disapproved. The potential of expansion by international suppliers into the local market was misjudged. This is an important economic aspect of the post-merger grinding media market. This again highlights the dynamic behaviour of market players, which can easily be overlooked when focused on the structural or efficiency hypothesis.

6.2.4 Countervailing power

Customers play a central role in restraining the exercise of unilateral market power (Church & Ware, 2000). Big customers such as mines, as in the case for the Scaw/Ozz transaction are able to constrain a monopoly supplier from increasing prices (Ellison & Snyder, 2001). This they do by either encouraging new entry, vertically integrating or switching suppliers (ABA, 2008).

In concluding that Scaw has, the ability to increase prices for its customers post-merger, by implication the Tribunal ignored countervailing power. This is palpable from the Reasons for Decision that does not engage the theory of countervailing power.

The market dynamic that has subsequently emerged is largely due to decisions by customers to seek alternative supplier(s) through importing (Table 19, Theme 2 and

Table 15, Theme 4). The conscious effort by customers has stimulated the influx of imports, which has transformed the grinding media market (excerpt 39). The desire to introduce more competition was steered by the high prices charged by Scaw (Table 19, Themes 2 and 3). The economic factors (exchange rate and raw material prices) discussed under 6.2.1 enabled customers to cost effectively switch to imports.

The ability to switch to other suppliers is a factor of costs, time, likelihood, and sufficiency (ICN Merger Working Group, 2006; US Department of Justice & Federal Trade Commission, 2010). Quality in terms of the wear rate of a grinding media is an important consideration when decisions around switching suppliers are made (excerpts 46 - 49). This limits the speed with which customers can switch to alternatives (excerpt 50). Security of supply is another pertinent factor in deciding whether a supplier is suitable. Despite these key factors, the mining customers engaged in a deliberate process of introducing competition. Customer 1 pre-merger procured its entire grinding media from Scaw before the merger. To date imports account for at least 30-35% of their steel ball purchases (Table 14, Theme 4).

The results from the research indicate that the costs of switching are high and time intensive because the steel balls need to be tested. In spite of these elements, the high (excessive) prices charged by Scaw, were sufficient incentive for customers to seek substitute suppliers in imports. As such, high switching costs do not necessarily discount countervailing power.

Due consideration by the Tribunal's for the ability of customers to restrain anti-competitive conduct by Scaw may have resulted in reaching a contrary decision to approve the transaction without conditions. The recognition of countervailing power would have indicated constrain could be exerted. That said, with the low levels of imports in 2008 and the lack of local alternative suppliers, the concern potential anti-competitive conduct post-merger is not misplaced entirely. This however does not obviate the oversight of the Tribunal from not assessing countervailing power.

Conclusion

The countervailing power exerted by mining customers by sourcing imported steel balls transformed the market into a more competitive space. This reduced Scaw's market power. Accordingly, research proposition four, which aimed to test whether mergers between competitors in a concentrated market will lessen competition in the absence of countervailing power, is unfounded.

6.2.5 Effectiveness of the remedies imposed

The Tribunal required Scaw to curb price increases to a maximum of 11% for a period of 5 years. Given the timeframe on the condition, the Reasons for Decision is not clear whether the 5-year period is sufficient to allow entry or the basis for the period. This is an important question in light of the Tribunal's assertion that the transaction is a merger to monopoly, and would lead to price increases to customers.

The decision to enforce a remedy despite the transaction being a merger to monopoly is in contrast with the literature reviewed in chapter 2. According to the OECD (2003b), some competition regulators will impose a condition even it lessens competition provided these are not substantial or lead to dominant firm. The Tribunal postulated that Scaw will be a monopoly and not a dominant firm and the anti-competitive outcome will be substantial. This together with high barriers to entry and lack of sufficient alternative suppliers, the Tribunal should have prohibited the transaction. Especially given that, its assessments lean towards the SCP framework. Alternatively, it should have approved the transaction without condition, in view of the substantial market power Scaw held pre-merger.

According to the Halverson et al., (2004/2005) the principal objective of a condition is to maintain competition at levels prior to the transaction. For the merger between Scaw and Ozz this would mean that the cap on price increases for 5 years should act as a mechanism to allow for the market in which at least two players compete after the 5-year period. The ex-post analyses reveal the presence of the imports, at least two other small local players (Dikunu and Bonolo Trust) and reduced prices. It therefore indicates the remedy without being explicit, allowed for entry into the market. As discussed in sections 6.2.1 and 6.2.3 the presence of increased imports are due to countervailing power and favourable conditions in terms of exchange rate and local steel prices. It is thus less an outcome of the remedy imposed but more due to market dynamics.

The condition placed an annual price increase ceiling to customers of 11% for grinding media. Table 16 however show average steel prices increases of less than 8% between 2009 and 2011. This is a significant finding as steel is the largest cost input for grinding media. With steel price increases of less than 8%, the condition therefore had minimal impact in shielding severe prices increases. It could also be an indication that the high prices charged by Scaw in 2008 were influenced by the high steel prices at the time. This was confirmed by customer 3 in excerpt 36. This means that

understanding the history of market economics and possible future developments are essential in determining if market power can be exerted (Audretsch et al., 2001).

Conclusion

The Reasons for Decision do not explicitly outline the reasoning for imposing a condition of 5 years. One cannot conclude that the remedy had the desired outcome of allowing a more competitive market to realise in view of the discussions in section 6.2.1 to 6.2.4. In the main, the post – merger evaluation of the Scaw / Ozz transaction reveal that the grinding media market is concentrated but the merger did not increase market power. The improve market dynamics in terms of lower prices and presence of alternative suppliers was not a consequent of the remedy. As such, the condition was imposed on a merger that did not lessen competition and therefore proportion five could not be tested.

6.2.6 Post-merger financial performance of Scaw

The rationale for acquiring Ozz as stated in the Reasons for Decision for Scaw was to unlock synergies and improve production efficiencies. Martin (2010) states that mergers are often not profit creating because the perceived cost efficiencies that are expected are not large enough. Table 21, Theme 1 highlight the lack of efficiencies from the merger. The closure of some of the production lines of Ozz (Table 21, Theme 2) confirms Maksimovic et al., (2011) maintained that 19% of acquiring firms close the plants of the target firms.

According to Pepall et al., (2010) the gains from mergers are mixed and are dependent on the various assumptions employed. Scaw was the most profitable in 2008, the year in which the merger was approved. It recorded operating profit of US\$ 274 million from US\$172 the preceding year (Table 23). The subsequent years however reported substantial drops in operating profit to a low of US\$40 million in 2011(Table 23). The global economic crises that took effect around 2008 possibly played role in the depressing operating and turnover numbers achieved by Scaw. Although by its own account, competition from imports severely constrained its ability to pass on raw material price increases to customers (Table 21). The weak post-merger financial performance after 2008 partly indicate Scaw had limited market power. The combination of reduced sales and increased profits is said to be illustrative of market power (Gugler, et al., 2003). Contrary to Gugler, et al. (2003) who aver that most

mergers result in significant profits and reduced revenue post-merger, Scaw experienced declines in both revenue and profits post-merger.

Conclusion

The financial performance of Scaw subsequent to the merger has worsened substantially in 2009 and 2010. To this extent, the merger between Scaw and Ozz in a market with only two players pre-merger did not improve its financial performance. This finding therefore dismisses proposition six and the SCP framework.

6.2.7 Concluding remarks on the ex-post analysis of Scaw/Ozz

The analytical method by the Tribunal appears to favour the structural approach and is shallow in application of the Post-Chicago school. The deficiency in employing the new industrial school which advocates for understanding the potential strategic reactions by competitors, is obvious. This competition authority did not consider potential barriers to expansion and the extent of countervailing power held by customers.

In the main, the post-merger examination of the Scaw and Ozz merger reveals mixed outcomes of the Tribunal Reasons for Decision. Proposition one was denied as the merger did not increase market power. The findings suggest that market power was present pre-merger and therefore did not arise due to the acquisition of Ozz. Proposition two was not tested as the market appears to be more conducive for unilateral conduct than coordinated conduct. Research proposition three was also denied because post-merger, imports were sufficient alternatives as international firms extended their geographic reach. Proposition four that tested whether the merger between Scaw and Ozz will lessen competition in the absence of countervailing power was also refuted by the research results.

The market economics with respect to influence of the exchange rate and local raw material prices partly explain the high prices of grinding in the years preceding and post the merger. The market outcomes re-affirm the Post-Chicago doctrine that markets are dynamics and should be viewed in a static manner.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

This last chapter of the research report is dedicated to drawing together the main themes from the research. Chapter seven commences by synthesising key insights from the research. It proceeds to draw lessons from the ex-post evaluations of the Nampak /Burcap and Scaw/Ozz mergers respectively. The chapter then highlights lessons to be learned. Lastly, chapter seven outlines the scope for future research.

The research findings highlight the importance and need for post-merger analyses. These studies play a pivotal role for a number of reasons. They aid in ensuring that competition authorities are aware of the impact of their decisions on market outcomes. It also assists regulators to better understand the dynamic nature of certain markets for future decision-making. Post-merger analyses that confirm conclusions by competition authorities will give market participants' greater comfort in their ability to anticipate market outcomes. This will shield agencies from unnecessary laborious litigations and allow resources to be devoted to ensure that correct decisions are derived from investigations.

