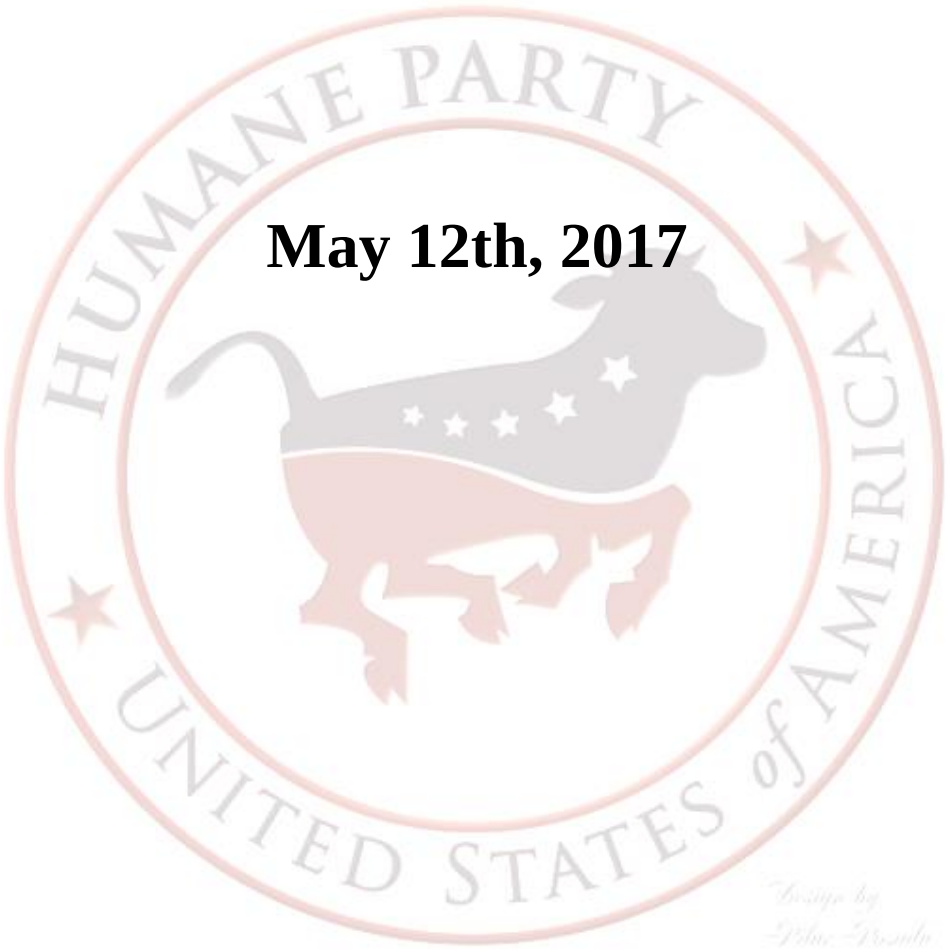
Key Business Ratio comparison, animal-based industry Vs. plant-based industry



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Report preamble

The present document is meant to highlight the findings by the Humane Party in its analysis of the historic Key Business Ratios presented by dun & bradstreet Library solutions. No assumptions have been made in the preparation of this report, only results are explained.

This report presents a comparison between animal-based agriculture industries and plant-based agriculture industries. Key Business Ratios provide an overview of the efficiency, solvency and profitability of publicly owned companies within an industry. The industries used to obtain the data are all publicly owned and encompass a relevant market share within their industry; another important aspect of the industries selected is their nature in being directly linked and exclusive to animal or plant-based agriculture. A total of 6 plant-based industries were used in this comparison and 9 animal-based industries. The industries used are listed below:

Animal-based industries	Plant-based industries
1. Agricultural production- Livestock and animal specialties (SIC-02) 2. Poultry and poultry products (SIC-5144) 3. Meats and meat products (SIC5147) 4. Fish and seafood products (SIC-5146) 5. Dairy products- except dried or canned (SIC-5143) 6. Fluid Milk (SIC-2026) 7. Cheese, natural and processed (SIC-2022 8. Sausages and other prepared meats (SIC-2013) 9. Dry, condensed and evaporated dairy products (SIC-2023	1. Agricultural products- Crops (SIC-01) 2. Vegetables and melons (SIC-161) 3. Deciduous tree fruits (SIC-175) 4. Fresh fruits and vegetables (SIC-5148) 5. Grain and field beans (SIC-5153) 6. Canned fruits and specialties (SIC-2033)

