

KEY FINANCIAL RATIOS FACT SHEET

SOUTHERN REGION

UNDERSTANDING YOUR KEY FINANCIAL RATIOS HELPS MANAGE YOUR FARM BUSINESS SUSTAINABILITY

As farm businesses become more sophisticated and owners strive ever harder to improve profitability and create wealth, the move beyond simple measures of physical production to whole business analysis is gaining momentum. The use of financial ratio and benchmark analysis has become increasingly popular with progressive farm business operators in recent years.

KEY POINTS

- ▶ Top farm businesses should be able to quote and understand their key financial ratios and their trends over time.
- ▶ Calculating financial ratios is quite simple - with a little explanation.
- ▶ Five key areas to focus on: Liquidity, Solvency, Profitability, Cost Efficiency and Debt Servicing Capacity.
- ▶ Ratio trends over several years are a more valuable tool than looking at one year in isolation.
- ▶ Monitoring your business' financial ratios does not guarantee greater profit, but it will improve the likelihood of success over time and improve the understanding of your business.
- ▶ Context is very important – compare apples with apples!

Financial ratio analysis

Financial ratios or benchmarks are used to assess business profitability, balance sheet structure and overall business performance.

Typically these measures are expressed as a ratio (number of times) or a percentage. As such, they are no more than one number expressed as a percentage or fraction of another number. No one ratio

can give an absolute picture of business performance, but in combination, their trends over time can be used to identify areas of strength and weakness within the business.

In many respects, financial ratios are like a soil test. They identify that you have a high or low level of a certain element compared with established standards, but they won't tell you why you have it, how much it will affect yield, or how to manage the problem. Once an area of concern is established, we need to get behind the figures to see what is causing the problem, so physical production benchmarks will be closely linked to the financial ratios.

The value of benchmarking and ratio analysis as a method of comparing farm and farm business performance depends on the accuracy of the data and the basis on which the data is used to generate the ratio. You have to make sure that you are comparing 'like with like' if you use a range of data to make comparisons. For example, to compare profitability of your farm in 2012 with a neighbouring farm's 2010 performance is of little value – variation in climate, yields, prices and so on mean you are likely comparing apples with oranges!

Whilst there are countless ratios quoted by finance analysts (and most have their uses), for the purpose of this fact sheet, the focus will be on 17 ratios covering 5 key areas of the business, being: 1) Liquidity,

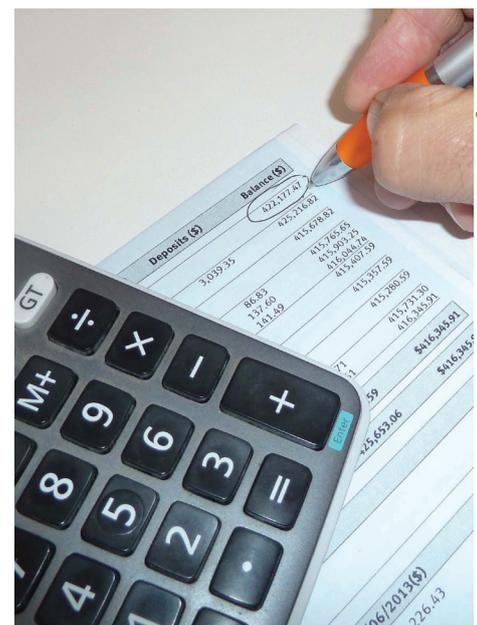


PHOTO: P2P/PA/rii

2) Solvency, 3) Profitability, 4) Financial Efficiency, and 5) Repayment Capacity.

All the ratios described below can be calculated from two budgets most farm businesses can easily access:

- ▶ **Profit and Loss Budget**
- ▶ **Balance Sheet**

For the purpose of this fact sheet, we have provided a sample Profit and Loss Budget (Figure 1) and Balance Sheet (Figure 2) for a farm business for the 2012/13 financial year. These figures are used as the reference point for all calculations and discussion.

NB. Other factsheets in this series outline a Profit and Loss Budget and a Balance Sheet.