7.1 Synthesis of information

There is an acknowledgement that understanding strategic interactions among market players given the dynamic nature of competitor behaviour is important. This is informed by the most recent evolution in the field of industrial organisation and competition economics. As opposed to the uni-directional methodology of the past that a structure of the industry is definitive of how firm are likely to behave. There is recognition by competition authorities for this new approach as highlighted in the latest merger guidelines issued by the UK and US regulators and the factors set-out in the South African competition legislation. Notwithstanding these developments, the SCP framework at least as a starting point still heavily informs the analytical approach by competition agencies.

The UK competition authorities have progressed to a more game theory approach. This proposition evidenced by their reasoning in the 2006 Pan Fish / Marine Harvest merger. This happens to be the same jurisdiction that commissions regular post-merger assessments and been vindicated in ex-post examinations.

The instant ex-post analyses of the Nampak/Burcap and Scaw/Ozz mergers confirm the predisposition of the Tribunal towards the Harvard school. The oversight in

understanding the strategic reactions of competitors and dynamics in markets, in part is responsible for the flawed conclusions in the Nampak/Burcap transaction specifically.

The Tribunal did not receive a clean audit for any of the three cases evaluated post-merger by the Commission in 2010. The conclusions by the Tribunal in the three cases that were studied after the merger suffer from similar mistakes as in the instant research. The post-merger assessment of the Murray & Roberts /Cementation merger found barriers to entry to be low for firms active in related markets (that could expand), which were responsible for increased competition post-merger. In the Scaw /Ozz ex-post evaluation, imports are shown to be a significant constraint. This relates to the ability of firms to expand, which lowers barriers to entry. This is contrary to the Tribunal's reasoning that imports are ineffective. Both the Nampak/Burcap and Scaw/Ozz mergers are also marked by the same lack of appreciation for countervailing power by the Tribunal, as was the case in the Trident/Dorbyl ex-post findings. This suggests that the Tribunal has to greatly embrace the Post-Chicago doctrine that advocates for a deeper understanding of behaviour around strategies of the various market players.

The analyses on the financial performance of the two mergers studied here is clouded by the economic crises as both occurred around the time (2007/2008) when the effects of crises became observable. Nevertheless, insights can be drawn from literature and the interviews. When assessed against the archetypes put forth by the literature, the acquisitions of Burcap and Ozz are closest to ones that were conceived to create value through synergies, acquire skills and technologies swiftly and cheaply. However, in pursuit to generate synergies, which usually entail retrenchments, critical skills and persons that have long relationships with customers were forgone. Burcap was subsequently sold within three years endorsing literature that such mergers and acquisition are motivated to enhance market power and not efficiencies.

7.2 Lessons from Nampak/Burcap transaction

The results from the interviews reveal that Nampak and Burcap were not direct rivals. Therefore, neither of the research propositions could be tested. This is due to the inconsistencies between the Tribunal's reasoning and the actual market economics post-merger. The evaluation ex-post indicate that mergers involving metal paint and plastic paint container manufacturers do not create market power and consequently do not pose a threat to consumer welfare. Accordingly, the Tribunal's conclusion at the onset is flawed and had critical bearing on the theories of harm relating to barriers to

entry, countervailing power, and the effectiveness of remedies. The research findings are in stark contrast to the Tribunal's judgements and decisively point to the need for rigorous evaluations informed by the new game theory methodology. Studying the extent of countervailing power is increasingly important as this was also found lacking in earlier post-merger studies.

7.3 Lessons from Scaw/Ozz transaction

The six research propositions were unfounded in the post-merger evaluation of the horizontal merger between Scaw and Ozz. The findings in relation to unilateral market power indicate predominantly towards the existence of market power pre-merger. In that case, the merger was not likely to enhance Scaw's ability to increase prices. Moreover, the findings suggest that high prices were prevalent before the merger. Thus despite the merger in concentrated market, unilateral power was not enhanced. To this end, the first proposition is not satisfied by the post-merger study. The role of exchange rate is a macro-economic factor but influences the extent to which imports can be viewed as alternative suggests that market dynamics cannot be viewed in a static manner. Nonetheless, despite few numbers of firms active in the grinding media market, customers experienced softening prices driven by favourable market conditions and countervailing power. The ex-post analyses show that the assessment of barriers to entry should also consider barriers to expansion. This again is an approach emanating from the third wave of industrial economics. The research confirms as with the earlier examinations of post-merger studies in South Africa, that the competition authorities need to spend time understanding market dynamics to avoid making erroneous decisions.

7.4 Lessons for the South African competition authorities

The inconsistencies between the market economics after the merger and the Tribunal's reasoning call for efforts to narrow this gap. Post – merger evaluations are pertinent in this respect. It is important for competition authorities to embrace the new industrial wave. This can be achieved by spending time to understand the possible reactions by competitors, the potential for expansion either geographically or production as a means for entry and the extent of customers to counter market power.

The data requirements and the participation of market players are important for credible post-merger evaluations. Competition authorities can bridge this gap by mandating merging parties to make information available for subsequent studies and to

encourage other stakeholders through advocacy to participate in post-merger assessments.

7.5 Recommendations for future research

The lack of ex-post evaluation in the South African context provides enormous scope for on-going research. The instant research is dedicated to two horizontal mergers that were conditionally approved. There is therefore opportunity for post – merger research on horizontal mergers that were prohibited/blocked and horizontal mergers that were approved without any conditions.

Similarly, ex-post assessments of vertical mergers that were approved, prohibited or approved can also be reviewed retrospectively.

To date, the post-merger evaluations were largely based on case studies, as such employing other methods such as simulation and DiD models can be tested provided that sufficient and quality data can be accessed.

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ANNEXURE A - INTERVIEW GUIDE: NAMPAK (MERGING PARTIES)

1. Introduction

Thank you very much for taking the time to meet with me. My name is Grace Mohamed, a final year MBA student at GIBS (Gordon Institute of Business Science). As explained in my earlier correspondence the research I am undertaking is a compulsory component of my MBA degree.

The research endeavours to examine the impact of unilateral and coordinated conduct on market dynamics by conducting post-merger analyses on three merger transactions that have been conditionally approved or unconditionally approved by the Competition Tribunal. I intend to engage three to four market players to gain a deeper understanding of changes in the market dynamics arising from horizontal mergers. As an important market participant your understanding and views on the changes in the industry dynamics are highly appreciated.

For the purpose of the research your identity (individual and firm) will remain anonymous and will only be shared with my research supervisor (Mike Holland) and no other person or authority. The information shared will be aggregated with responses from other interviewees. The interview will take at least one hour. I will use an audio facility in order to ensure I do not omit any important information you will be sharing with me. I will, however, also be taking notes during our conversation. In order to protect the information that will be gathered during the interview, I am attaching a non-disclosure agreement.

Please note that you do not have to answer any question that you wish not to answer.

2. Synopsis of merger transaction being assessed retrospectively

The transaction involved Nampak that acquired Burcap a plastic container manufacturer in 2007. The Tribunal in its Decision found that the merger was likely to lead to substantial lessening of competition and as result imposed remedies to reduce the potential anti-competitive effects. The Tribunal indicated that (1) barriers to enter the industrial plastic container (used for solvent based paint) are high because of a technology (PET) (2) Nampak has an incentive to increase prices of industrial plastic containers to a level close to that of metal container prices in order to reduce customer switching (3) there will only be two viable competitors post-merger. Therefore, to

address these concerns the Tribunal required of Nampak not purchase any new technology for a period of three years.

3. Research themes

The main themes we will discuss are market dynamics, market share and concentration; barriers to entry, countervailing power, pricing strategy, coordinated conduct and the conditions imposed by the Tribunal.

3.1 Market dynamics

The Tribunal was of the view that the market was evolving from metal containers to include plastic containers. Although plastic containers were primarily used to store water based paint it was argued that they could also be used for solvent based paints. In order to test whether the Tribunal's premises has materialised, please explain the following:

- What type of containers (metal or plastic) do you currently manufacture?
- Do you manufacture PET plastic containers and can these be used to store water based and solvent based paints?
- Do your water based paint customers typically use plastic containers or not?
Explain
- Do your solvent-based paint customers typically use metal containers or not?
Explain
- Has the plastic container market evolved as stated by the Tribunal in 2007?

3.2 Market share and concentration

- Who do you currently compete with in the market for plastic containers?
- Who do you currently compete with in the market for metal containers?
- How would you describe the number of competitors in the metal and plastic container market since the merger (e.g fewer, more, the same)?
- Do you import any plastic containers?
- Can plastic containers be sourced through imports by customers?
- What is your total production capacity for metal containers?
- What is your current level of production for metal containers?
- What is your total production capacity for plastic containers?
- What is your current level of production for plastic containers?

- How has your capacity levels changed since the merger of Nampak and Burcap for both plastic and metal containers? Explain whether these were due to external (e.g demand, excess capacity in the market) or internal factors (e.g costs, shortage of skills,)
- How has the merger changed competition (prices, volumes, number of suppliers) in the plastic container market?
- How has the merger changed competition (prices, volumes, number of suppliers) in the metal container market?

