



ESSENTIAL FOOD PRICE MONITORING REPORT

SEPTEMBER 2023



9th Essential Food Pricing Monitoring Report

1. Despite headline inflation reaching its lowest level since October 2021, food inflation remains at nearly double the overall inflation rate.¹ The Competition Commission (“Commission”) therefore continues to monitor essential food prices and prices throughout the value chain to see whether consumers are being harmed by the state of competition throughout food value chains. As commodity prices fall, our attention turns to the speed at which lower input costs translate into low prices for consumers - slow price transmission is an indicator of low competition levels throughout food value chains. However, the disruptive effects of load shedding have forced food producers and retailers to spend more money on adapting to longer and more frequent power outages. The cost of adapting is likely keeping food prices higher than what food input costs would imply, but this effect certainly varies across food value chains, producers, and retailers.
2. Consumers should be just as concerned about the potential for opportunistic pricing practices when costs fall as when they rise. Both instances provide companies with pricing power an opportunity to expand margins at the expense of consumers. When costs rise, they can do so by overcompensating for

the increase. When costs fall, companies can do this by not lowering prices to reflect their lower costs.

3. This report begins with a brief discussion of new research insights on the role of mark-ups by larger companies in food markets and in the current inflationary period. We also highlight the work that has been done by competition authorities to shed some light on margin levels in food markets.

Rockets and feathers in food value chains

4. The relationship between price-pass through and competition in food markets is widely discussed topic among competition policy researchers and practitioners.² Generally, it is assumed that in markets with few but large players, pass-through will be lower than it would be in competitive markets. This phenomenon, mentioned in the 7th EFPM Report, is known as the rocket and feather effect. It’s animating principle is that prices are quick to rise in response to a cost increase but are slow to fall when costs decrease.

1 StatsSA. July 2023. Statistical Release - June 2023. Available online: <https://www.statssa.gov.za/?cat=33>

2 McCorriston, S. 2021. CPI Antitrust chronicle December 2021. “Pass-through and Competition in the Food Sector: New Data, New Insights, Remaining Questions”. Available online: <https://www.competitionpolicyinternational.com/pass-through-and-competition-in-the-food-sector-new-data-new-insights-remaining-questions/>

5. Evidence of the rocket and feather effect has been found across several food value chains locally and abroad. Academics from the universities of Stellenbosch and the Free State have found evidence for this effect in the local beef;³ maize meal;⁴ bread;⁵ sunflower oil;⁶ and fresh milk⁷ value chains. All of which are notable for being staple foods. However, more recent work finds the opposite for maize meal and bread.⁸ This later work acknowledges its limitations when it comes to identifying instances of anti-competitive conduct throughout the value chain.⁹ While several plausible explanations have been extended for this phenomenon, such as adjustment costs and the nature of contracts in food chains, the one that is most salient for competition regulators is that it serves as an indicator that competition may not be functioning optimally throughout food value chains.
6. The main mechanism through which actors along the value chain transmit changes in input costs to customers is through how they treat mark-ups.¹⁰ Mark-ups are added at every point in the value chain and until the final price that consumers pay. When input costs increase, firms throughout the value chain are likely to increase prices to maintain their mark-up percentages. This behaviour is not inherently problematic from a competition policy perspective. The problem is that when firms have market power, by virtue of their size, events such as natural disasters or supply chain disruptions provide an additional incentive and opportunity to expand their mark-ups and use costs as a cover to also boost their profitability. In addition, where the cost increases are substantial upstream, then the same percentage markups downstream may cease to be appropriate given that it expands absolute margins well beyond the downstream intermediary costs.¹¹
7. Conversely, the desire to maintain or capture high mark-ups gives firms an incentive to maintain higher prices even when costs decrease. When markets are competitive, high mark-ups will be competed away until prices reach competitive levels. But high concentration and increased vertical integration in food value chains coupled with high barriers to entry weakens this process giving companies the opportunity to enjoy the spoils of high mark-ups.
8. The currently inflationary episode follows several global disruptions from the COVID-19 pandemic to the Eastern European conflict. These successive disruptions have prompted researchers to examine the role of sellers' inflation in concentrated markets.¹² This new research analyses the degree to which the current inflationary period is profit-led (as opposed to wage-led) in the United States. The argument it presents is that the supply-shocks from post-lockdown supply chain bottlenecks together with the effect of the war in Ukraine on commodity and energy prices created an environment where companies sought to hedge against uncertainties by raising their margins and, by extension, prices.¹³ In South Africa, the load-shedding crisis could play a similar role. Since these cost shocks were commonly felt across industries, companies could raise their prices secure in the knowledge that others (suppliers, customers, and competitors) would do the same. The research shows that price increases, in-turn, generate higher profits and an impulse for further price hikes. Responding to higher prices from upstream sectors, downstream players passed on these price hikes resulting in a general increase in prices.¹⁴ Evidence of growing profit margins as buffer against cost pressures pushing up prices has also been found in the eurozone.¹⁵

3 Ogundenji, A; Mare, FA. 2018. "Price transmission in the Beef Value Chain – The Case of Bloemfontein, South Africa". Conference Paper. Available online: <https://ageconsearch.umn.edu/record/275930?ln=en>; Spies, DC. 2011. "Analysis and quantification of the South African Red Meat Value Chain. Available online: <https://scholar.ufs.ac.za/xmlui/bitstream/handle/11660/1901/SpiesDC.pdf?isAllowed=y&sequence=1>

4 Cutts, M; Kirsten, J. 2006. "Asymmetric price transmission and market concentration: an investigation into four South African agro-food industries". Available online: <http://hdl.handle.net/2263/2714>

5 Ibid

6 Ibid

7 Ibid

8 Louw, M; Meyer, F; Kirsten, J. 2017. "Vertical price transmission and its inflationary implications in South African food chains". *Agrekon* (56) 2. Available online: <https://doi.org/10.1080/03031853.2017.1313751>

9 Louw, M; Meyer, F; Kirsten, J. 2017. "Vertical price transmission and its inflationary implications in South African food chains". *Agrekon* (56) 2. Available online: <https://doi.org/10.1080/03031853.2017.1313751>

10 McCorriston, S. 2021. CPI Antitrust chronicle December 2021. "Pass-through and Competition in the Food Sector: New Data, New Insights, Remaining Questions". Available online: <https://www.competitionpolicyinternational.com/pass-through-and-competition-in-the-food-sector-new-data-new-insights-remaining-questions/>

11 Competition Commission. 2022. Essential Food Price Monitoring Report – March 2023. Available online: https://www.compcom.co.za/wp-content/uploads/2023/03/EFPM-Report_Mar-2023.pdf

12 Weber, IM; Wasner, E. 2023. "Sellers' inflation, profits and conflict: why can large firms hike prices in an emergency". *Review of Keynesian Economics* (11)2. Available online: <https://doi.org/10.4337/roke.2023.02.05>

13 Ibid

14 Ibid

15 Hahn, E. 2023. "How have unit profits contributed to the recent strengthening of euro area domestic price pressures". *ECB Economic Bulletin*, Issue 4/2023. Available online: https://www.ecb.europa.eu/pub/economic-bulletin/focus/2023/html/ecb.ebbox202304_03~705befadac.en.html

9. Rockets and feathers may be short-term events and mark-up or margin levels may return to long-term levels once cost pressures subside. Where mark-ups or margin expand temporarily but go back to long-term levels, then it is unlikely that ongoing cost increases were behind the temporary margin expansion. In the interim period where margins are high, companies may earn higher profits through charging consumers higher prices that are not fully related to costs. The risk of this happening is higher in markets with low competition levels and is particularly harmful in a high poverty country like South Africa.