Business ratios are separated as follows[1]:

- Solvency
  - Quick Ratio
  - Current Ratio
  - Current liabilities to net worth
  - Current liabilities to inventory
  - Total liabilities to net worth
  - Fixed assets to net worth
- Efficiency
  - Collection period
  - Sales to inventory
  - Assets to sales
  - Sales to net working capital
  - Accounts payable to sales
- Profitability
  - Return on sales
  - Return on assets
  - Return on net worth

Bias

There is an ethical obligation to disclose the bias of the preparers and analyzers involved in this report. The Humane Party aims and fights to free all animals from abuse, exploitation, and property status. It is in the Humane Party's interest that the results of this report support its goal insofar as possible. All members involved in this investigation, analysis, and report have acted at the margins of this bias, striving for their judgement to remain unaffected by said bias.

Sources

The dun & bradstreet Library Solution's "Key Business Ratios" was utilized as the source for this report. The D&B® Key Business Ratios Archives has over 30 years of history going back to the late 1970's, consisting of US Corporations, partnerships and proprietorships for both public and privately held companies.

Keywords

Agriculture, business, industry, liquidity, solvency, profitability, efficiency, plant-based-industry, animal-based-industry, economic-transition.

[1] Each individual ratio is explained in detail when the result is analyzed.

Disclaimers & Methodology

Disclaimers

Key Business Ratios by D&B look at relevant publicly traded companies within an industry and they analyze their statements and obtain their ratios. By using a relevant sample, they are able to obtain the lowest, highest and most common ratios within an industry. The common use for this data is to compare one's company against the industry (competitors), benchmarking your numbers to understand your position and overall health of your business within the industry, regardless of your size in comparison to competitors. This report does not aim to compare one individual company against their industry sector; the goal is to abridge the situation of all industries directly related to animal-based agriculture and all industries directly linked to plant-based agriculture and compare them to one another. In doing so, we can have a very broad view of both sets of industries and compare them in terms of efficiency, solvency and profitability. In order to merge both sets of data (animal-based industries and plant-based industries) their median results were combined in an average for each ratio. The average of the medians are compared in order to visualize the overall financial situation of both sets of industries (animal-based and plant-based).

When stated, "a company or group" refers to individual companies or a collective of companies within an industry.

Methodology

To ensure accuracy, dun & bradstreet Library solutions identify the upper, lower and median ratio for each industry. An averaged factor was obtained from the medians within each industry and a comparison was laid out between Animal-based industry and Plant-based industry. Each ratio was analyzed individually to properly reflect its implication.

Implications & Results

Implications

Key ratios are mathematical illustrations of a company or group financial condition. Key ratios examine the profitability, solvency and efficiency of a company or group. The value of these ratios is multi-dimensional; some of its uses include:

- Comparing a company against the industry norm.
- Analyzing an industry's current situation.
- Studying the viability of investing in a company within an industry.
- Comparing the health of several industries.

The results of the comparison of key business ratios of industries directly linked to animal-based products against its plant-based counterparts can influence investment decisions. The present analysis can influence future capital investments in the analyzed industries.

Results

Given the nature and value of each key ratio, one set of industries cannot be directly labeled as better than the other. Each set of ratios analyzes a vital aspect of the industries; at the same time, each industry is a complex sector of its own with large particularities. The present analysis condenses all the available information to paint a broad image of the situation of industries relying directly on animal-based products and those relying directly on plant-based products.
The most noticeable results are:

- Animal-based industries are, overall, more liquid than plant-based industries. Animal-based industries have a better capacity to meet their short-term obligations.
- Plant-based industries are, overall, more efficient than animal-based industries. Plant-based industries make better use of their assets and liabilities.
- Plant-based industries are, overall, significantly more profitable than animal-based industries. Plant-based industries generate shareholders, overall, a higher return on their investment.