Liquidity – Cash, the short term picture: ‘Do we have enough cash to pay the bills this year?’

Liquidity considers the availability of cash (or near cash) assets to cover short term obligations without disrupting normal business.

- 1 Current ratio:**
Current assets/current liabilities:
Times covered
- 2 Working capital:**
Current assets - current liabilities:
Dollars

Solvency – Business stability/risk: ‘How much of this business is really ours and how much belongs to the bank?’

Solvency ratios measure the gearing of the business, the amount of debt, leasing and other financial commitments, relative to the owner’s equity/assets. Can it withstand an economic downturn? Can it borrow to stay afloat or expand?

Case study example:

The following figures 1-3 provide an explanation of and show actual calculations of each of the ratios outlined above:

Figure 1 Profit and Loss Budget, 2012-13

Income		Formula
Cash sales	870,000	A
Movement in inventory	44,000	B
Gross Revenue	914,000	C = (A+B)
Variable costs	365,000	D
Whole Farm Gross Margin	549,000	E = (C-D)
Overhead costs	260,000	F
Depreciation	67,000	G
Operating Profit (EBIT)	222,000	H = (E-F-G)
Finance costs	84,000	I
Net Profit Before Tax (NPBTD)	138,000	J = (H-I)
Family drawings	70,000	K
Taxation	20,400	
Net Profit After Tax (NPAT)	47,600	L

Source: Tony Hudson, Hudson Facilitation

- 3 Equity/Assets Ratio:**
Total farm equity/total farm assets:
% equity
- 4 Debt/Assets Ratio:**
Total farm debt/total farm assets:
% debt
- 5 Debt/Equity Ratio:**
Total farm liabilities/total farm equity:
% debt

Profitability – Are we making enough money? ‘We’ve got a lot of capital tied up in this place; how is it performing?’

Profitability ratios tend to measure the ability of the business to generate profit from its land, labour and capital resources. They remove the effect of scale of operations so comparison can be made between businesses of any size. They provide a useful means to compare businesses in different industries.

- 6 Return on Assets (ROA):**
EBIT/total assets:
% of assets
- 7 Return on Equity (ROE):**
NPBT/total equity:
% of equity
- 8 Operating Profit Ratio:**
EBIT/total revenue:
% gross revenue

- 9 Net Profit Ratio:**
NPBT/total revenue:
% gross revenue
- 10 Debt to Income Ratio:**
Total liabilities/gross revenue:
% gross revenue

NB. EBIT – Earnings Before Interest and Tax

NPBT – Net Profit Before Tax

Financial Efficiency – Tracking the costs: ‘We work hard to maximise production; where does all the money go?’

Financial efficiency ratios measure how efficiently the business uses its productive capacity. They generally consider the percentage of gross revenue which is spent on costs for inputs, overheads, finance and machinery.

- 11 Asset Turnover Ratio:**
Gross revenue/total assets:
% gross revenue
- 12 Input Cost Ratio:**
Variable costs/gross revenue:
% gross revenue
- 13 Overhead Cost Ratio:**
Overhead costs/gross revenue:
% gross revenue
- 14 Finance Cost Ratio:**
Finance costs/gross revenue:
% gross revenue
- 15 Depreciation Ratio:**
Depreciation expense/gross revenue:
% gross revenue

Repayment Capacity – Ability to service debts: ‘Can we actually reduce our debts? Would the bank let us borrow to expand?’

Repayment capacity ratios measure the capacity of the business to meet interest/leasing costs and to repay debt. The business needs to provide for living expenses/family drawings and payment of taxes after covering all its costs. At the end of the day, what is left after paying input, overhead, finance, tax and living costs is all that is left to reduce debt, reinvest in the business, invest off farm or improve lifestyle.