Recent competition authority studies in food value chains

10. Recent debates about the character of price hikes further compel us to probe price formation processes in markets that are key for social well-being such as food to determine whether this is occurring in practice. The competition authorities of Canada, the United Kingdom, and Ireland have conducted studies to assess whether the competition dynamics in food value chains have not amplified price increases beyond what would be justified by costs. In doing so, they have focused on whether profit margins in the grocery retail market have increased in the last 3 - 4 years. Like the EPPM Reports, these studies do not constitute findings against any firm in terms of the laws of these countries and largely draw on publicly available data sources. However, these insights aid in understanding whether there are likely to be competition concerns in the grocery retail market.

- 10.1. The Competition Bureau Canada (CBC) found that Canada's largest grocers' food gross margins have increased "by a modest yet meaningful amount".¹⁶ This is a long-term trend that pre-dates the COVID-19 pandemic and the current inflationary period. Just as we have previously argued, the CBC noted that "a business does need to increase its margin to increase its profits".¹⁷ Higher food inflation can increase profits even if gross margins remain

the same or increase by a small amount. The CBC found that margins have increased by 1 or 2 percentage points since 2017.¹⁸ This increase is equivalent to a \$1 - 2 on each \$ 100 spent by Canada consumers. Higher grocery prices in Canada have also translated into higher profits. Canada's 3 largest grocers collectively grew their profits from \$2.4 billion in 2019 to \$3.6 billion in 2022 (a 50% increase).¹⁹

- 10.2. In Ireland, the Competition and Consumer Protection Commission (CCPC) published a high-level analysis of the Irish Grocery Retail Sector. While the report was constrained by limited public data, the CCPC found pre-tax profit margins in Ireland between 2.1 - 2.4%, which reflect the low-margin and high-volume business model of grocery retailers.²⁰ Importantly, the CCPC highlighted that concentration in the Irish grocery retail sector has fallen with the entry of discounters (Aldi and Lidl) which is likely to have assisted in keeping Ireland's food inflation lower than the EU.²¹

- 10.3. The Competition and Markets Authority (CMA) of the United Kingdom published their report on grocery market competition in July 2023. In the UK, grocery revenues increased by 3.6% in the most recent year (an inflation-adjusted decline of 6.6%).²² Gross profits increased by 0.3%, which means that the cost of goods increased by more than average selling prices. Consequently, average gross margins have fallen from an average of about 29.0% in 2019/20 to approximately 27.5% in 2022/23.²³ Average operating margins have fallen from approximately 3.5% in 2019/20 to below 2.0% in 2022/23.

11. Total revenues in the South African grocery sector have grown by 38% since 2019 and 13% from 2022 to 2023.²⁴ The top national grocery chains collectively grew their profits by 26% from R13.8 billion in 2019 to R16.6 billion in 2023.²⁵ Gross margins have been constant as shown in **Figure 1**.

16 Competition Bureau Canada. 2023. "Canada Needs More Grocery Competition: Competition Bureau Retail Grocery Market Study Report". Available online: <https://ised-isde.canada.ca/site/competition-bureau-canada/sites/default/files/attachments/2023/CB-Retail-Grocery-Market-Study-Report-EN-2023-06-23.pdf>

17 Ibid

18 The specific margins were submitted under confidentiality regime and was not included in the published report.

19 Ibid

20 Competition and Consumer Protection Commission. 2023. "High-level analysis of the Irish Grocery Retail Sector." Available online: <https://www.cccpc.ie/business/wp-content/uploads/sites/3/2023/06/2023.06.16-CCPC-Competition-Analysis-Retail-Grocery-Sector.pdf>

21 Ibid

22 Competition and Markets Authority. 2023. "Competition, choice and rising prices in groceries". Available online: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1172290/Competition__choice_and_rising_prices_in_groceries.pdf

23 Ibid

24 For the purposes of this analysis, we use the last 5 complete financial years with audited results that the retailers have reported on as of September 2023. Where possible we have included local or grocery operations.

25 Ibid

Figure 1: Gross margins of JSE-Listed grocery retailers

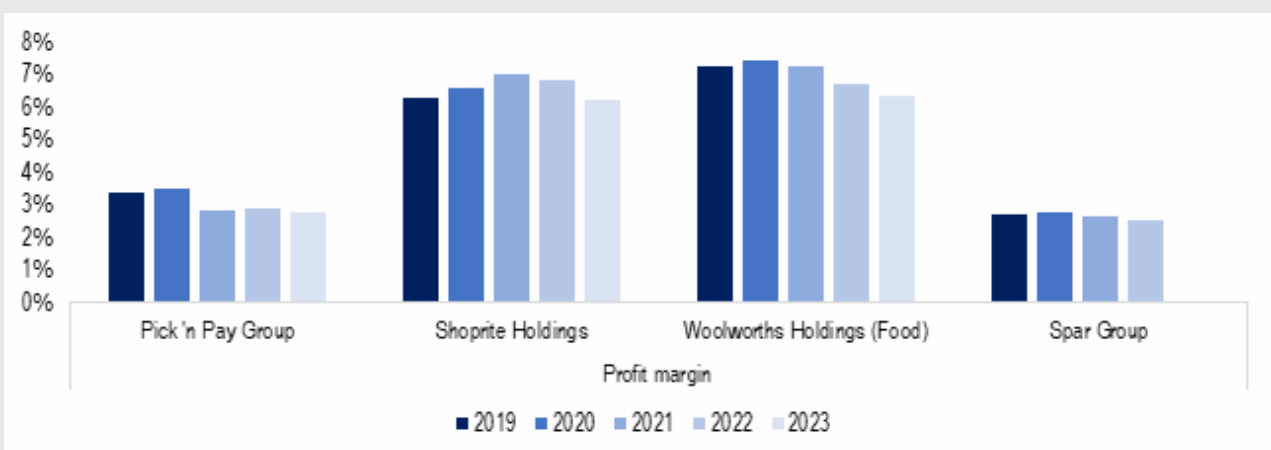


Sources: Annual financial statements of Pick 'n Pay, Shoprite Holdings, Woolworths Holdings, and Spar Group. Notes: Pick 'n Pay, Shoprite, and Spar reported gross margins or cost of sales for the entire group in these years. As such, segmenting by non-food and/or local operations is not possible.

Constant gross margins indicate that retailers' ability to pass on price increases hasn't changed significantly and that there hasn't been a material change in competitive dynamics among grocery retailers such as in the UK where gross margins have fallen following the entry of discounters. The recent agreements to phase out exclusive leases with Shoprite, Pick n Pay and Spar should bring more competitive pressure in future.

12. South Africa's before tax profit margins in **Figure 2** are higher than those in the UK and Ireland and may reflect the effect of exclusive leases in shopping malls, among other dynamics. As we see in the figure below, Shoprite's profit margin grew from 2019 to 2023, but has returned to where it was in 2019. Woolworths has fallen consistently since 2020. Pick 'n Pay's profit margin has remained stable since 2021 whereas Woolworths and Shoprite have declined but remain well above Pick 'n Pays. We note that for Spar Group this reflects the wholesale operation only as individual retail members do not form part of the reporting.

Figure 2: Profit margins of JSE-listed retailers.



Sources: Annual financial statements of Pick 'n Pay, Shoprite Holdings, Woolworths Holdings, and Spar Group. Notes: We use self-reported trading margins for Shoprite's Supermarkets RSA Division; Pick 'n Pay is calculated using group trading profit over revenue; Woolworths is calculated using food profit before tax over food revenue; Spar is the self-reported group operating profit margin.

