

Basis Summary

How to use the Basis Summaries

Introduction

This document should be read in conjunction with the Basis Summary Reports published by Ag Concepts Unlimited every six months. It explains what basis is, and describes how to understand and use the information provided in the Basis Summary reports.

The Basis Summary reports provide an analysis of the basis for Meat and Livestock Australia's (MLA) National Livestock Reporting Services (NLRS) saleyard cattle indicators.

The basis summaries will help you to:

- Understand the drivers of cattle prices.
- Estimate what prices to expect in the forward contracting of your cattle.
- Make decisions on the use of price risk management tools such as MLA/SFE Cattle Futures.

What is Basis?

Basis is simply the difference between any two prices. It provides an indication of the value of your cattle relative to the general cattle market.

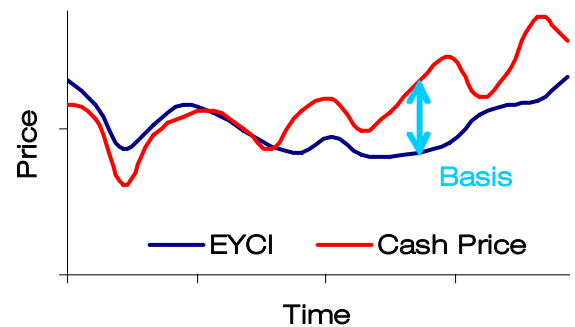
In the case of the Australian cattle industry, the general market average is represented by the Eastern Young Cattle Indicator, or EYCI. The EYCI is the base for the MLA/SFE Cattle Futures contract.

$$\text{Basis} = \text{Cattle price (Cash Price)} - \text{EYCI}$$

What does it mean?

- Positive basis = higher cattle price than the market average.
- Negative basis = lower cattle price than the market average.

Basis is likely to be stronger when your cattle are in high demand and low supply.



Price and Basis

Figure 1 – Cash price vs EYCI

- A visual guide to the movements in the cattle price and EYCI over time.

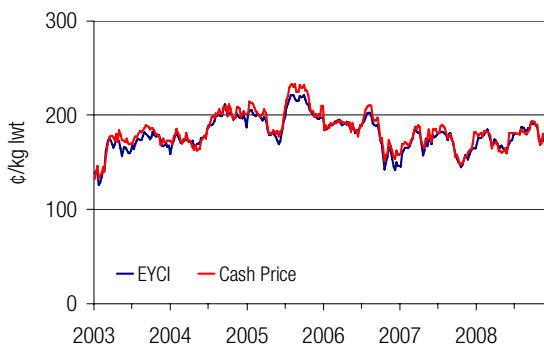


Figure 2 – Long term Basis

- Shows the level of basis (difference between the two prices) over time, as well as the volatility.
- Higher volatility in basis means it is more difficult to estimate basis in the future.

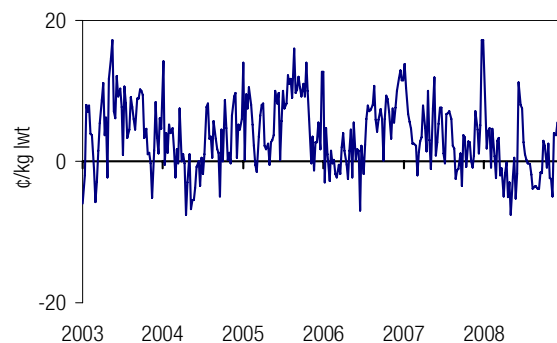


Table 1 – Key price and basis statistics

- Average Price and Basis - shows the average price and the average basis for the indicator over a given period of time.
- Standard Deviation (SD) - indicates how volatile the price and basis have been. A lower standard deviation means the price or basis has shown low volatility.
- Correlation - A higher correlation means that the prices are more closely related.

What does this mean?

- Low basis volatility and high correlation suggest that the EYCI is a good predictor of the indicator. Therefore, MLA/SFE Cattle Futures could provide an effective hedge for cattle that match the description of this indicator.

Figure 3 – Seasonality of basis

- Shows recent average monthly basis (in red) and the five-year average basis. In addition, strong and weak basis lines are calculated as average basis ± 1 standard deviation.
- Basis seasonality highlights the volatility and pattern of the basis throughout the year.

What does this mean?

- When the basis moves above the strong basis line, the indicator is considered to be very strong relative to historic data for that time of year.
- Some indicators will exhibit more pronounced seasonality than others.
- The closer the strong and weak basis lines are to the average, the less volatile – and therefore more predictable – the basis.

Risk

When using basis to assist in pricing and hedging, it is important to understand whether more price risk lies in the basis or the cash price. Table 2 can assist with this.