Findings

Solvency & Liquidity Ratios

Solvency and liquidity ratios measure enterprises' capacity to meet their short-term and long-term obligations. Liquidity also refers to the capability to quickly transform non-cash assets into cash. Table 1 compares the solvency and liquidity ratios:

Table 1 Solvency & Liquidity comparison

Ratios	Plant-Based Industries		Animal-Based Industries		Difference
Quick Ratio	0.90		1.18		0.28
Current Ratio	1.88		1.97		0.08
Current Liabilities / Net Worth (%)	58.62%		74.82%		16.21%
Current Liabilities / Inventory (%)	278.25%		167.98%		110.27%
Total Liabilities / Net Worth (%)	93.27%		117.83%		24.57%
Fixed Assets / Net Worth (%)	54.23%		41.58%		12.66%

Quick Ratio:

The quick ratio, also known as the acid test, is a measure of the extent to which a company or group can cover its liabilities with current assets that are quickly convertible to cash. It shows the amount of assets that are easily convertible to cash and the ability this amount has to cover current debt. A ratio of 1.0 represents a liquid company, or group; the higher the ratio the better.

Animal-based industries have a higher liquidity ratio by a factor of 0.28. This is a relevant difference; animal-based industries have some breathing room in terms of meeting their short-term debts. Companies that make use of their cash assets for non-operational investments have a lower quick ratio as well as those requiring re-investments of their cash in new equipment.

Current Ratio:

The current ratio measures the extent to which current assets can cover current liabilities. The higher this ratio is, the more likely a company will be able to meet its short-term liabilities; as such, a ratio of 2 or higher is desirable.

The animal-based industry has a higher current ratio by a factor of 0.08. This difference is not highly relevant. Companies that make use of their cash assets for non-operational investments have a lower quick ratio as well as those requiring re-investments of their cash in new equipment.

Current liabilities to net worth (%):

This ratio illustrates the relationship of what a company or group owes to its creditors in the course of a year as a percentage of the owners' or stockholders' investment. As a rule of thumb, a company or group, starts to have problems when this relationship is above 80%.

Plant-based industries have a lower relationship in comparison to animal-based industries by 16.21%. Creditors are at higher risk with animal-based industries than with plant-based industries. It is important to mention that animal-based industries are close to the 80% mark.

Current liabilities to inventory (%):

This ratio illustrates, as a percentage, the reliance on the available inventory to pay debt.

Animal-based industries have a better position by a difference of 110.27%, suggesting a better cash situation. Plant-based industries have an overreliance on their inventory to meet their debt. Cash assets might be used to finance non-operational activities such as mergers and acquisitions or to expand the fixed asset accounts.

Total liabilities to net worth (%):

Total liabilities to net worth shows the relation of the company's or group's debt with the equity of stockholders or owners. The higher this ratio is, the less security there is for creditors of the company or group. The difference between this ratio and the previous one is that it includes long-term debt. If total liabilities exceed net worth, creditors have more at stake than stockholders or owners.

For this particular ratio, plant-based industries have a more favorable position by 24.57%.

Fixed assets to net worth (%):

This ratio measures the extent to which the owners' cash is invested and frozen in the form of fixed assets such as property, plant and equipment.

Animal-based industries have a better position by a factor of 12.66%, as less of their owners' cash is frozen in the form of fixed assets.

Efficiency Ratios

Efficiency ratios measure the ability of a company or a group to utilize its assets and manage its liabilities in an effective manner. Table 2 compares the efficiency ratios:

Table 2 Efficiency comparison

Ratios	Plant-Based Industries		Animal-Based Industries		Difference
Collection Period (days)	22.25		22.70		0.45
Sales / Inventory (times)	27.75		18.22		9.53
Assets / Sales (%)	46.95%		35.88%		11.07%
Sales / Net Working Capital (times)	11.17		15.29		4.12
Accounts Payable / Sales (%)	4.13%		4.69%		0.56%

Collection period (days):

The average collection period shows the average number of days in which a company or group cashes their accounts receivable.