3.3 Barriers to entry

- How many plastic industrial container suppliers have PET technology?
- How important is it for customers that a plastic container supplier has access to PET technology?
- Are these technologies for exclusive use for each supplier?
- How many new suppliers are there in the plastic container market?
- Do these new suppliers have PET technology?
- Have any firms exited the plastic container market since the Nampak/Burcap merger? Explain, why they exited the market?

3.4 Countervailing power

- Can customers (and have they) switched between metal and plastic containers for your solvent based paints? Explain
- What will cause a customer to switch between metal and plastic containers (e.g price increases, improved technology)?
- Do customers switch between suppliers of plastic containers? Explain why?
- Since the merger, have solvent-based paint customers switch to plastic containers (explain whether they have also switched to PET plastic containers)?
- How do customers procure plastic containers (tender system, supply agreement request for quote, spot purchases)?
- Do your customers typically procure from one supplier their entire plastic container requirements or do they procure from more than one supplier?

3.5 Pricing of plastic containers

- What is your current selling price for 1litre, 5 litre and 20litre plastic containers?
- What is your current selling price for 1litre, 5 litre and 20litre metal containers?

- At the time of the merger (2007) what was your selling price for 1litre, 5 litre and 20litre plastic containers?
- How often do you change the prices of metal containers change (e.g monthly, quarterly, yearly)?
- Do prices change based on dynamics in the market (e.g raw material prices, exchange rate)?
- How often do the change your pricing of plastic containers change (e.g monthly quarterly, yearly)?
- What influence your price change e.g raw material prices, exchange rate, fixed costs, demand, rivals prices)?
- What constraints Nampak from increasing its prices (e.g regulatory, international prices, parent company directive)?
- What is the current price differential between plastic containers and metal containers?
- Has the price differential between plastic containers and metal containers narrowed or widened since the merger in 2007?
- Is Nampak a price taker (dictated by customers) or price leader (independently set prices)?
- What is the Nampak pricing strategy (e.g none, cost plus mark-up, customers negotiating power, competitors' prices, regulation, ROI)?

3.6 Coordinated conduct

- How different are the suppliers from each other in terms of size (production)?
- Have the acquisition of Burcap by Nampak made suppliers of plastic containers similar in terms of production capacity and product range?
- How different are the prices among plastic container suppliers?
- Which supplier normally increases their prices first?
- Do you make your prices publicly available (e.g price lists)?
- When are price increases announced?
- What is the greatest proportion in terms of costs (e.g labour, electricity, raw material)?
- What is the proportion of raw material (plastic) of total cost?
- What is the proportion of labour of total cost?
- Have prices remained stable over a period of time?

- Are plastic container manufacturers' price takers (dictated by customers/market) or price leader (independently set)?

3.7 Remedies

The Tribunal imposed a condition that restricted Nampak from buying any technology for a period of three years.

- How many firm use PET technology for plastic industrial containers?
- Are PET technology licenses exclusive in the industry?
- Do you think the condition imposed by the Commission was effective? Explain
- Do you think the condition enabled entrants into the plastic container market?
- State any effects (if at any) the conditions had on the plastic container market overall?

3.8 Financial performance

- How has the firm performed financially since the merger in 2008? Explain
- What economic factors influenced the financial performance of the firm?
- How did the economic factors impact the performance of the firm?
- What were the actual gains from the merger?
- How does the firm measure success?
- Kindly provide turnover, net profit and ROE information for the period 2006 to 2008 and 2009 to 2011.

ANNEXURE B - INTERVIEW GUIDE: NAMPAK'S CUSTOMERS

1. Introduction

Thank you very much for taking the time to meet with me. My name is Grace Mohamed, a final year MBA student at GIBS (Gordon Institute of Business Science). As explained in my earlier correspondence the research I am undertaking is a compulsory component of my MBA degree.

The research endeavours to examine the impact of unilateral and coordinated conduct on market dynamics by conducting post-merger analyses on three merger transactions that have been conditionally approved or unconditionally approved by the Competition Tribunal. I intend to engage three to four market players to gain a deeper understanding of changes in the market dynamics arising from horizontal mergers. As an important market participant your understanding and views on the changes in the industry dynamics are highly appreciated.

For the purpose of the research your identity (individual and firm) will remain anonymous and will only be shared with my research supervisor (Mike Holland) and no other person or authority. The information shared will be aggregated with responses from other interviewees. The interview will take at least one hour. I will use an audio facility in order to ensure I do not omit any important information you will be sharing with me. I will, however, also be taking notes during our conversation. In order to protect the information that will be gathered during the interview, I am attaching a non-disclosure agreement.

Please note that you do not have to answer any question that you wish not to answer.

2. Synopsis of merger transaction being assessed retrospectively

The transaction involved Nampak that acquired Burcap a plastic container manufacturer in 2007. The Tribunal in its Decision found that the merger was likely to lead to substantial lessening of competition and as result imposed remedies to reduce the potential anti-competitive effects. The Tribunal indicated that (1) barriers to enter the industrial plastic container (used for solvent based paint) are high because of a technology (PET) (2) Nampak has an incentive to increase prices of industrial plastic containers to a level close to that of metal container prices in order to reduce customer switching (3) there will only be two viable competitors post-merger. Therefore, to

address these concerns the Tribunal required of Nampak not purchase any new technology for a period of three years.

3. Research themes

The main themes we will discuss are market dynamics, market share and concentration; barriers to entry, countervailing power, coordinated conduct and the conditions that were imposed.

3.1 Market dynamics

The Tribunal was of the view that the market was evolving from metal containers to include plastic containers. Although plastic containers were primarily used to store water based paint it was argued that they could also be used for solvent-based paints. In order to test whether the Tribunal's premises has materialised, please explain the following:

- What type of containers (metal or plastic) do you currently use?
- Do you use plastic containers only to store water based paints?
- Do you use metal containers only to store solvent based paints?
- What do you currently pay for 1litre, 5 litre and 20litre plastic containers?
- What do you currently pay for 1litre, 5 litre and 20litre metal containers?
- At the time of the merger (2007) what were the prices of metal containers?
- At the time of the merger (2007) what were the prices of plastic containers?
- Do you think the merger had any impact on prices of plastic containers? Explain
- Do you think the merger had any impact on prices of metal containers? Explain
- How often do the prices of metal containers change (e.g monthly, quarterly, yearly)?
- Do prices of metal containers change based on dynamics in the market (e.g raw material prices, exchange rate)?
- How often do the prices of plastic containers change (e.g monthly quarterly, yearly)?
- Do prices of plastic containers change based on dynamics in the market (e.g raw material prices, exchange rate)?
- What is the price differential between plastic containers and metal containers?
- Has the price differential between plastic containers and metal containers narrowed or widened since the merger?

- Are discounts / rebates common for plastic containers? Explain how these are implemented if discounts are offered.

3.2 Market share and concentration

- Who are your suppliers and potential suppliers of metal containers?
- Who are your suppliers and potential suppliers of plastic containers?
- Can metal containers be sourced through imports?
- Can plastic containers be sourced through imports?
- Who are the largest four firms in the plastic container market?
- Who are the largest four firms in the metal container market?
- Has Nampak reduce the production of metal containers since the merger?
- Has Nampak reduce the production of plastic containers since the merger?
- Have plastic suppliers been able to raise prices above your average cost increases in your company? Explain
- Have metal suppliers been able to raise prices above your average cost increases in your company? Explain
- How has the merger changed competition (e.g prices, volumes, number of suppliers) in the plastic container market?
- How has the merger changed competition (e.g prices, volumes, number of suppliers) in the metal container market?

3.3 Barriers to entry

- How many plastic industrial container suppliers have PET technology?
- How important is the PET technology for you as a plastic container customer?
- Are these technologies for exclusive use for each supplier?
- How many new suppliers are there in the plastic container market?
- Do these new suppliers have PET technology?
- How many firms have exited the plastic container market since Nampak/Burcap merger?
- In your opinion, why have they exited the plastic container market?
- Have you considered or are you considering to manufacture the containers (plastic or metal) yourself?
- What will be the capital cost to set-up a manufacturing plant for plastic containers?

- What are these barriers (structural barriers e.g. cost, level of demand and technology; absolute barriers e.g. government regulations, licensing, intellectual property rights; economies of scale; strategic advantage e.g. first mover advantage, sunk costs)?
- Have you imported plastic containers since the merger between Nampak/Burcap?

3.4 Countervailing power

- Have you switched between metal and plastic containers for your solvent based paints?
- What caused you to switch between metal and plastic containers (e.g. price increases, availability of other suppliers)?
- Have you switched suppliers of plastic containers?
- What caused you to switch between plastic container suppliers (e.g. price increases, quality and availability of other suppliers)?
- Have you switch between metal and plastic containers for your water-based paints? Explain why?
- What caused you to switch between metal and plastic containers for water-based (e.g price increases, availability of other suppliers)?
- Have you switched suppliers of metal containers?
- What caused you to switch between metal container suppliers (e.g. price increases, quality and availability of other suppliers)?
- How you procure plastic containers (e.g tender, request for quote, supply agreement etc)?
- Do your customers typically procure from one supplier their entire plastic container requirements or do they procure from more than one supplier?
- What constraints Nampak from increasing its prices to you?

3.5 Coordinated conduct

- How different are the suppliers from each other in terms of size (production)?
- Has the acquisition of Burcap by Nampak made suppliers of plastic containers similar in terms of production capacity and product range?
- How different are the prices among plastic container suppliers?
- Are prices publicly available (e.g price lists)?
- When are price increases announced?