13. The weighted profit margin for South African retailers went from 5.6% in 2020 to 6.0% in 2022. It has fallen to 5.3% in 2023 but remains higher than profit margins in Ireland and the UK.²⁶ The recent marginal decline is probably explained by more intense loadshedding experienced by retailers in their respective 2022/2023 financial years. The most recent results released by retailers highlight the costs of loadshedding on their operations:²⁷

13.1. Pick 'n Pay reported it had incurred R522 million in incremental diesel costs in the 2023 financial year. Energy-saving initiatives offset some of this spending resulting in an incremental energy cost of R430 million. This accounts to approximately 20% of Pick 'n Pay's trading expense growth from 2022 to 2023.

13.1. Shoprite's South African Supermarkets division incurred R1.3 billion in loadshedding expenses. This is an increased approximately R1.1 billion from the previous financial year and is 15% of the trading expense growth from 2022 to 2023.

13.1. Woolworths reported that its fresh food business carried R 20 million to R30 million in loadshedding related food waste and diesel costs (R240 - R360 million annually). Absent loadshedding, Woolworths calculates that its earning before interest and tax would've 9.1% higher in the 2023 financial year.

13.1. Spar reports that retailers spent more than R 700 million on diesel costs in the first six months (October 2022 to March 2023).

Essential Food Price Tracking

Methodology

14. The Commission has continued to monitor the price of essential foods identified by the public and advocacy groups. These are sunflower oil, bread, maize meal, and IQF chicken pieces. We begin this section with an overview of our methodology before discussing recent pricing developments. In this edition of the EFPM Report, we assess margins at two points in the value chain - the producer level and the retail level. These insights come from aggregated and publicly available price data. They are not intended to make inferences on anticompetitive conduct by individual firms whether acting alone or with competitors. Rather it is used to assess price transmission through the value chain and whether there may be evidence of rocket and feather effects.





15. As we only measure gross margins between commodity inputs and producer prices, and between producer price inputs and retail prices, it is possible that changes in costs at the producer and retail level may influence margin levels rather than opportunistic behaviour. However, where margin increases are temporary before reverting to their long-term trend, such as in a rocket and feather context, then permanent changes in costs are unlikely to be behind such increases as one would then expect margin changes to be more permanent.

16. At the producer level we compare the farm value of a good - value of the raw materials required to manufacture a given quantity - and the producer price of that quantity. Since this a common technique we have the benefit of using conversion and extraction rates previously used by researchers studying these value chains. For all SAFEX prices, we apply a three-month time lag to better reflect the nature of the contracts used at this part of the food value chain. Our methodology for arriving at industry-wide producer margins is summarized in **Table 1**.

²⁶ We have excluded Spar from this figured because it is largely a wholesaler to members of the Spar Guild.

²⁷ We acknowledge that making simple comparisons across retailers is difficult due to differences in their report period, which affects the number of days and intensity of loadshedding experienced by the companies.

Table 1: Methodology for calculating farm values of selected essential foods.

PRODUCT		FARM VALUE CALCULATION
	White bread ¹	$(\text{SAFEX Wheat Price} / 80\% \text{ Extraction Rate}) / (\text{Loaves baked from 1 ton of wheat} = 1996)$
	Brown bread ¹	$(\text{SAFEX Wheat Price} / 87\% \text{ Extraction Rate}) / (\text{Loaves baked from 1 ton of wheat} = 2095)$
	Sunflower oil ²	$(\text{SAFEX Sunflower Seed Price} / 40\% \text{ Extraction Rate}) / \text{Liters of oil per ton of seeds} = 1087) \times (\text{Producer Quantity} = 20)$
	Maize meal ¹	$(\text{SAFEX White Maize Price} / 62.5\% \text{ Extraction Rate}) / (\text{2.5 kg bags from per ton of maize} = 400)$

Sources: 1) National Agricultural Marketing Council, Farm-to-retail-price-spread definitions, and methodology; 2) Bureau for Agricultural Policy, Sunflower Quality Report, 2020.

17. At the retail level, we analyse the aggregate spread between retail and producer prices. For the purposes of our analysis, the spread is the percentage difference between the producer price of good and the retail price.

$$\text{Retail spread} = \frac{(\text{Retail price} - \text{Producer price})}{\text{Retail price}}$$

18. These spreads do not capture all the costs required to turn raw materials into food products. They similarly do not capture all the costs incurred by retailers. These costs differ by producers and retailers depending how they manage their business units, therefore making industry-wide claims about costs is impossible. Nonetheless, trends in aggregate spreads provide a useful indicator of the state competition in value chains including where there are pricing pressures from costs and profit margins.

Findings

19. Our recent analysis shows that margins earned by bread and maize meal producers continue to grow in 2023, despite some easing cost pressures. For bread, falling wheat prices in the period up to April were not reflected in producer or retail prices immediately, but those prices are now starting to come down. Maize meal producer and retail prices now show evidence of the feather effect following the recent fall in white maize price. Listed producers of bread and maize meal have all reported that they increased prices to compensate for higher costs. However, in some cases margins have expanded which suggests price increases more than costs

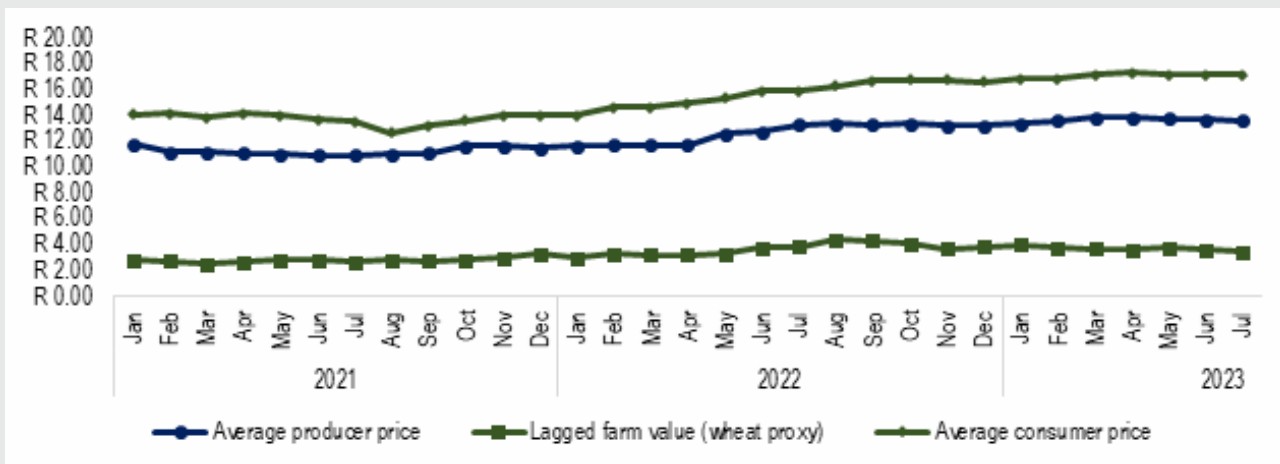
among other factors. The impact of higher prices on volumes and profitability is mixed with larger players having been more successful at transmission than their smaller counterparts in these markets. Loadshedding costs have been reported by most food companies, but with the exception of poultry, these do not appear to be major cost drivers. Retail spreads for bread and maize meal have remained constant which implies that retailers have not raised prices by more than their cost of sales. However, retailers may have earned more in absolute Rand terms.