- 16 Interest Cover Ratio:**
Operating profit/finance costs:
Times covered

Figure 2 Balance Sheet 2012-13

Formula	Assets		Liabilities		Formula
	Current Assets	\$	Current Liabilities	\$	
	Cash on deposit	30,000	Overdraft	85,263	
	Debtors	12,291	Creditors	45,000	
	Trade lambs	58,000			
	Grain on hand	20,900			
	Fodder	25,000			
M	Total Current Assets	146,191	Total Current Liabilities	130,263	P
	Non-Current Assets		Non-Current Liabilities		
	Plant and equipment	670,000	Term Loan 1	300,000	
	Land and buildings	3,400,000	Term Loan 2	600,000	
N	Total Non-Current Assets	4,070,000	Total Non-Current Liabilities	900,000	Q
(M+N) = O	Total Assets	4,216,191	Total Liabilities	1,030,263	R = (P+Q)
			Owners Equity:	3,185,928	S = (O-R)

Source: Tony Hudson, Hudson Facilitation

Using Figures 1 and 2 above, the financial ratios outlined previously have been calculated below.

Figure 3 Calculation of Ratios

Ratio	Formula	Calculation	Result	Weak Range	Strong Range
Liquidity Ratios:					
1. Current Ratio	$M \div P$	$146,191 \div 130,263 \times 100 =$	1.1 times	< 1 time	> 1.5 times
2. Working Capital	$M - P$	$146,191 - 130,263 =$	\$ 15,928	Negative	Positive/stable
Solvency Ratios:					
3. Equity/Assets Ratio	$S \div O \times 100$	$3,185,928 \div 4,216,191 \times 100 =$	76%	< 70%	> 90%
4. Debt/Assets Ratio	$R \div O \times 100$	$1,030,263 \div 4,216,191 \times 100 =$	24%	> 30%	< 10%
5. Debt/Equity Ratio	$R \div S \times 100$	$1,030,263 \div 3,185,928 \times 100 =$	32%	> 40%	< 20%
Profitability Ratios:					
6. Return on Assets	$J \div O \times 100$	$138,000 \div 4,216,191 \times 100 =$	3.3%	< 2.5%	> 5%
7. Return on Equity	$J \div S \times 100$	$138,000 \div 3,185,928 \times 100 =$	4.3%	< 2.5%	> 5%
8. Operating Profit Ratio	$H \div C \times 100$	$222,000 \div 914,000 \times 100 =$	24.3%	< 15%	> 30%
9. Net Profit Ratio	$J \div C \times 100$	$138,000 \div 914,000 \times 100 =$	15.1%	< 20%	> 30%
10. Debt to Income Ratio	$R \div C \times 100$	$1,030,263 \div 914,000 \times 100 =$	112.7%	> 300%	< 100%
Financial/Cost Efficiency Ratios:					
11. Asset Turnover Ratio	$C \div O \times 100$	$914,000 \div 4,216,191 \times 100 =$	21.7%	< 15%	> 30%
12. Input Cost Ratio	$D \div C \times 100$	$365,000 \div 914,000 \times 100 =$	39.9%	> 40%	< 25%
13. Overhead Cost Ratio	$(F + G) \div C$	$327,000 \div 914,000 \times 100 =$	35.8%	> 40%	< 30%
14. Finance Cost Ratio	$I \div C \times 100$	$84,000 \div 914,000 \times 100 =$	9.2%	> 15%	< 5%
15. Depreciation Ratio	$G \div C \times 100$	$67,000 \div 914,000 \times 100 =$	7.3%	> 20%	< 10%
Debt Servicing Ratios:					
16. Interest Cover Ratio	$H \div I$	$222,000 \div 84,000 =$	2.6 times	< 1 time	> 2 times
17. Term Debt & Lease Cover	$(L+I+G)/XX^*$	$(47,600 + 84,000 + 67,000) \div 144,000 =$	1.4 times	< 1 time	> 1.5 times

XX* equals total annual principal and interest payments, plus any leasing costs (assumed here as \$144,000).

Source: Tony Hudson, Hudson Facilitation

17 Term Debt & Lease Cover:

(NPAT + finance costs + depreciation)/
(total principal and interest payments
plus leasing costs):
Times covered

Interpreting the figures:

Liquidity: The business has adequate cash reserves for now, but is poorly positioned to meet any unexpected costs. Reliance on fodder to provide working capital is risky. The overdraft limit should be known as this will provide additional working capital in the short term, but debt structure may need to be considered in the medium term.