- Which supplier normally increases its prices first?
- Have prices remained stable over a period of time? If so, how long?
- Are plastic container manufacturers' price takers (dictated by customers/market) or price leaders (independently set prices)?
- Is Nampak a price leader in the plastic container market?
- Is Nampak a price leader in the metal container market?

3.6 Conditions

The Tribunal imposed a condition that restricted Nampak from buying any technology for three years.

- How many firm use PET technology for plastic industrial containers?
- Are PET technology licenses exclusive in the industry?
- Do you think the condition imposed by the Commission was effective? Explain
- Do you think the condition enabled entrants into the plastic container market?
- State any effects (if at any) the conditions had on the plastic container market overall?

ANNEXURE C - INTERVIEW GUIDE: SCAW'S CUSTOMERS

1. Introduction

Thank you very much for taking the time to meet with me. My name is Grace Mohamed, a final year MBA student at GIBS (Gordon Institute of Business Science). As explained in my earlier correspondence the research I am undertaking is a compulsory component of my MBA degree.

The research endeavours to examine the impact of unilateral and coordinated conduct on market dynamics by conducting post-merger analyses on three merger transactions that have been conditionally approved or unconditionally approved by the Competition Tribunal. I intend to engage three to four market players to gain a deeper understanding of changes in the market dynamics arising from horizontal mergers. As an important market participant, your understanding and views on the changes in the industry dynamics are highly appreciated.

For the purpose of the research, your identity (individual and firm) will remain anonymous and will only be shared with my research supervisor (Mike Holland) and no other person or authority. The information shared will be aggregated with responses from other interviewees. The interview will take at least one hour. I will use an audio facility in order to ensure I do not omit any important information you will be sharing with me. I will, however, also be taking notes during our conversation. In order to protect the information that will be gathered during the interview, I am attaching a non-disclosure agreement.

Please note that you do not have to answer any question that you wish not to answer.

2. Synopsis of the Horizontal merger between Scaw and Ozz Industries

The Competition Tribunal was concerned that the horizontal merger between Scaw and Ozz was combining the only two large local firms in the supply of grinding media. The products supplied by both Scaw and Ozz were high chrome mill liners, grinding media, manganese rounds and tumblers and idlers. The focus of the interview will be on grinding media, the only product that was of concern to the Tribunal. The remaining products did not raise any competition issues. The Tribunal was of the view that there was great potential of Scaw to increase the prices of grinding media post-merger.

Barriers to entry in the grinding media market were found to be high given the kinds of technical skills required. Imports of grinding media at the time were not considered cost effective to constrain the Scaw post-acquisition of Ozz.

3. Research themes

The main themes we will discuss are market share and concentration; barriers to entry, countervailing power, coordinated conduct and the Conditions imposed by the Tribunal.

3.1 Market share and concentration

- How many local suppliers of grinding media are there and who are they?
- Who do you currently procure grinding media from?
- Do you import any grinding media?
- Have production / supply of grinding media decrease since the merger? Explain
- What are product(s) could the mine use as substitute from grinding media?
- What has been the impact of the merger on competition among grinding media suppliers?

3.2 Barriers to entry

- Are there any new suppliers of grinding media in South Africa since 2008?
- Have imports of grinding media increased since the merger? Explain
- Did the merger create economies of scale for Scaw? If so, explain how this impacted prices of grinding media?
- In your view did the merger create or enhance barriers to enter the grinding media market? Explain

a. Countervailing power

- How many suppliers do you currently procure grinding media from?
- How do you purchase grinding media (e.g. tender, supply agreement, request for quote)?
- Have you switched between suppliers of grinding media? If so why?
- What will cause you to switch between grinding media suppliers (e.g. price increases, availability of other suppliers, quality)?
- What do you currently pay for grinding media?
- At the time of the merger (2008) what was the price for grinding media?
- How have prices of grinding media changed since the merger?

- How often do the prices of grinding media change (e.g. monthly, quarterly, yearly)?
- In your view, do prices of grinding media change based on dynamics in the market (e.g. raw material prices, exchange rate)?
- Are you as a customer of grinding media a price setter or price taker?
- What is constraining/limiting Scaw from increasing its prices?

3.4 Coordinated conduct

- How different is the grinding media offered suppliers of grinding media?
- Are prices of grinding media publicly available (e.g. price lists)?
- How different are prices among competitors?
- Have prices remained stable over a period of time? If so, how long?
- Are suppliers of grinding media' price takers or price setters?
- When are price increases of grinding media generally announced?
- Which supplier of grinding media normally increases their prices first?
- Is Scaw a price leader in grinding media?

3.5 Conditions

The Competition Tribunal ordered Scaw to continue to produce high chrome or standard grinding cylpebs or eclipsoids products to meet the requirements of its customers and potential customers for a period of five years since the date the transaction was approved. The Tribunal also imposed a maximum 11% increase in the ex-works price charged to customers for grinding media. The remedy was imposed by the Tribunal given that the transaction create a monopoly (2 to 1 merger) and raised concerns relating to Scaw's ability to raise prices unilaterally (unconstrained) or reduce output of grinding media post-merger.

- Have you procured grinding media from Scaw since 2008?
- Have your purchases of grinding media from Scaw remained constant since 2008?
- What is the average ex-work price per tonne your currently pay for grinding media?
- What has been the average price increases on grinding media since 2008?
- Has the Condition imposed by Tribunal been effective in terms of ensuring supply of grinding media and limiting Scaw's ability to increase prices?

- In your view, state any (if at any) effects the conditions has on grinding media in general

ANNEXURE D - INTERVIEW GUIDE: SCAW (MERGING PARTIES)

1. Introduction

Thank you very much for taking the time to meet with me. My name is Grace Mohamed, a final year MBA student at GIBS (Gordon Institute of Business Science). As explained in my earlier correspondence the research I am undertaking is a compulsory component of my MBA degree.

The research endeavours to examine the impact of unilateral and coordinated conduct on market dynamics by conducting post-merger analyses on three merger transactions that have been conditionally approved or unconditionally approved by the Competition Tribunal. I intend to engage three to four market players to gain a deeper understanding of changes in the market dynamics arising from horizontal mergers. As an important market participant your understanding and views on the changes in the industry dynamics are highly appreciated.

For the purpose of the research your identity (individual and firm) will remain anonymous and will only be shared with my research supervisor (Mike Holland) and no other person or authority. The information shared will be aggregated with responses from other interviewees. The interview will take at least one hour. I will use an audio facility in order to ensure I do not omit any important information you will be sharing with me. I will, however, also be taking notes during our conversation. In order to protect the information that will be gathered during the interview, I am attaching a non-disclosure agreement. In addition, to give interviewees greater comfort in sharing information, GIBS has agreed to a two year embargo on the final research report.

Please note that you do not have to answer any question that you wish not to answer.

2. Synopsis of the Horizontal merger between Scaw and Ozz Industries

The Competition Tribunal was concerned that the horizontal merger between Scaw and Ozz was combining the only two large local firms in the supply of grinding media. The products supplied by both Scaw and Ozz were high chrome mill liners, grinding media, manganese rounds and tumblers and idlers. The focus of the interview will be on grinding media, the only product that was of concern to the Tribunal. The remaining products did not raise any competition issues. The Tribunal was of the view that there was great potential of Scaw to increase the prices of grinding media post-merger. Barriers to entry in the grinding media market were found to be high given the kinds of

technical skills required. Imports of grinding media at the time were not considered cost effective to constrain the Scaw post-acquisition of Ozz.

3. Research themes

The main themes we will discuss are market share and concentration; barriers to entry, countervailing power, coordinated conduct and the Conditions imposed by the Tribunal.

3.1 Market share and concentration

- How many local suppliers of grinding media are there and who are they?
- Do you import any grinding media?
- Are there any imports of grinding media? If so, what is your estimate of the market share of imports?
- What is your total production capacity for grinding media?
- What is your currently level of production for grinding media?
- How has your capacity levels for grinding media changed since the merger? Explain whether these were due to external or internal factors
- How has the merger changed competition (prices, volumes, number of suppliers) in the grinding media market?

3.2 Barriers to entry

- Are there any new suppliers of grinding media in South Africa since 2008? If so who are they?
- Have imports of grinding media increased since the merger? Explain
- Did the merger create economies of scale for Scaw? If so, explain how this impacted prices of grinding media?
- In your view did the merger create or enhance barriers to enter the grinding media market? Explain
- What are the barriers to enter the grinding media market in South Africa?

3.3 Countervailing power

- How do your customers purchase grinding media (e.g. tender system, supply agreement, request for quote, spot purchases)
- Have you lost customers since the merger? If so, explain to whom and what was the cause
- What will cause a customer of grinding media to switch suppliers (e.g. price increases availability of other suppliers, quality)?

- Do customers generally procure their entire requirement of grinding media from one supplier or from more than one supplier?

3.4. Pricing of grinding media

- At the time of the merger (2008) what was the price for grinding media?
- What do you currently charge for grinding media?
- How have prices of grinding media changed since the merger?
- How often do you change your prices of grinding media change (e.g monthly, quarterly, yearly)?
- What influence your price change e.g raw material prices, exchange rate, fixed costs, demand, rivals prices)?
- What constraints Scaw from increasing its prices (e.g regulatory, international prices, parent company directive)?
- Is Scaw a price taker (dictated by customers) or price leader (independently set prices)?
- What is Scaw's pricing strategy (e.g none, cost plus mark-up, customers negotiating power, competitors' prices, regulation, ROI)?