20. Sunflower oil prices continue to come down at the producer and retail levels following the exposure by the August 2022 EFPM Report finding that substantial price increases in 2022 were not based on cost increases. However, while producer prices increased faster than retail prices when prices were rising in 2022, showing retailers absorbed some of that increase, as producer prices now fall, we find that retailers are not passing through those decreases in full resulting in a widening retail spread (albeit lower than it was in 2021). Lastly, we see that IQF chicken price increases remain constrained by imports, as noted in the previous edition of this report, but it will be interesting to examine future trends given that the suspension of the anti-dumping tariff has now ended.

Bread

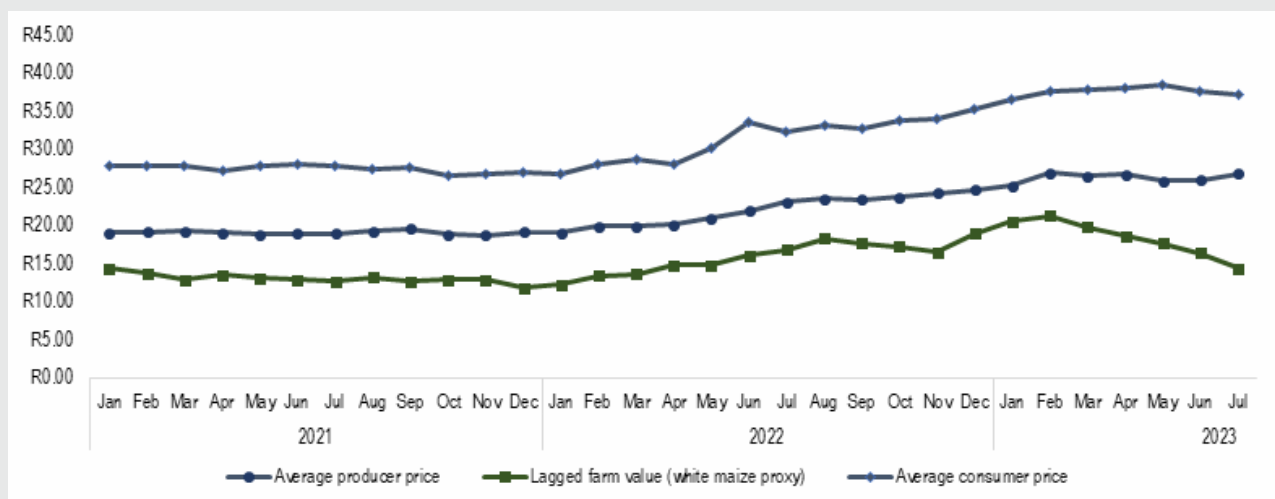
21. **Figure 3** shows the farm value of the wheat that goes into a loaf of bread, the producer price for a loaf and the retail price for a loaf. It shows that bread prices have started falling following an increase in the first

Figure 3: Bread retail, producer, and farm value prices



Source: Commission’s own using StatsSA, SAFEX

Figure 4: Maize meal retail, producer and farm value prices



Sources: Commission’s own using StatsSA, SAFEX

3 months of 2023. In January 2023 the average retail bread prices was R16.83 and increased by 3% to R17.29 in April 2023. At the same time, the average producer price also increased by 3% from R13.82 to R13.40. The wheat proxy price, however, fell by 10% over the same period going from R3.99 in January to R3.60 in April 2023. Retail and producer prices have fallen in May and June while the wheat proxy price has remained constant.

22. There is a long-term pattern of narrower margins in bread production. In 2021, the farm value share of the producer price was 25% meaning that 25% of producer price could be explained by wheat. This increased to 29% in 2022 and is currently 27% for 2023.

Maize meal

23. Maize meal in 2023 provides a good example of the feather effect. **Figure 4** shows that since February 2023, the primary input cost (white maize) has fallen 23% with the farm value for a 2.5kg bag going from R21.28 to R14.40. At the same time, however, producer prices have only fallen by 1%. This has resulted in the farm value share of producer prices reaching 54% in July 2023. This is the lowest it has been since December 2021. The large reversal in the farm value share as white maize prices come down is cause for concern given that the long-term trend in farm value shares is that they are increasing. In 2021, the average farm value share of producer prices was 69% increasing to 72% in 2022. We will continue to

monitor these prices to ascertain whether the farm value share has returned to long-term levels.

24. At the retail level, average prices increased by 1.6% from January to July 2023, but did reduce from May to July. There hasn't been a significant difference in the relationship between retail and producer prices, indicating that retailers are simply passing through changes in producer prices and don't appear to be absorbing cost increase nor are they overcompensating for them. The average retail spread in 2023 is 30%, which is roughly the same as 2021 and 2022. However, the absolute Rand margin has increased given the higher producer prices.

25. Bread and maize meal are produced by the same group of listed food producers: Premier Foods, Tiger Brands, and RCL Foods. These companies have reported increases in the revenue of their milling and baking divisions in their last financial years with Premier Foods being the most successful at doing so without sacrificing volumes. These results support what aggregate analysis shows in terms of margin and profit growth at the producer level:

25.1. Premier Foods, (which has 9 maize meal brands²⁸ and 5 bread brands²⁹) had a 33.0% gross margin for financial year ending March 2022 and 30.2% in 2023. Revenue in the division responsible for bread and maize meal (Millbake) increased by 25.4% through a 24% increase in price and 1% increase in volumes. Premier Foods incurred R32 million in loadshedding costs in 2023 which it says did not have a material impact on operations.

25.2. RCL, albeit a smaller player in bread, through Sunbake, reported a 16.2% revenue increase in its baking division due to price increases to recover operating costs. Despite this price increase, Sunbake's volumes grew as RCL reported a 49% increase in Sunbake's market share. Across the entire business, loadshedding added R158.3 million in diesel, generator hire and additional labour costs in the 2023 financial year. However, this seems to be concentrated in the poultry division, not the baking division.

25.3. Tiger Brand's milling and baking division (with produces Albany Bread and Ace Super Maize Meal) increased revenue by 5% due to an 11% volume increase alongside a price increase of 16%. The operating margin for milling and baking fell to 8.2% from 9.4%. In the first half of the 2023 financial year, Tiger Brands incurred

R76 million in loadshedding expenses (2% of total expenses)³⁰ across the entire business which is 533% higher than R12 million for the same period in 2022.

Sunflower oil

26. The cooking oil price remains a worry for the Commission. We had previously noted evidence of the rocket effect in sunflower oil prices. The expectation of higher input costs following the invasion of Ukraine, which were not realised in the local SAFEX market, caused several successive increases in the average producer and retail price of sunflower oil, which started to fall in the second half of 2022 - while the price of sunflower seeds remained flat.

27. In 2023, the deflation in average retail and producer prices of cooking oil has continued. Average retail prices fell by 4.6% from January to June 2023, but producer prices have fallen by 9.7%. The retail spread has consequently gone from 31% to 35%. Interestingly, there is in the context of a slight increase in sunflower seed prices from January to April 2023 which has now been reversed.

28. The relationships between these prices along the sunflower oil value chain have not returned to their levels period to March 2022. In 2021, the farm share of the producer price was 86% and in 2022 it fell to 72%, indicating higher margins for producers. For 2023, the average is currently 75%, which suggests higher margins even as prices go down. The average retail spread has gone from 37% in 2021 to 32% in 2022 and is 33% in 2023. Which indicates lower retail mark-ups on cooking oil.