Solvency: This is towards the risky end for debt and equity position. The business may have recently borrowed to expand, or possibly been through one or several challenging seasons requiring finance to cover costs. No cause for alarm, but would like to see several years' results and analyse trends over time. Either of these events could also explain the tight cash position.

Profitability: This is not strong, but within a reasonable range for all ratios, except for net profit ratio, suggesting a high proportion of gross revenue is paid in finance costs. Reducing debt (if possible) will remedy this. Again, these ratios may reflect a business which has recently geared up for some reason – this would also explain the medium ROC and ROE figures.

Cost efficiency: Generally, this is at the poor end of the scale, particularly for overhead and input costs. Compared to cost efficient businesses, this one is not creating adequate revenue for the costs it incurs. Options are to increase revenue (production or price) from the same cost base, or to cut costs somehow. Use of production benchmarks will quickly isolate whether the issue is yield related, price related or poor cost control.

Debt Servicing: Despite the relatively poor results in each previous section, this business is actually quite well placed to meet its financial commitments and reduce debt, or invest in efficiency gains to improve profitability.

In summary, the above business has performed at a less than optimal level in the year under analysis. While it can meet its financial commitments, it is using resources inefficiently to generate profit. Increasing gross revenue at the same cost base is a simple remedy to almost every financial ratio – it reduces the cost of production.

However, two key target areas are identified above - input costs and overhead costs. Given gross revenue is a simple function of yield and price, either of these two issues can be quickly confirmed or dismissed with some district benchmarking comparison. If neither is identified as being poor, then we need to look more closely at management performance – are we spending money unnecessarily, or could we manage operations more efficiently? Lack of scale of the business may also contribute to higher costs per unit of production – expansion may actually be the answer.

Remember – looking at one year in isolation can be of limited value. You should compare a number of years' ratios and look for trends over time. Is equity eroding, is cash becoming increasingly tight, generally are the ratios improving or deteriorating? Poor ratios are not necessarily a cause for concern, as long as they can be explained. Most businesses would see equity and likely return on equity reduce for a few years after an additional land purchase, but if after 3-5 years, things had not improved, there may be real concern. Context is critical!

USEFUL RESOURCES**Related GRDC Fact Sheets**

Other related fact sheets in this Farm Business Management series are: Cost of Production (Order Code: GRDC912), Benchmarking (Order Code: GRDC931) and Understanding a Bank's Approach to Farm Business (Order Code: GRDC934).

Copies of all the above fact sheets are FREE plus P&H and available from:

Ground Cover Direct Freephone: 1800 11 00 44 or email: ground-cover-direct@canprint.com.au

These can also be downloaded from www.GRDC.com.au/fbm

Plan to Profit (P2P), a whole-farm financial management program that can help calculate a farm's financial budgets: www.P2PAgri.com.au

MORE INFORMATION**Tony Hudson**

Hudson Facilitation Pty Ltd
0407 701 330
tony@hudsonfacilitation.com.au

Mike Krause

P2PAgri Pty Ltd
0408 967 122
mike@P2PAgri.com.au
www.P2PAgri.com.au

**GRDC PROJECT CODE****AES00006****DISCLAIMER**

Any recommendations, suggestions or opinions contained in this publication do not necessarily represent the policy or views of the Grains Research and Development Corporation. No person should act on the basis of the contents of this publication without first obtaining specific, independent, professional advice.

The Corporation and contributors to this Fact Sheet may identify products by proprietary or trade names to help readers identify particular types of products.

We do not endorse or recommend the products of any manufacturer referred to. Other products may perform as well as or better than those specifically referred to.

The GRDC will not be liable for any loss, damage, cost or expense incurred or arising by reason of any person using or relying on the information in this publication.

Copyright © All material published in this Fact Sheet is copyright protected and may not be reproduced in any form without written permission from the GRDC.