Table 2 – Price movement risk

- Shows the standard deviation (SD) of movements in the indicator and the basis over the specified time period.
- For example, in any 6 month period you could expect that movement in the cash price will be up to 21¢ from the average price movement and that the basis movement will be up to 5.5¢ from the average basis movement.

What does this mean?

- A high SD of the cash price or basis movement suggests that the average price movement over a period of time is more volatile – and therefore less predictable.
- If the SD of the cash price movement is greater than the SD of the basis movement, it suggests that there is greater risk of movement in the cash price compared to the basis. In this case, the use of MLA/SFE Cattle Futures or forward price contracts could be warranted to reduce the risk of unexpected price movements.

Table 1: Key Price and Basis Statistics

	c/kg lwt	Price	S.D.
12 month average price		177.05	8.77
Average price since Jan 2003		183.25	18.76
	c/kg lwt	Basis	S.D.
12 month average basis		0.10	3.90
Average basis since Jan 2003		3.71	5.01
Correlation		96%	

Figure 3: Seasonality of Basis

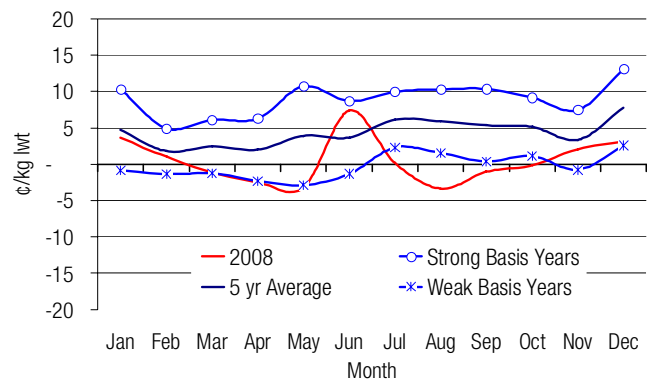


Table 2: Price Movement Risk

	c/kg dwt	Cash SD	Basis SD
3 months		20.00	5.08
6 months		20.82	5.47
9 months		21.70	5.98
12 months		21.87	5.49

Percentiles

Table 3 - Percentiles

- A percentile is the value of a variable, below which a certain percent of observations fall. So, for example, the 60th percentile is the value below which 60% of the observations may be found.
- For example, Table 3 shows that since 2003, the EYCI has been above 183¢/kg lwt for 40% of the time and below 183¢/kg lwt for 60% of the time.

What does this mean?

- Historical price levels can help us assess forward price offers, to determine whether particular price levels are likely to be achievable and whether they represent good value.
- To illustrate: if a cattle buyer offered a price of 191¢/kg lwt, this would represent good value, as (cash) prices have only been greater than 191¢ for 30% of the time since 2003.

Table 3: Percentiles since 2003 (¢/kg lwt)

	EYCI	Cash	Basis
Min	126	132	-8
10%	158	162	-2
20%	166	170	-1
30%	172	174	1
40%	174	178	2
50%	179	181	3
60%	183	185	5
70%	189	191	7
80%	195	199	8
90%	201	208	10
Max	221	233	17

Expected Basis

Table 4 – Expected monthly basis

- Shows the average basis and standard deviation (SD) for each month over the past five years. Table 4 contains the data underpinning Figure 3.
- Weak basis – calculated by subtracting the SD from the average basis
- Strong basis – calculated by adding the SD to the average.

What does this mean?

- It is possible to predict basis for the coming year by looking at the average basis. For example, in March, basis could be expected to be +2.4¢/kg lwt.
- A higher SD suggests greater volatility – and therefore lower predictability – in basis for a particular month.
- It may be more appropriate to use the Weak Basis or Strong Basis values to estimate basis. For example, if demand for this particular type of cattle is expected to be stronger than normal or if supply is expected to be lower than normal, basis would be expected to be stronger and, as such, the Strong Basis value could be used To estimate forward prices.

Table 4: Expected Monthly Basis (¢/kg lwt)

Month	Ave.	Std Dev.	Weak Basis	Strong Basis
Jan	4.7	5.6	-0.9	10.3
Feb	1.8	3.1	-1.4	4.9
Mar	2.4	3.7	-1.3	6.1
Apr	2.0	4.3	-2.3	6.3
May	3.9	6.8	-2.9	10.7
Jun	3.7	5.0	-1.3	8.7
Jul	6.1	3.8	2.3	9.9
Aug	5.9	4.4	1.5	10.3
Sep	5.3	5.0	0.4	10.3
Oct	5.1	4.0	1.1	9.1
Nov	3.3	4.1	-0.8	7.5
Dec	7.8	5.3	2.6	13.1

Data for these reports was kindly supplied by Meat and Livestock Australia's National Livestock Reporting Service (NLRS) www.nlrs.com.au

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