Individual quick-frozen (IQF) chicken

29. The retail price of IQF chicken in **Figure 6** has continued to rise at a slower rate than the producer price resulting in a compression of the retail spread. This trend began in July 2022 when the spread fell to 44% from 47% in the previous month. As of July 2023, the spread between retail and producer prices is 41%. As we noted in the March 2023 EFPM Report, IQF chicken inflation has been lower than that of many other essential foods such as maize and some vegetables. We have previously noted that imports place an important discipline on the price of IQF chicken, which may explain its lower inflation.

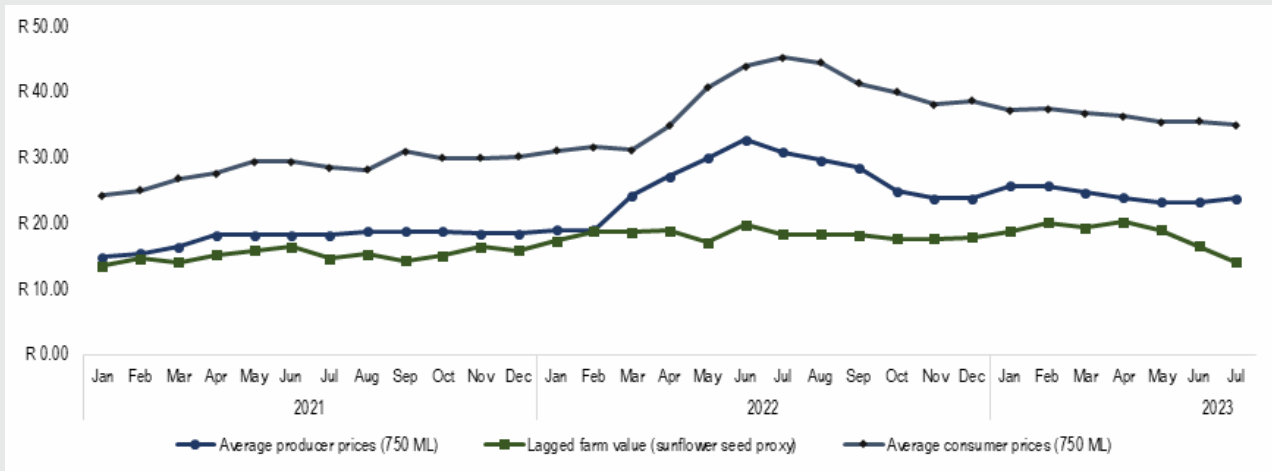
30. While in the 2022 financial year, Astral increased revenue by 21.1% and gross margin by 2.90 percentage points, the most recent interim results

28 Premier Coarse Braaipap, Nyala, Top Score, Impala, Iwisa, Mega Star, Ligugu, Invicta, Super Sun.

29 Mister Bread, Blue Ribbon, Star Bakeries, BB Bakeries, S.U.B (eSwatini)

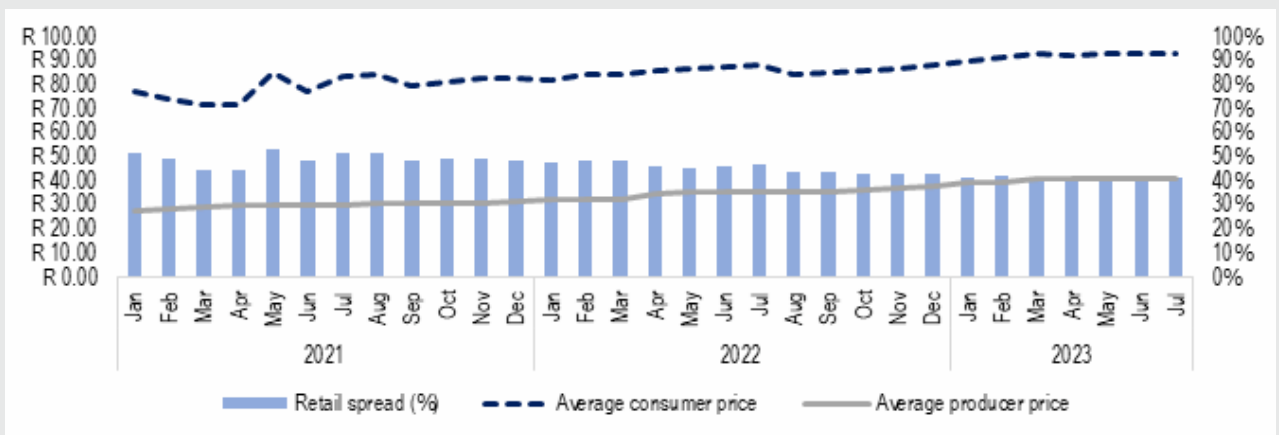
30 We use sales and distribution expenses, marketing expenses, and other operating expenses for this comparison

Figure 5: Sunflower oil retail, producer, and farm value prices



Source: Commission’s own using SAFEX, StatsSA

Figure 6: Retail spread of IQF chicken.



Source: Commission’s own using StatsSA

suggest that it has reached the limits of its ability to increase prices to recover costs. Interim results for the first 6 months of 2023 show 5.7% increase in revenue and an 8.3% percentage point drop in gross margin. In same period, Astral incurred R 741 million in loadshedding costs. This an outlier among food producers reflecting that it is unique in the multiple ways in which it is affected by electricity cuts.

31. Within RCL, the Rainbow division increased revenue by 18.3% through price increases and higher volumes. However, the division’s profit fell 90% due to high feed costs, failing municipal infrastructure, and loadshedding which resulted in more generator costs, additional feed usage and labour requirements. Most of the R158.3 million incremental loadshedding costs is likely attributable to this division.



Topical Deep Dive - Beef Value Chain

32. The beef value chain is among those for which there has been evidence of the rocket and feather effect in South Africa.³¹ Beef is an important protein source in South Africa with consumption of nearly 18 kilograms per person – second only to chicken. Any opportunistic behaviour throughout the value chain therefore has a detrimental impact on consumer welfare. The beef value chain has become more concentrated and more integrated in recent years, increasing the chances of anti-competitive pricing practices.
33. We analyse aggregate prices and margins at the producer (feedlots) and retail levels. We find that producer prices have been falling for much of 2023 following a period of elevated prices in 2022. This occurs against the backdrop of better profitability indicators in the feedlot sector, suggesting that input costs are falling faster. However, lower producer prices have not fully translated into lower retail prices, indicating that retailers too are not passing through all cost reductions. As a result, the retailers share of retail prices reached a historically high level while the producer share has been historically low.
34. South Africa's red meat market is dualistic with a large, productive, and well-developed formal market existing alongside a much smaller and less productive informal sector.³² South Africa's red meat farmers benefit from a relative abundance of land as 80% of South African agricultural land is suitable for extensive grazing. Outside of droughts, local maize production supplies ample sources of feed, a critical input for raising cattle. These conditions have contributed to South Africa being a small net exporter of red meat because production exceeds domestic consumption.
35. Red meat consumption continues to grow and is the second most consumed meat product after chicken. This consumption growth has been facilitated by a combination of demand side factors such as income growth, population growth, and changing consumer tastes and preferences. Supply-side factors that have supported growth include technological improvements, access to markets following deregulation, and greater efficiencies throughout the red meat production value chain.
36. The beef value chain consists of four actors: farmers, feedlots, abattoirs, and wholesalers and retailers. These actors transform live cattle to the various meat products available in retailers and the hospitality sector.
- 36.1. *Farmers:* There are approximately 22 000 commercial livestock farmers in South Africa who own 12.3 million heads of cattle.³³ The number of farmers has fallen from 50 000 in 2011. Approximately 60% of the country's cattle are reared by commercial farmers with the remaining 40% reared by emerging farmers. Commercial farmers prefer breeds such as Angus, Hereford, and Sussex.³⁴ These breeds have desirable genetic features in terms of average daily weight gain, feed conversion efficiency, and the shape and size of carcasses. On the other hand, small-scale farmers produce weaners of indigenous breeds such as Afrikaner and Nguni. As these breeds aren't highly sought-after by the formal sector this may serve as a barrier to entry into the commercial red meat value chain. The meat from indigenous breeds nonetheless serves niche markets and are marketed as grass-fed.
- 36.2. *Feedlots:* Between 75–80% of all cattle raised in South Africa are marketed through feedlots.³⁵ A similar proportion of cattle slaughtered at abattoirs is estimated to have come from feedlots. The most recent data shows that there are approximately 100 commercial feedlots in South Africa with a standing capacity of 770 000 heads of cattle.³⁶ The local feedlot industry is highly concentrated with the four largest cattle feedlots (Karan Beef, Sparta Beef, Beefmaster and EAC) accounting for 44.2% of standing feedlot capacity.³⁷ The top ten account for 68.8%. In 2015 the top four