3.5 Coordinated conduct

- How different or similar is the grinding media manufactured by the different producers of grinding media?
- What is the greatest proportion in terms of costs (e.g labour, electricity, raw material)?
- What is the proportion of labour of total cost?
- Are prices publicly available (e.g price lists)?
- How different are prices among competitors?
- Have prices remained stable over a period of time? If so, for how long?
- Are suppliers of grinding media' price taker or price setters?
- Do you make your prices publicly available (e.g price lists)?
- When are price increases announced?
- Which supplier normally increases their prices first?

3.6 Conditions

The Competition Tribunal ordered Scaw to continue to produce high chrome or standard grinding cylpebs or eclipsoids products to meet the requirements of its customers and potential customers for a period of five years since the date the

transaction was approved. The Tribunal also imposed a maximum 11% increase in the ex-works price charged to customers for grinding media. The remedy was imposed by the Tribunal given that the transaction create a monopoly (2 to 1 merger) and raised concerns relating to Scaw's ability to raise prices unilaterally (unconstrained) or reduce output of grinding media post-merger.

- What has been the average price increases on grinding media since 2008?
- Has the condition imposed by Tribunal been effective in terms of ensuring supply of grinding media and limiting Scaw's ability to increase prices?

3.7 Financial performance

- How has the firm performed financially since the merger in 2008? Explain
- What economic factors influenced the financial performance of the firm?
- How did the economic factors impact the performance of the firm?
- What were the actual gains from the merger?
- How does the firm measure success?
- Kindly provide turnover, net profit and ROE information for the period 2006 to 2008 and 2009 to 2011.

ANNEXURE E – NAMPAK JUDGEMENT

COMPETITION TRIBUNAL OF SOUTH AFRICA

Case No:71/LM/Oct06

In the matter between:

Nampak Products Limited

Acquiring Firm

And

Burcap Plastics (Pty) Ltd

Target Firm

Panel : N Manoim (Presiding Member), Y Carrim (Tribunal Member),
and M Mokuena (Tribunal Member)

Heard on : 8 December 2006 and 22 March 2007

Decided on : 26 March 2007

Reasons Issued: 25 June 2007

REASONS FOR DECISION

Approval

On 26 March 2007, the Tribunal conditionally approved the merger between Nampak Products Limited and Burcap Plastics (Pty) Ltd. The reasons for approving the transaction follow.

The parties

The primary acquiring firm is Nampak Products limited ('Nampak Products'). Nampak Products is a wholly owned subsidiary of Nampak Limited ('Nampak'), a public company listed on the JSE Securities Exchange. Nampak Products has a number of subsidiaries.³ In addition, Nampak Products has a 50% shareholding in Burcap Plastics (Pty) Ltd, the primary target firm in this transaction. Nampak has in excess of 100 subsidiaries worldwide.⁴

³ Nampak Products' subsidiaries include Nampak Metal Packaging Limited, Metal Box Botswana (Pty) Ltd, Metal Box Namibia (Pty) Ltd, Nampak Polycyclers (Pty) Ltd, Nampak Leasing (Pty) Ltd, Interpak Books (Pty) Ltd, Nampak Petpak Namibia (Pty) Ltd, Nampak Corrugated PMB (Pty) Ltd, Nampak Tissue (Pty) Ltd, Disaki Cores and Tubes (Pty) Ltd, Metal Box South Africa (Pty) Ltd, Printpak Limited, Amalgamated Packaging Industries (Pty) Ltd and Twinsaver (Pty) Ltd.

⁴ Annexure A of the form CC4(2) filed by the primary acquiring firm.

The primary target firm is Burcap Plastics (Pty) Ltd, a private company duly incorporated under the laws of the Republic of South Africa. Nampak Products, the primary acquiring firm in this transaction, has a 50% shareholding in Burcap. The remaining 50% shareholding in Burcap is jointly held by the Frits Burger Family Trust ('the Burger Family Trust') and the Hans Westhof Trust ('the Westhof Trust'), with each holding a 25% share.

Burcap has a 50% interest in each of Burcap Plastics Gauteng (Pty) Ltd ('Burcap Plastics Gauteng') and Burcap Plastics IML (Pty) Ltd ('Burcap Plastics IML') and the remaining 50% in each of the aforementioned companies is held by Nampak Products.

Description of the transaction

Nampak currently owns 50% in Burcap Plastics (Pty) Ltd and intends to acquire the remaining 50% in this joint venture. (For convenience we will from now on refer to the businesses of Burcap (Pty) Ltd and its subsidiaries collectively as 'Burcap', except where it is necessary to make the distinction). The parties have submitted that at present Nampak and Burcap are run as separate businesses. Nampak's wholly owned subsidiary, Metal Box South Africa Limited ('MBSA'), acquired 50% in Burcap in 2000 and later ceded its 50% shareholding in Burcap to Nampak in 2004.

When MBSA bought 50% in Burcap in 2000, the transaction constituted an intermediate merger and was notified for approval in terms of the Competition Act. However due to a failure of the Commission to extend its period of investigation timeously, the merger was deemed to have been approved in terms of section 14(2) of the Act. The implication is that Nampak acquired joint control by default and not a competition assessment on the merits. Thus it cannot be said that the Commission ever fully considered the competition implications of that merger.

In terms of clause 6 of the shareholders agreement signed in 2000 ('the shareholders' agreement'), the incumbent management, through their chosen investment vehicles, the Burger Trust and the Westhof Trust, were given the option to put their respective 25% shareholdings in Burcap to Nampak.⁵ Nampak was also given a reciprocal call option. The option was exercisable five years after the conclusion of the shareholders agreement, effectively 30 September 2006. The Burger Trust and Westhof Trust have each exercised this put option and hence the present merger.

After receiving the Commission's recommendation we called for further information from the merging parties and subsequent to that asked the Commission to investigate some other aspects that arose from these new documents. The hearing of the merger was postponed on 8 December 2006 and resumed on 22 March 2007. In the interim period both the Commission and the merging parties filed further submissions. We also called a representative of one of the major customers – Mr Gwilliam, the Group Procurement Executive of Barlow Plascon South Africa ('Plascon') - to testify at the hearing when it resumed.

⁵ Record p66.

Rationale for the transaction

Nampak has submitted that it intends to increase its shareholding in Burcap so that it can have sole control, which will enable it to better integrate Burcap into its group structure and product offering.

The Burger Trust and Westhof Trust are exercising their right (in terms of a put option in the 2000 shareholders' agreement) to put their remaining 25% shareholding each in Burcap to shares to Nampak Products, the holder of MBSA rights.

The parties' activities

Acquiring firm

Nampak and its subsidiaries manufacture a wide variety of products which include the following:

Drums

Nampak manufactures a wide range of blow moulded plastic drums. The drums come in a variety of shapes, neck formats, closure options and temper evident features. Sizes range from 1 litre to 250 litres.

Injection moulded plastic industrial containers

Nampak manufactures thin wall injection moulded containers. These are small containers varying in sizes from 125grams to 1 kilogram. They are used mainly for the packaging of food in retail industry such as ice cream, yogurt and margarine. The products can be of any design or shape required, and customers can select their preference in respect of graphics, finishes and seals.

Nampak also manufactures polypropylene buckets, containers, dishes, basins and reusable household containers. These containers are available from 250ml to 25 litres.

General line cans

General line cans include two-piece, built up and down cans, in a variety of shapes. The general line cans are used in the following sectors: food, automotives, cosmetics, pharmaceuticals, paints and household sectors. They can be manufactured from either plastic or metal.

Metal closures

Twist off/ press twist

These are the caps used to close cans and are generally used for glass jammed and processed food products. The products are offered in a wide range of sizes and have temper evident features.

Roll on Piler Proof ('ROPP')

These include a range of aluminium ROPP closures for edible oils, wine, spirits and non-alcoholic beverages. The products are offered in a wide range of sizes with a broad selection of printing and finishing options. These are the caps used to close the bottles

Paint containers

Nampak products manufactures metal paint containers in sizes of 1 litre, 5 litres and 20 litres. These containers can be used for all types of paints, including water based and acrylic based paints.

The primary target firm

Burcap is involved in manufacturing the following products:

Injection moulded plastic industrial containers

Burcap manufactures thick walled containers made of plastic. Thick wall containers are generally larger containers, where the size of the container requires a thicker wall for strength. These containers are used in food, chemicals and paint industries. They are available in sizes ranging from 100ml to 25 litres.

Paint containers

Burcap manufactures plastic paint containers for water based paints in sizes of 1 litre, 5 litre and 20 litres. Burcap supplies its plastic paint containers to some of the smaller paint manufacturers Chemspec, Prominent, and Promac, amongst others,⁶ but does not supply some of the largest paint manufacturers, namely, Plascon, Dulux and Medal.⁷

Relevant markets

The markets implicated by this merger are difficult to define with complete precision; there are large numbers of containers of different shapes and sizes; secondly, customers range from producers of food products to producers of industrial products such as paints, and accordingly have different propensities to substitute. Whilst many manufacturers are capable of producing a range of containers, for technical reasons not all produce the complete range, and it would appear that most specialise in a particular range and further specialise in making either plastic or metal containers. Notwithstanding this array of detail, it appears that there are at least two broad segments that we can sensibly work with for purposes of analyzing the merger – containers for the food industry, typically injection moulded plastic containers, and containers for industrial products like paint, which can be either metal or plastic.