Both industries have, on average, a 22 days collection period. The difference places animal-based industries in a more favorable position by 0.45 days; such a difference is not relevant.

Inventory turnover (times):

The sales to inventory ratio measures the speed at which inventories are moving the cash flow of the company or group. A very high ratio may indicate that sales are being lost because of understocked items. A very low ratio may show stagnation of products that are obsolete.

In this specific ratio, plant-based industries have a more favorable position; there is better inventory turnover by a factor of 9.53 times. In the case of public companies, a higher inventory turnover drives cash flow, which is a very important component on the sentiments for the stocks' valuation.

Assets to sales (%):

The assets to sales ratio shows how efficiently companies utilize their assets to generate sales. The higher the ratio, the lower the investment required to generate sales. A very high ratio can indicate that company assets are not being fully utilized, while a low ratio may indicate that a company is selling more than what can be safely fulfilled with its assets.

For this ratio plant-based industries enjoy a more favorable position, requiring less of an investment to generate sales; by a factor of 11.07%.

Sales to net working capital (times):

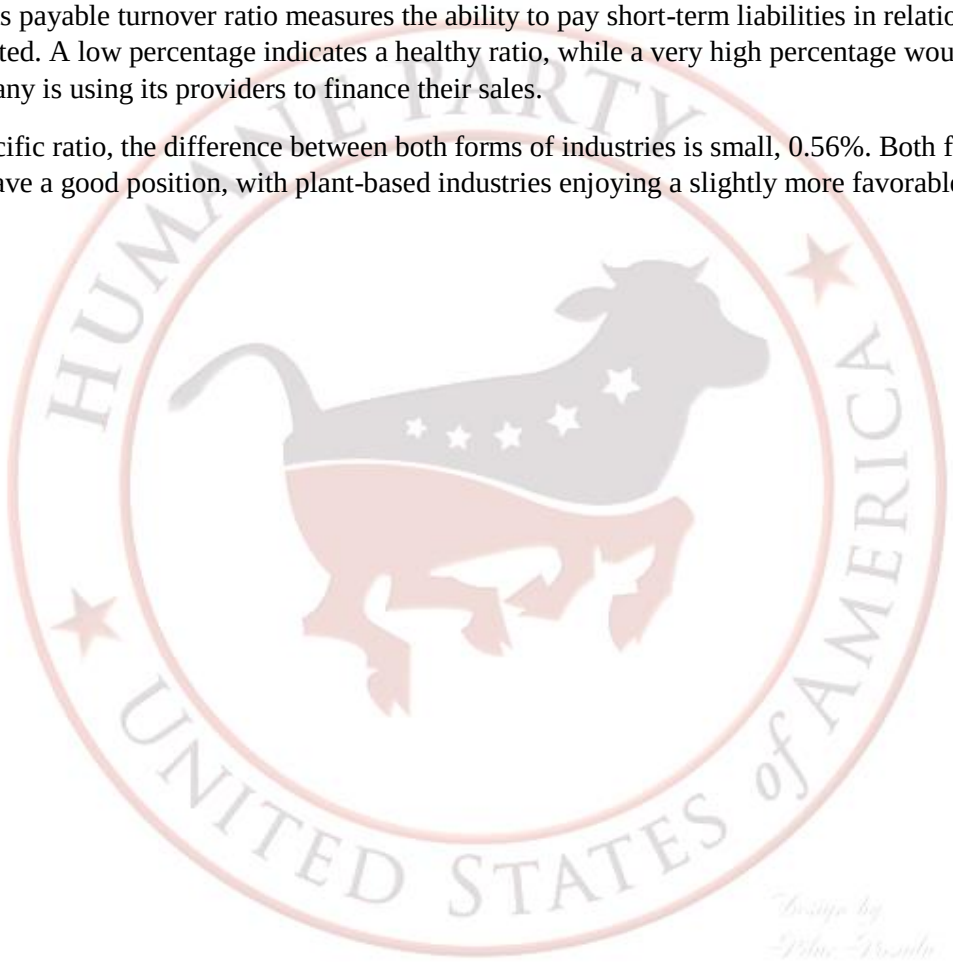
This ratio measures the number of times the working capital turns over in relation the companies' net sales. This ratio indicates the effectiveness with which working capital is being used.