31 Ogundenji, A; Mare, FA. 2018. "Price transmission in the Beef Value Chain – The Case of Bloemfontein, South Africa". Conference Paper. Available online: <https://ageconsearch.umn.edu/record/275930?ln=en>; Spies, DC. 2011. "Analysis and quantification of the South African Red Meat Value Chain. Available online: <https://scholar.ufs.ac.za/xmlui/bitstream/handle/11660/1901/SpiesDC.pdf?isAllowed=y&sequence=1>

32 DALRRD. 2021. "A profile of the South African Beef Market Value Chain." Available online: <http://webapps1.daff.gov.za/AmisAdmin/upload/Beef%20Market%20Value%20Chain%20Profile%202021.pdf>

33 Ibid

34 OABS Development. 2018 "A study on the potential product development for the commercialization and value add to beef products." Available online: <https://www.idc.co.za/wp-content/uploads/2018/11/Beef-Study-Final-Report.pdf>

35 OABS Development. 2018. "A study on the potential product development for the commercialization and value add to beef products." Available online: <https://www.idc.co.za/wp-content/uploads/2018/11/Beef-Study-Final-Report.pdf>

36 Competition Commission. 2021. "Measuring concentration and participation in the South African economy: levels and trends." Available online: <https://www.compcom.co.za/wp-content/uploads/2021/12/Concentration-Tracker-Main-Report-1.pdf>

37 Ibid

and top ten accounted for 34.0% and 50.6% of standing capacity respectively.³⁸ In addition to becoming more concentrated, feedlots have also vertically integrated forwards into abattoirs, wholesaling, and retail brands.³⁹

36.3. *Abattoirs*: Abattoirs are the processing facilities where live animals are converted to meat. The abattoir industry was liberalised in the 1990s together with rest of the South African agricultural sector. Liberalisation has led to greater variety in the types of abattoirs in South Africa as opposed to the previous dispensation, which was dominated by the state-owned monopoly, Abakor.⁴⁰ DALRRD estimates that there are approximately 430 abattoirs.⁴¹ Abattoirs can be further segmented as being high, low, or rural throughput based on the heads of cattle that they slaughter daily.

36.3.1. High throughput abattoirs can slaughter more than 20 heads of cattle a day and are often partially or fully integrated into feedlots.⁴² In 2020, there were 132 such abattoirs in South Africa.⁴³ Most high throughput abattoirs are located close to large urban centres.

36.3.2. Low throughput abattoirs slaughter less than 20 heads of cattle a day.⁴⁴ As of 2020, 72 abattoirs were in this group.⁴⁵

36.3.3. Rural throughput abattoirs slaughter up to 5 heads of cattle a day.⁴⁶ As of 2020, most abattoirs, 182, were in this group.⁴⁷

36.4. Like feedlots, abattoirs are also a highly concentrated activity in the red meat value chain. In 2020, the top 10 beef abattoirs slaughtered 48% of all cattle that went through abattoirs.⁴⁸ The main players in the abattoir industry are vertically integrated and have a presence at the upstream feedlot level of the value chain. These players include, Karan Beef, Sparta Beef, Beefmaster, Chalmar Beef, the Sernick Group, EAC, and Chamdor.⁴⁹

36.5. Abattoirs target a live animal weight between 400 kg and 460 kg, which yields a carcass of about 240 kg.⁵⁰ Meat carcasses are then sold to meat traders, processing plants, and butcheries.⁵¹ Once the cattle are slaughtered, abattoirs pay feedlots or farmers based on the cold carcass weight of the animal. The price of a carcass is determined by its age (measured by the number of permanent incisors) and fat content (measured by the thickness of fat between the 10th and 11th rib). Meat processors, wholesalers and retailers generally prefer younger carcasses with moderate fat content. The price paid to feedlots or farmers excludes the hide and offal, known as the fifth quarter and can be taken to be about 40% of the cold carcass mass. The fifth quarter belongs to the abattoir and is seen as the slaughtering fee and profit margin.⁵²

36.6. *Wholesalers and retailers*: Previous research has found that carcass procurement takes place regionally from abattoirs by debonding and packaging facilities retailers. Most retailers purchase primary cuts rather than whole

38 Ibid

39 Who owns whom. 2022. "The production, processing and preserving of red meat in South Africa (including Meat-alternative vegan products)." Available online: <https://www.whoownswhom.co.za/store/production-processing-preserving-red-meat-south-africa/>

40 Spies, DC. 2011. "Analysis and quantification of the South African Red Meat Value Chain. Available online: <https://scholar.ufs.ac.za/xmlui/bitstream/handle/11660/1901/SpiesDC.pdf?isAllowed=y&sequence=1>

41 DALRRD. 2021. "A profile of the South African Beef Market Value Chain." Available online: <http://webapps1.daff.gov.za/AmisAdmin/upload/Beef%20Market%20Value%20Chain%20Profile%202021.pdf>

42 OABS Development. 2018. "A study on the potential product development for the commercialization and value add to beef products." Available online: <https://www.idc.co.za/wp-content/uploads/2018/11/Beef-Study-Final-Report.pdf>

43 Competition Commission. 2021. "Measuring concentration and participation in the South African economy: levels and trends." Available online: <https://www.compcom.co.za/wp-content/uploads/2021/12/Concentration-Tracker-Main-Report-1.pdf>

44 OABS Development. 2018. "A study on the potential product development for the commercialization and value add to beef products." Available online: <https://www.idc.co.za/wp-content/uploads/2018/11/Beef-Study-Final-Report.pdf>

45 Competition Commission. 2021. "Measuring concentration and participation in the South African economy: levels and trends." Available online: <https://www.compcom.co.za/wp-content/uploads/2021/12/Concentration-Tracker-Main-Report-1.pdf>

46 OABS Development. 2018. "A study on the potential product development for the commercialization and value add to beef products." Available online: <https://www.idc.co.za/wp-content/uploads/2018/11/Beef-Study-Final-Report.pdf>

47 Competition Commission. 2021. "Measuring concentration and participation in the South African economy: levels and trends." Available online: <https://www.compcom.co.za/wp-content/uploads/2021/12/Concentration-Tracker-Main-Report-1.pdf>