⁶ Transcript pp 42-43.

⁷ Commission's further recommendations p9.

With this as a basis for analysis, it means that an overlap occurs between the two merging firms in the market for containers for the food market and containers in the industrial market.

With regard to the industrial containers market, the Commission had argued that the merging parties produce complementary products as one firm (Nampak) only produces metal containers, and the other (Burcap), only produces plastic containers. Metal containers are manufactured from tinsplate and plastic paint containers are manufactured from polypropylene.

The Commission's reasoning is based on the fact that the majority of industrial containers are sold to paint manufacturers. Hence the container choices of these customers are the primary driver as to whether plastic or metal can be considered complements or substitutes. Customer evidence is that water based paints (also called acrylic paints) can be stored in either plastic or metal containers. However, paint manufacturers prefer to store water based paints in plastic containers because the seams and welds on metal containers are vulnerable if the paint has a high water content. Plastic also does not scratch easily and has a greater after market use. Water based paints can only be stored in metal based containers if the containers are coated with a lacquer. Lacquered containers are more expensive than conventional metal based containers.

On the other hand, solvent based paints (also called enamel paints) can only be stored in metal containers. At present, they cannot be stored in plastic containers because plastic is susceptible to attack by solvents.⁸ For this reason the Commission came to the conclusion that the two products should be regarded as complements not substitutes.

In this respect we have parted ways with the Commission and have come to the conclusion that the two technologies can be regarded as substitutes and hence are capable of disciplining one another's prices. On the evidence of the Commission's market enquiries, it is evident that at present, for some customers, plastic and metal containers are at least partial substitutes for one another.

But in the near future, plastic containers will become complete substitutes for metal as new plastic technologies have been developed, presently in use in overseas markets, which will allow plastic containers to store solvent based paints, without deterioration. Yet even with the products serving as partial substitutes, as they do presently, there is evidence of a growing trend towards greater substitutability, from both customers and Nampak. Customers have advised the Commission that because plastic containers are between 15 – 20 % cheaper than

⁸ Plascon indicated that it puts certain solvent based products, like thinners, in plastic containers, but that it does not store solvent based paints in plastic paint. In order to store the solvents in plastic containers a process of fluorination is done on high density polyethylene containers so that there is a barrier to stop migration of that solvent over a period of time. Currently fluorination is only done by Fluoripac in Pelindaba. Fluorination is an expensive process. (Transcript p32 and p49).

their metal counterparts, where they can, they have begun substituting plastic for metal. They also inform the Commission that when one product is in short supply they substitute with the other.⁹

The reason for the fluctuation in prices and supply of these container products is the cost of their respective key inputs – in the case of metal containers, steel prices which manufacturers receive from Mittal, the sole supplier in the domestic market – in the case of plastic containers, polypropylene, an input again dependant on a sole supplier, Sasol. Since these input prices are not interdependent, the gap between the prices in metal and plastic is not constant. Nevertheless customers suggest that plastic has remained the cheaper product and that the gap with metal, on most versions, fluctuates at around 20%.

As a result, and where they can, firms are moving away from metal paint containers to plastic paint containers. Mr Mathontsi, the divisional managing director of one of Nampak's subsidiaries (Nampak Tubes and Tubs), admitted to this trend in his evidence:

*"MR MATHONSI: ...During a number of years the market has gradually moved its water based paint from metal containers into plastic containers. Amongst the major players in the paint market our analysis has indicated that Plascon has lagged behind in that migration from metal to plastic containers specifically for water based paints..."*¹⁰

Thus Nampak saw the need to defend its industrial container business, where it is the largest manufacturer of metal containers, by expanding into plastic industrial containers where it has no presence, except for its 50% interest in Burcap. The response of Nampak to this trend in substitution was threefold. The first was to use the opportunity to purchase the remaining interest in Burcap. This would give Nampak a 100% interest in a business that presently supplies, as we noted earlier, some of the plastic container needs of the paint manufacturing industry. However Burcap does not enjoy the custom of the larger players in the paint market, and most notably, it gets no business from Plascon who source all their plastic containers from another firm, Pailpac (Pty) Ltd ('Pailpac'). The reason for this is that Pailpac manufactures a container that meets Plascon's requirements, but Burcap presently does not have the technology to do so. Thus the second response of Nampak is to invest money in a plant to manufacture a container that will meet the Plascon's requirements for plastic containers for water based paint. The third response is to invest in one of the new plastic container technologies, called PET, which entails the development of a plastic container that can be used to store solvent based paints.

This is evidence of a dynamic market responding to changes in technology and customer needs – plastic and metal containers can no longer be considered as functionally distinct products.

We can thus conclude that the relevant market comprises an overlap between the two firms in the market for injection moulded plastic containers for the food industry, and secondly, metal and plastic containers for the storage of liquids (solvent or water based) for industrial use.

⁹ See for instance Earthcote, which stated that it has changed from using only tin a few years ago to tin and plastic with a saving for them of 25 -30% (record 453) Similarly, Sabre Paints says that plastic is generally cheaper, but when plastic is in short supply it makes use of metal.(Record 475)

¹⁰ Transcript p8.

Competition analysis

There are no competition concerns arising from the market for injection moulded plastic containers for the food industry and in this respect we are in full agreement with the submissions of the Commission and the merging parties. Whilst the food industry requires a wide range of containers, the market is nevertheless characterised by low barriers to entry, a large number of players and high degree of supply side substitution. The merged entity will have a post merger market share of 19%. Presently, Nampak Tubes and Tubs has 9,5% and Burcap has 9,5%.¹¹ Apart from the merged firm there will also be at least three other companies each having a market share of approximately 14%, which will continue to compete with the merged entity. These are Pailpac with 14.1%, Polyoak (Pty) Ltd with 14.1%, and Huhtamaki (Pty) Ltd with 14.1%. In addition, there have been six new entrants into the market within the past 5 years.¹²

The issues become more complex when considering the industrial containers market. Since Nampak already has 50% of the company, the merger only makes a difference if it changes the incentives of Burcap post merger. Certainly post merger, Nampak, now a 100% owner, unconstrained by its erstwhile partners, could use Burcap to protect a Nampak dominant position in metal containers or the soon to be established plastic substitutes for the metal.¹³ Nampak would be able to prevent customers arbitraging between the two products, as they are presently, by raising the prices of plastic containers so that they are priced closer to their metal counterparts and thus protect its dominant position in metal containers.

Nampak, unsurprisingly, argued that it would have no such incentive, although, it did not convincingly explain why. At best it argued that customers in the face of a price rise could look to other suppliers. Firms mentioned were Pailpac (with a market share of 41%) and Markon Plastics (with a market share of 7%) and Consol Plastics (which has a market share of 2%). Pailpac has recently gained much market share and supplies some of the big paint manufacturers like Plascon and Dulux. The problem with this argument is that at present there are few other suppliers. Not only must a supplier be capable of providing the volumes and service levels required by a major customer, but it must also have the technology to make a container that meets customer's standards.

It is clear from the testimony of Mr Gwilliams of Plascon, and the internal documents of Nampak which we have had access to, that those customers moving from metal to plastic, still want the latter product to meet more exacting standards. At present Plascon only sources plastic containers from Pailpac and does not procure from Burcap, because it considers that only the Pailpac product is suitable for its needs. Some smaller paint manufacturers are satisfied with the Burcap offering and use it for that purpose. However, Plascon is the most valuable customer in this sector and is particularly valuable to Nampak.¹⁴ These presently represent sale of metal containers. It is not difficult to see how crucial the loss of some or all of this business to plastic containers would be for Nampak. Plascon, as we noted earlier does not use Burcap as a supplier for its plastic containers, because it considers that it cannot manufacture a container that meets its quality requirements. Presently, only Pailpac does and hence it supplies all Plascon's plastic container needs. Nampak for this reason took a decision to upgrade the

¹¹ Record p52.

¹² Commission's further recommendation p13-14.

¹³The remaining competitors in the metal container market are Rheem (with a market share of about 38%), Grief (with a market share of less than 2%) or Canpac (with a market share of less than 2%)

¹⁴ Plascon purchases from Nampak are three times the size of its next largest customer, in the industrial sector, Chemspec, six times larger than those of Dulux, and twice the size of its largest customer in the food sector. See record page 31

Burcap Durban plant to meet this need. Although Nampak claims to have no guarantee that the investment will win it the Plascon plastic business, it would seem a fairly safe bet that it will. What bearing does the merger have on this investment? It seems as if the investment decision was taken once it was certain that the option would be exercised, and therefore, Nampak was at large to decide in which of the groups plants, post merger, to place this production. The evidence of Mr Mathonsi was that production would commence at the Burpac plant in Durban, for logistical reasons, but would thereafter continue in Gauteng at a Nampak plant.¹⁵ However, if the merger had not gone ahead, and the status quo resumed, it is probable that Burcap would have considered winning the Plascon investment account as a viable strategy, while Mathonsi has made it clear that it intended entering this market regardless of whether the approval for this merger was granted. Although Nampak never states this explicitly it is probable that it intended this to be entry independent of Burpac and not through an investment in Burpac.¹⁶ Thus in relation to investment in existing plastic technology to serve current needs, the merger removes the potential of separate entry for the Plascon water based plastic containers from both Burcap and Nampak and ensures that there is only a single entrant to take on Pailpac.