Animal-based industries appear to be more efficient in utilizing the short-term assets and liabilities for supporting sales, by a factor of 4.12.

Accounts payable to sales (%):

The accounts payable turnover ratio measures the ability to pay short-term liabilities in relation to the sales generated. A low percentage indicates a healthy ratio, while a very high percentage would indicate that a company is using its providers to finance their sales.

For this specific ratio, the difference between both forms of industries is small, 0.56%. Both forms of industries have a good position, with plant-based industries enjoying a slightly more favorable position.



Profitability Ratios

Profitability ratios describe how well a company is performing by analyzing how profits were earned in relation to sales, assets and net worth. Table 3 compares the profitability ratios:

Table 3 Profitability comparison

Ratios	Plant-Based Industries		Animal-Based Industries		Difference
Return on Sales (%)	3.35%		2.96%		0.39%
Return on Assets (%)	8.42%		7.43%		0.98%
Return on Net Worth (%)	17.13%		14.68%		2.46%

Return on sales (%):

This ratio measures the profits after taxes from the year's sales. The higher the ratio, the better companies are equipped to handle downtrends.

Plant-based industries enjoy a more favorable position than animal based industries by a factor of 0.39%.

Return on assets (%):

The returns on assets ratio shows the after tax earnings of assets; this particular ratio is the key indicator of companies' profitability. A high percentage indicates companies are well-run, with healthy returns on assets.

Plant-based industries rank at a higher position by a factor of 0.98% when compared to animal-based industries. The difference may appear small but, depending on the revenues generated, it can represent millions of dollars.

Return on net worth (%):

The return on net worth measures the ability to generate an adequate return on the capital invested by the owners or stockholders.

Plant-based industries have a better capital management by a factor of 2.46%. This ratio measures how many dollars of profit are generated with each dollar of shareholders' equity. This ratio shows that plant-based industries generate more profits for every dollar invested by the shareholders than animal-based industries.

Exhibits

Table 4.1 Plant-based ratios per industry part-1

Plant-based industries Key Business Ratios							
Industry	**Agricultural products (Crops)**				**Vegetables and Melons**		
SIC	**01**				**161**		
Year of Data	**2014**				**2015**		
Number of Samples	**Samples: 96**				**Samples: 14**		
Solvency	Upper	Median	Lower		Upper	Median	Lower
Quick Ratio	2.1	0.8	0.2		1.6	0.8	0.4
Current Ratio	5.2	1.6	0.9		4.9	1.7	0.6
Current Liabilities / Net Worth (%)	7.9	40.2	103.6		24.8	58.8	96
Current Liabilities / Inventory (%)	99	189.5	560.6		28.7	196.8	305.9
Total Liabilities / Net Worth (%)	18.1	68.5	160.9		30.9	86.7	128.6
Fixed Assets / Net Worth (%)	35.2	57.8	112.8		28.8	45.7	54.1
Efficiency	Upper	Median	Lower				
Collection Period (days)	16.4	28.5	45.6		2.4	23	45.9
Sales / Inventory (times)	37	14.4	4.5		24.7	9.1	8.2
Assets / Sales (%)	32.2	66.8	135.9		30.1	47.5	63.3
Sales / Net Working Capital (times)	15.9	7	3.2		7.8	6.4	4.1
Accounts Payable / Sales (%)	2.5	5.2	9.7		2.5	5.9	10.4
Profitability	Upper	Median	Lower				
Return on Sales (%)	8.4	2.3	0		8	2.8	0.4
Return on Assets (%)	16.9	4.6	-0.1		18.9	5.2	0.7
Return on Net Worth (%)	33.2	13.7	1.5		30.3	7.8	3.5