48 Ibid

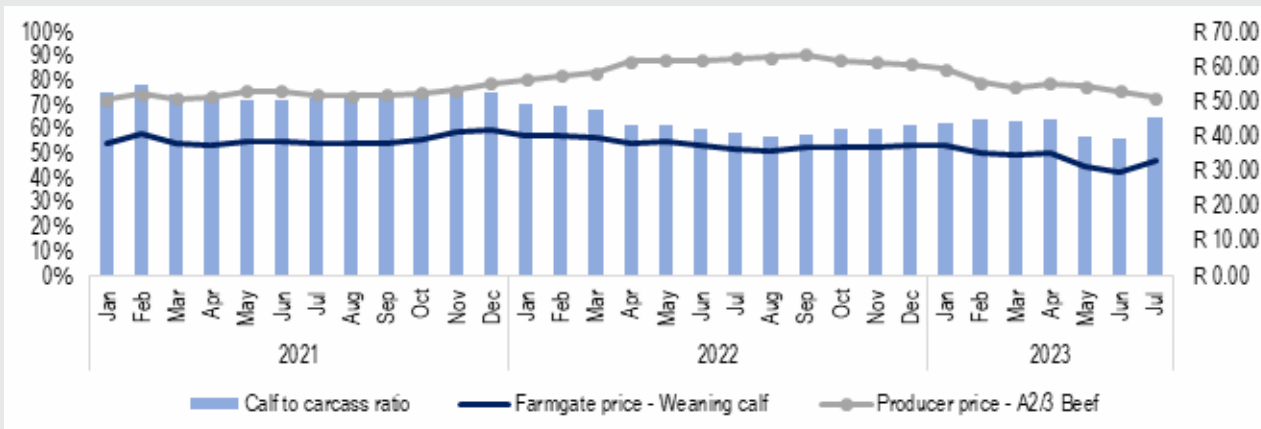
49 Ibid

50 OABS Development. 2018. "A study on the potential product development for the commercialization and value add to beef products." Available online: <https://www.idc.co.za/wp-content/uploads/2018/11/Beef-Study-Final-Report.pdf>

51 Ibid

52 Spies, DC. 2011. "Analysis and quantification of the South African Red Meat Value Chain. Available online: <https://scholar.ufs.ac.za/xmlui/bitstream/handle/11660/1901/SpiesDC.pdf?isAllowed=y&sequence=1>

Figure 7: Farmgate and producer prices for beef



Source: Commission's own using StatsSA

carcasses.⁵³ These are processed by co-packers or in-store butcheries. Several integrated feedlots also have retail brands that are sold alongside the meat processed by retailers. These branded value-added meat products include frozen patties and corned beef.

Price analysis

37. Price formation in the red meat value chain begins with the prices paid to farmers for live animals. In the 6 months from January to June 2023, the price of weaning calves fell by 21% going from R37.48 per kg to R29.61 per kg. This steep decline has been attributed to low carcass prices and higher carcass supply. While this may be positive for ultimate consumer prices, producers note that it is not feasible for them to sell weaner calves at below R30.00 per kg. For all of 2022, weaner calf prices were well above R30.00 and averaged R37.95 per kg. Weaner calf prices were relatively flat in the second half of 2022 following a sustained decline in the first months of 2022. Analysts explained that this was likely driven by higher feed costs and lower demand.⁵⁴

38. Carcass prices out the abattoir is the next step in price formation in the red meat value chain. At this point, there has been significant value addition to the animal as feedlots have grown to the point when they can be slaughtered for meat sold and bought through retailers. As mentioned, the carcass weight of an animal is lower than its live weight before it was slaughtered. Because of this, abattoirs generally

make a loss on meat, but this is compensated by the hide and offal obtained from the carcass.

39. **Figure 7** above shows that the price of a beef carcass has been falling over the last year. Producer prices (Beef A2/A3 carcass prices) fell from R62.43 per kg in July 2022 to R51.17 per kg in July 2023. The foot-and-mouth disease outbreak in 2022 and subsequent prohibitions on the movement of cattle in September 2022 led to short supply in the market resulting in higher prices.⁵⁵ In that month, the average prices in September 2022 were R63.74 and fell to R61.88 in October 2022, once the ban was lifted.

40. Feedlots and abattoirs benchmark their profitability using the ratio between weaner calf prices and carcass prices. Ideally, the weaner prices must be less than 65% of the carcass price. The industry reached this benchmark in May 2022 and has therefore shown signs of improved profitability since. Prior to that, it seems that the beef industry experienced some profit pressures as the ratio was above 70% for all of 2021 - leaving less income to cover production overheads and profit margins.

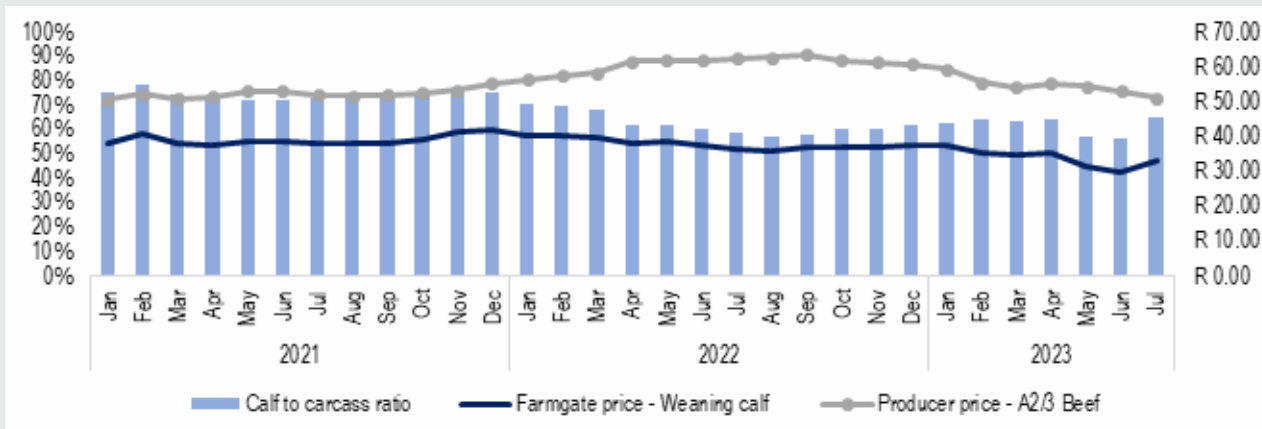
41. Among the costs that must be recovered through the sale of carcasses is the cost of feed. Throughout the producer value chain, feed is among the most important input costs and therefore price. This applies to farmers rising weaner calves and to feedlots. To understand the profit pressure that feed prices may exert on the value chain, the industry uses a maize to carcass ratio with a target of 14.

53 Ibid

54 ABSA. 2022. Agri Trends: Livestock Report - June 2022. Available online: <https://www.absa.co.za/business/sector-solutions/agribusiness/agri-smart-insights/>

55 ABSA. 2022. Agri Trends: Livestock Report - September 2022. Available online: <https://www.absa.co.za/business/sector-solutions/agribusiness/agri-smart-insights/>

Figure 8: Maize-to-carcass ratio



Source: Commission's own using ABSA, SAFEX

Essentially, this says that for a profitable feedlot operation, 1 kg of carcass must be the value of 14 kg of maize with a higher ratio being better (i.e. 1kg of carcass being valued higher in maize cost terms). The maize to carcass ratio fell below this benchmark in September 2022, but reached 15.21 in April 2023. In the last three months, the maize to carcass ratio has remained above 14, but has been declining and the July value reached 13.99.