But as we noted earlier, new technology is available to ensure that there is a viable plastic substitute for solvents. Nampak has on its own pursued this opportunity and has acquired the exclusive rights to technology to manufacture what are referred to as polyethylene terephthalate (PET) containers from an overseas firm. It would appear that this container, if successfully developed, could become the leading edge technology for this type of product. Nampak is optimistic about the prospects of the new (PET) technology because of its success in foreign markets.¹⁷ To the best of anyone's knowledge no-one else in the domestic market has access to this technology. But once again it seems clear, that absent the merger, Burcap would have been an obvious entrant into the PET market and the merger again eliminates the potential for this conflict of interest between the two firms.

Without the merger a major conflict of interest would have arisen between Burcap and Nampak. Nampak had the choice of making the new investments we have discussed, either in Burcap or independently of Burcap. Similarly, Burcap might well have viewed these projects as corporate opportunities to protect its plastics business. It is thus clear that a conflict of interest would mean that incentives between the two firms were not aligned. Burcap's management shareholders would be competing for the same corporate opportunities that Nampak's board have identified to protect its metal container business. The merger by giving Nampak full ownership of Burcap resolves this conflict.

Instead of competing for market opportunities with its half-parent, as it in all likelihood would have done, the now wholly owned Burcap will form part of a specialisation strategy in which Nampak can direct which plants do what. By eliminating Burcap as an independent entity able to make its own investment decisions, Nampak has reduced potential future competition from a firm well-placed to expand in the plastic segment of the container market. Given that only two serious players remain in the plastic segment of the market for the customers who have these needs, the merger leads to a market structure in which post merger there are two, instead of potentially three, viable competitors. Since plastic seems to be where the industrial containers market is going in the future, the elimination of even potential competition in this segment has

¹⁵ See evidence of Mathonsi transcript page 22.

¹⁶ With separate entry Nampak enjoys 100% of the returns not 50%. Since investment in this plant is de novo there was every incentive to do this at an existing Nampak plant like the one in Gauteng as synergies with the Burpac plant don't seem a consideration.

¹⁷ See evidence of Mathonsi transcript p15-16.

greater implications than might seem at present. Thus, this is a market where in the language of section 12(2)(e) of the Act we must be aware of

“the dynamic characteristics of the market, including growth, innovation, and product differentiation.”

The parties are of the view that even if there are not many players in the plastic segment of the market presently, barriers to entry are low. In this respect Mr Gwilliam of Plascon has done them a great favour. He outlined how successfully Pailpac, a firm owned by two enterprising brothers, has recently entered the market and proved highly successful. If they can do it so can someone else, the argument goes. However, Pailpac does not hold any intellectual property rights over its technology and this is the reason Nampak is investing in new plant to meet this standard without the need for a licence. What this means is that Pailpac’s competitive advantage will soon be reduced as it is highly likely that Plascon will move at least some of its plastic container business to Nampak so that it is not dependent on one supplier.¹⁸ For this reason Pailpac is in future likely to be a less vital competitor than it is presently. Since Burcap has never manufactured metal containers, the merger does not reduce the number of metal based competitors to Nampak. However, because metal containers are more expensive and are losing market share to plastic containers, firms manufacturing metal containers are unlikely to be a source of strong competitive pressure to the merging firm. To the extent that Nampak is able to raise the price of plastic containers, closer to those of metal, these firms benefit as higher plastic container prices may slow down migration from plastic to metal.

We must then consider whether the merged firm will be constrained by the possibility of new entry. Superficially, barriers to entry to plastic container manufacturing appear to be low, as the success of Pailpac illustrates. Note however, this only applies to entry to manufacturing plastic containers for water based paints, their traditional use. The market must however be analysed dynamically. The market is moving towards greater use of plastic containers for both water and solvent based paints, and the firm that can provide both, is going to be able to reduce the opportunities for arbitrage between the two products, a characteristic of the market at present, and gain considerable pricing power. Since the new technology to put solvent based paints into plastic cans is dependent on access to viable patents, a barrier to entry to manufacture this product does exist. At present the only firm which enjoys access to this new technology is Nampak, via its exclusive licence to PET technology from PCC.¹⁹ We were advised that other (PET) patents exist, but have not been licensed to anyone for exploitation in the South African market.²⁰ Nampak, given its size and financial strength relative to its rivals, has the ability to acquire further PET licences in order to prevent them falling into the hands of rivals or even if it does not succeed in acquiring them, by getting into a competitive auction for them, can raise the costs of the rivals who do acquire them. By acquiring control over Burcap, Nampak also gains control over another plastic container patent - the Bocan which Burcap enjoys as a result of an exclusive licence with a Danish company.

¹⁸ See evidence of Gwilliam on p36-37 and p42 of the transcript.

¹⁹ In contrast, Pailpac not only does not have such a licence, but also is vulnerable to losing its present competitive advantage over its non solvent plastic containers as they are not subject to a patent and can be readily copied by a rival.

²⁰ The Commission and Nampak submitted that there are other patent holders worldwide which can grant licenses to other manufacturers of paint containers to manufacture PET containers. The only example provided is that of Brittpac which at one time approached Nampak with a proposal for Nampak to manufacture its PET containers. (Record pp554-557).

For this reason Nampak has undertaken, as a condition for the approval of the merger, not to acquire any further exclusive licence agreements for PET paint containers within South Africa for a period of three years after the approval of this merger.²¹ As Nampak has not yet developed the PET patent from PCC, a protection has been introduced in the condition in case the licence agreement is cancelled.²²

The condition states that:

Save for the exclusive license agreement concluded between Nampak Products Limited and the Plastic Can Company Limited ("PCC"), neither Nampak Limited ("Nampak") nor any of its subsidiary companies may, for a period of three years from the date of approval of the proposed transaction, conclude any exclusive license agreement with any licensor for the manufacturing and sale of polyethylene terephthalate (PET) paint containers within South Africa.

Nampak shall after 12 calendar months from the approval of the proposed transaction, and on an annual basis thereafter and for the duration of these conditions, provide the Competition Commission ("Commission") with an affidavit deposed to by Nampak's Group Legal Adviser, confirming Nampak's compliance with paragraph 1.1 hereof.

Should it become apparent to Nampak at any stage during the three year period referred to in paragraph 1 above that the exclusive license agreement concluded with PCC will not result in the commercial exploitation of 1 litre and 5 litre PET paint containers manufactured under the PCC license, Nampak shall inform the Commission thereof in writing and shall provide the Commission with written confirmation of the cancellation of the exclusive license agreement concluded with PCC, before concluding any exclusive license agreement with any other licensor for the manufacturing and sale of polyethylene terephthalate (PET) paint containers within South Africa.

While the merger will in all probability result in a substantial prevention or lessening of competition in the industrial container market, the condition helps in lowering the barriers to entry in respect of new plastic technology, the direction as we observed earlier, in which the industrial container market seems to be moving. Hence other firms manufacturing paint containers will have a greater opportunity to acquire licenses to manufacture PET paint containers from other PET patent holders. This helps to ensure that rivalry with the merging firm exists in respect of all types of industrial containers.

²¹ See clause 1.1 of the condition

²² See clause 1.3

Public Interest

There are no public interest issues.

Conclusion

The merger is approved subject to the tendered condition.

N Manoim

Tribunal Member

25 June 2007

DATE

Y Carrim and M Mokuena concur in the judgment of N Manoim

Tribunal Researcher: R Kariga

For the merging parties: A Cockrell, instructed by Bowman Gilfillan Attorneys

For the Commission : L Bignaut and HB Senekal (linked telephonically)

(Mergers and Acquisitions)

ANNEXURE F – SCAW JUDGEMENT

IN THE COMPETITION TRIBUNAL OF SOUTH AFRICA

CASE NO.: 13/LM/JAN08

In the merger between:

Scaw South Africa (Pty) Ltd

Primary Acquiring Firm

and

Ozz Industries (Pty) Ltd

Primary Target Firm

Panel : D Lewis (Presiding Member), Y Carrim (Tribunal Member), and U Bhoola (Tribunal Member)

Heard on : 30 May 2008

Order issued on: 4 June 2008

Reasons issued on : 21 July 2008

REASONS FOR DECISION

APPROVAL

[1] On 4 June 2008 the Tribunal conditionally approved the merger between the aforementioned parties.

THE MERGING PARTIES

[2] The primary acquiring firm is Scaw South Africa (Pty) Ltd (“Scaw”), a subsidiary of Anglo American. The primary target firm is Ozz Industries (Pty) Ltd (“Ozz”), which is not controlled by any firm.

THE TRANSACTION AND RATIONALE

[3] This transaction involves an acquisition by Scaw, of the entire issued share capital of Ozz in terms of the Sale of Shares Agreement signed by both parties. In terms of this agreement, Scaw will have sole control of Ozz, with the exception of Ozz’s West Rand Engineering Division as well as its subsidiaries; Klambon Water (Pty) Limited and Natal Steam Coal (Pty) Limited, which will be retained by the current shareholders of Ozz.²³

²³ Ozz Industries’ sites include; Eclipse East, Eclipse West in Benoni, Boksburg Foundry in Boksburg and the Dimbaza foundry in the Eastern Cape.