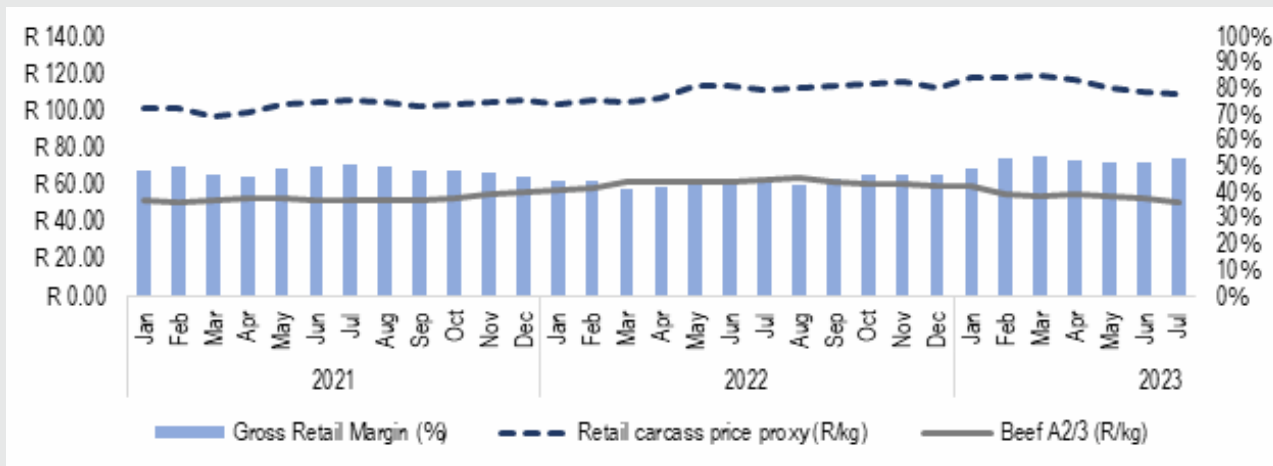
- 42. Since October 2022, yellow maize prices have been declining (together with carcass prices). Based on the maize and carcass prices alone consumers should have benefited from lower prices for the cuts that they purchase and other value-added products such as patties. We now turn our attention to consumer prices.
- 43. StatsSA tracks the price of seven beef products: rump steak, brisket, chuck, mince, fillet, sirloin, and stewing beef. These products have different prices, which means that we must convert them into a single price to compare against carcass prices and weaner calf prices. To do this, we adopt the methodology used by the National Agricultural Marketing Council (NAMC) which is the average of these cuts and products weight by their cold mass on the carcass. We assume a carcass weight of 248.40 kg and a retail carcass weights (sum of the mass of retail cuts) of 194.12 kg. Using these values, we obtain the weighted average consumer price of carcass per kg to compare to producer prices. This is summarised in the table below.

Table 2: Retail cut proportions on a carcass

Cut	% of retail carcass
Rump	2.47%
Brisket	7.45%
Chuck	18.02%
T-bone	3.64%
Fillet	1.15%
Sirloin	2.15%
Mince	11.36%
Stewing beef	31.82%

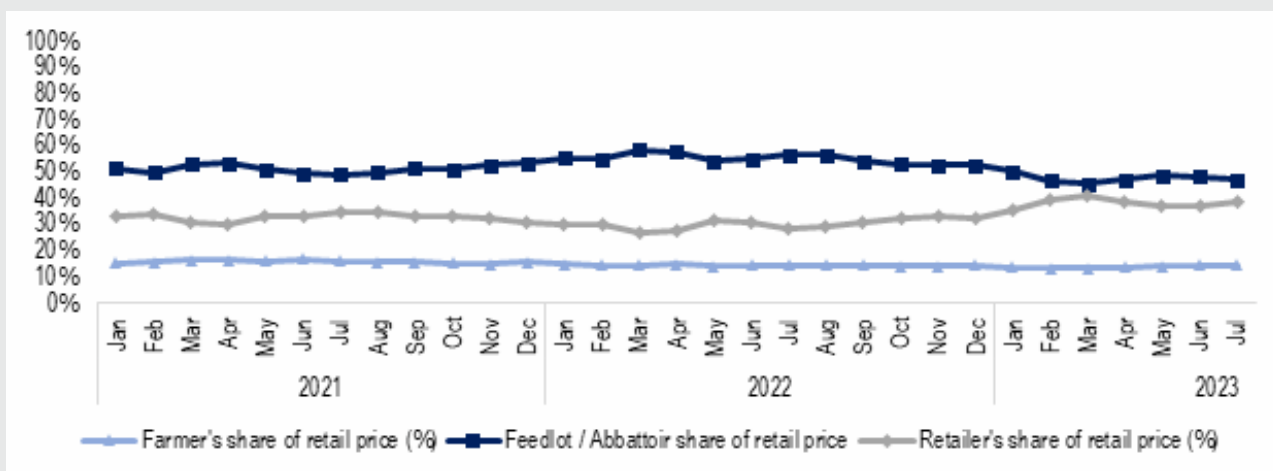
- 44. **Figure 9** shows that the beef has generally been more volatile than the consumer price. As a result, the price spread has also been volatile. In recent months, however, the producer price has declined while the retail price increased. This divergence has resulted in growing retail margins in 2023 with the retail spread in June 2023 at its widest level since 2021. The degree of this divergence is shown by the fact that wider spread has been sustained even as retail prices of beef have started to come down. This indicates a feather effect in retail prices for beef, as they have been slow to reduce in response to lower producer prices.
- 45. To further understand the relationship between farmgate, producer, and retail prices we express the weaner calf and carcass prices as a proportion of the retail price in **Figure 10**. We use this as a proxy indicator of where in the value chain margins have been applied. The graph shows that the farmer's share of the price has been constant at around 15%. Therefore, it is the interplay between the retailers

Figure 9: Beef retail and producer prices.



Source: Commission’s own using ABSA, StatsSA

Figure 10: Value chain distribution of retail prices



Source: Commission’s own using ABSA, StatsSA

share and the producer’s share that is important. In terms of this relationship, we see that in January 2023 the producer’s share of the retail price fell from 52.83% to 47.13%, the largest single jump (upwards or downwards) since January 2021. At the same time, the retailer’s share increased from 32% to 39.08%. In this period the farmer’s share fell from 14.53% to 13.79%.

sustained since the retailer’s share of the final price remains higher than the entire period under review, even as retail prices fall. Clearly, lower producer prices are not being fully transmitted to consumers. This may be the combination of lag effects between when retailers pay for the meat and when it is sold; and attempts to maintain profits in the face of higher costs from elsewhere such as fuel prices and load shedding.

46. As explained above, beef carcass prices have been falling since September 2022. It is evident that the increase in retail prices at this time was not due to pressure from farmers, feedlots or abattoirs. Rather, this is due to retailers applying more margin to meat than they did before. These margins have been

Conclusion

44. This edition of the EFPM Report shows that as upstream inflationary pressures in commodities and food production have eased, consumers are yet to feel the benefit of lower input costs. This is the case in all the value chains that we track as well as beef, covered in the deep dive. Unfortunately, this has coincided with severe loadshedding that has invariably played a role in slowing the pace of downward price transmission. However, the financial results of food companies show a mixed picture on

the costs of loadshedding, which calls a measure of caution when explaining its role in food prices. Even with the additional effect of loadshedding, the rocket and feather effect has been longstanding feature of food value chains domestically which indicates that these value chains at the producer and retail level are not as competitive as they could be.

ECONOMIC RESEARCH BUREAU