[4] For Scaw, this transaction is an opportunity to optimize its synergies and increase production in particular in the production of high chrome grinding media, which will be achieved by utilizing Ozz Industries' West Disa Plant which is currently used to produce cheek plates for West Rand Engineering ("WRE"). This will be conveyed to Scaw Union Junction plant for *heat treatment*, a facility which Ozz Industries currently does not have.²⁴ Scaw's objective is to implement stricter health and safety standards and environmental regulations at Ozz Industries' foundries.²⁵ For Ozz Industries' private equity investors, the proposed transaction is an opportunity to realize their investment.

RELEVANT MARKET

[5] Scaw's group has four main product lines which are: rolled products; cast products; grinding media and wire rod products. Ozz is active in the manufacturing and supply of crusher mill consumable steel wear parts and grinding media. Both operate within the broad foundry industry.

[6] The product overlap between the activities of the merging parties is found in the manufacture of four products which are: grinding media, high chrome mill liners, manganese rounds, and tumblers and idlers.

[7] There are no significant competition concerns in relation to the overlap products except for grinding media. With respect to high chrome mill liners, we are satisfied that there are imports which provide efficient delivery and supply better quality products than the merging parties, which will exert competitive constrain to the merging parties post merger. With respect to manganese rounds, and tumblers and idlers, despite the relatively low market shares, there are ample suppliers in South Africa which will act as a competitive constraint to the merged entity. We therefore only deal with grinding media in our analysis as it is the only overlap product which raises competition concerns in this transaction.

Grinding media

[8] Grinding media are spheres of alloy metallurgy which are used in ball mills/tube mills, cement plans, mines and thermal power stations. There are different grades of grinding media for different applications. Platinum and Gold Industries are the principle consumers of grinding media. Mining houses use both Scaw and Ozz's grinding media;- high chrome grinding media in the case of platinum mines, and standard grinding media for gold mines. The characteristic of grinding media depends on the method of production. High chrome grinding media are made by casting while standard grinding media are made from either forged steel or by casting. Scaw

²⁴ The Commission found in Scaw's documents that Ozz currently has excess capacity to produce high chrome grinding media, but cannot optimally use the capacity as it does not have the heat treatment technology, but the merging parties argue that Scaw will upgrade Ozz's Disa line to produce high chrome grinding media.

²⁵ The merging parties provided details of synergies anticipated by Scaw; See Pgs. 187-196 of the merger record.

and Ozz Industries use different methods of producing grinding media, and produce grinding media which is different in shape and quality.

[9] According to the merging parties, Scaw utilizes the forged steel method for their grinding media and produces ball shaped grinding media. The process Scaw uses for its high chrome balls has been licensed from a Belgian company called *Magotteaux*. It was submitted that Scaw's process of producing high chrome balls is of *superior quality* with minimum wear rate without any risk of breakage.

[10] Ozz Industries produces truncated cone shaped grinding media (standard and high chrome) using the *chill casting method* which involves pouring molten metal into moulds made of cast iron, coated on the inside with graphite.²⁶ It was submitted that the chill cast grinding media tends to be more porous making the casting prone to fracture and high wear rates.

GEOGRAPHIC MARKET

[11] The geographic market for the supply of standard and high chrome grinding media is considered to be national including some imports from China which, according to the merging parties, play an important role. Goldfields and Harmony uses Chinese grinding media (Standard) for approximately 90% of their requirements. Though no concerns were raised about the quality of Chinese imported grinding media, the Commission in its interview with Goldfields found that Chinese imports are more expensive due to exchange rate of the rand.

COMPETITION ANALYSIS

[12] The Commission argued that this merger is likely to lead to a removal of an effective competitor in the market for standard grinding media and the market for high chrome grinding media. In both the standard grinding media and high chrome grinding media, Scaw is the largest domestic supplier with approximately 90% market share in the high chrome grinding media and about 56% market share in the standard grinding media; while Ozz has a mere 1% market share in the high chrome grinding media, and 13% in the standard grinding media.²⁷ Implied imports account for 6% in the high chrome grinding media, and 25% in the standard grinding media.²⁸

[13] With respect to standard grinding media, the merging parties will have a combined market share of 69%. The merging parties point out that there is sufficient competition from Minmetals from China. However, according to the Commission, Minmetals products are substantially expensive to the local buyer, although large mining houses such as Goldfields and Harmony have procured from Minmetals because they have found that supply from Scaw is unreliable.

[14] The merging parties argued that notwithstanding Scaw's dominance in both markets, Scaw's prices are, and will continue to be constrained by the presence of imports from China,

²⁶ Ozz Industries' high chrome grinding media are produced without the heat treatment that Scaw uses.

²⁷ See Table 3 and Table 5 on pgs. 25-26 of the Commission's recommendations, and Table 9 and Table 10 on pgs. 140-141 of File 1 of the merger record.

²⁸ Minmetals has 19% and Chinese imports have 6%.

and the buying power of the mining companies, which have countervailing power. The essence of the merging parties' argument is that Ozz is not and has never been an effective competitor in the grinding media market²⁹, and that Chinese imports serve as a competitive constraint to the merging parties.

[15] The Commission contended that what is important is not Ozz's insignificant market share, but, Ozz's ability to provide increasing competitive discipline to Scaw, especially in light of its recent introduction of Eclipsoid which it is believed will provide better alternatives to other products in this market. The Commission further argued that Ozz has excess capacity which Scaw lacks, and that Ozz's market share should be viewed in the context of all these factors.

Eclipsoid

[16] This is a product which is a modification of Ozz's Cylpeb, which was currently launched by Ozz in 2006. There is no intellectual property that attaches to the eclipsoid. According to the Commission, except for Impala Platinum which has tested eclipsoid and found that it has a better wear rate than the cylpeb, and relatively compete with Scaw's balls,³⁰ no other mining houses have tested this product. The Commission based its assessment of the effectiveness of the eclipsoid on the test results from Impala, and contended that the eclipsoid renders Ozz an effective competitor to Scaw's steel balls, and that even though it is currently at its infancy, it will experience growing market acceptance, and various mining houses are yet to conduct tests on its effectiveness, which is likely to remove a potential effective competitor.

[17] According to Ozz Industries, they do not intend to expand their grinding media capacity as they intend to focus on production of wear parts and crushers. They also argued that it is impossible for Ozz to use the West Plant to produce eclipsoid as the facilities do not allow this given that there are no chill casting facilities at this plant, and it is currently impossible to produce the chill cast eclipsoids in this plant.

[18] Having regard to the aforementioned arguments by the Commission and the merging parties, we find it difficult to arrive at any significant conclusion on the eclipsoid. However, we find that there are other competition concerns in this merger which make it likely to substantially prevent or lessen competition in the grinding media market.

High Concentration in the grinding media market

[19] It is common cause that the grinding media market is highly concentrated, with an HHI increase of 476.84 in the high chrome grinding media, and change of 1456 in the standard grinding media market. Aside from Ozz, the other local producers are small and do not provide better alternative products.³¹

²⁹ Given the differences between Scaw and Ozz Industries' products, particularly having regard to their quality differences; one is inclined to argue, on the face of it, that Ozz does not provide a good competing alternative to Scaw's products.

³⁰ Eclipsoid is priced about 30% lower than the ball shaped grinding media produced by Scaw.

³¹ Minmetals is the only competitor which provides better alternative products.

[20] This is a 2-to-1 merger, combining the only two larger local firms in the supply of grinding media domestically. Imports are neither cost effective nor the most viable alternative source of supply for all customers, especially the smaller customers which may consider the price of the product as an important consideration, and which will be impacted negatively should the merging parties decide to profitably increase prices to their customers.³²

High barriers of entry

[21] Entry in the standard grinding media is considered to be difficult due to requirements of specific technical expertise in the market and intellectual property.³³

CONCLUSION

[22] Having regards to the concerns raised in the foregoing, we conclude that this merger is likely to substantially prevent or lessen competition in the grinding media market in South Africa.

[23] The merging parties advanced certain production efficiencies which failed to address all the concerns raised in this transaction, in particular, the pricing concerns which might impact negatively on customers post merger. However, the merging parties negotiated pricing remedies with the Commission in order to address the competition concerns in the affected market. The conditions were extensively canvassed by the Commission and the merging parties at the hearing. In the end, we are satisfied that these conditions alleviate the concerns raised, and accordingly approve this merger with the conditions attached.³⁴

Date

D Lewis

21 July 2008

N Manoim and Y Carrim **concurring**.

For the merging parties: Advocate J Wilson instructed by Webber Wentzel Bowens

For the Commission: D. Motsamai (Legal Services Division)

H Ratshisusu (Mergers & Acquisitions)

Researcher: L Xaba

³² We accept the Commission's argument that imports are not more competitive than the locally produced products due to high import prices and other import logistical constraints.

³³ Except for Minmetals which entered through its parent company, China Minmetals Corporation, approximately 10 years ago, there has not been any other entrant of note in the recent past.

³⁴ See Annexure A of these reasons.