Table 4.2 Plant-based ratios per industry part-2

Plant-based industries Key Business Ratios												
Industry	**Deciduous Tree Fruits**			**Fresh Fruits and Vegetables**			**Grain and Field Beans**			**Canned Fruits and Specialties**		
SIC	**175**			**5148**			**5153**			**2033**		
Year of Data	**2011**			**2015**			**2015**			**2015**		
Number of Samples	**Samples: 10**			**Samples: 121**			**Samples: 90**			**Samples: 14**		
Solvency	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Quick Ratio	6.4	1.4	1	1.7	1.2	1	0.8	0.4	0.2	1.1	0.8	0.5
Current Ratio	6.4	2.7	1.3	2.2	1.5	1.2	1.9	1.5	1.3	3.1	2.3	1.5
Current Liabilities / Net Worth (%)	9.9	18.7	24.9	50.3	115.6	222.2	43.6	72.3	124.4	29.2	46.1	242.4
Current Liabilities / Inventory (%)	214.8	526.4	999.9	377.1	557.8	999.9	91.9	120.9	167.6	53.1	78.1	224.4
Total Liabilities / Net Worth (%)	13.9	27.7	100.4	56.4	134.3	244.9	64.8	100.9	152.1	57.4	141.5	462.6
Fixed Assets / Net Worth (%)	47.3	53	93.1	6.1	31.9	62.7	37.3	56	74.7	29.6	81	156.9
Efficiency	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Collection Period (days)	16.8	19	26.3	19.7	26.5	33.2	7.1	11.7	17.5	21.7	24.8	30.7
Sales / Inventory (times)	94.6	41.6	21.6	163.6	84.2	50.8	12.6	8	4.6	20.9	9.2	2.9
Assets / Sales (%)	16.8	43.1	62.7	12.4	16	22.3	34.5	45.8	62.3	30.5	62.5	75.4
Sales / Net Working Capital (times)	26.9	15.4	6.5	43.2	20.8	14.5	16.3	11.5	7.8	11.9	5.9	3.5
Accounts Payable / Sales (%)	0.2	1.8	4.5	2.7	4.8	7	1.4	2.3	4.1	2.2	4.8	5.9
Profitability	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Return on Sales (%)	16.2	5.9	2.6	2.4	1	0.3	3.5	2.1	1.5	12	6	0.9
Return on Assets (%)	37.4	23.1	4.3	14.6	4.9	2.1	7.5	5.5	2.8	19.8	7.2	3.5
Return on Net Worth (%)	102.5	36.6	4.5	40.2	14.6	5	14.3	10.3	7	86.9	19.8	6.9

Table 5.1 Animal-based ratios per industry part-1

Animal-based industries Key Business Ratios									
Industry	**Agricultural Production-Livestock and Animal Specialties**			**Poultry and Poultry Products**			**Meats and Meat Products**		
SIC	**02**			**5144**			**5147**		
Year of Data	**2014**			**2013**			**2015**		
Number of Samples	**Samples: 23**			**Samples: 11**			**Samples: 29**		
Solvency	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Quick Ratio	2.2	0.8	0.3	2.8	1.9	0.8	6.3	1.8	1.1
Current Ratio	4.6	1.9	1.2	5.9	2.1	1.3	10.7	2.9	1.8
Current Liabilities / Net Worth (%)	3.1	18.4	56.7	35.8	95	140.4	6.5	31.9	58.5
Current Liabilities / Inventory (%)	58	84.5	232.2	85.5	131.6	289.5	33.4	103.2	190.7
Total Liabilities / Net Worth (%)	3.2	50.6	97.8	54	141.6	228.6	12.9	55.1	123.9
Fixed Assets / Net Worth (%)	33.2	65.2	97.3	12.3	21.5	42.5	4.7	23.9	74.8
Efficiency	Upper	Median	Lower				Upper	Median	Lower
Collection Period (days)	4	15.3	23.7	16.8	23	30.7	11.9	15.7	23.9
Sales / Inventory (times)	12.2	7.7	4.3	46.1	27.5	16.1	45.3	27.3	13.8
Assets / Sales (%)	40.7	55.5	104	12.7	16.2	24.4	14.1	18.4	27
Sales / Net Working Capital (times)	9.4	6.3	3.9	21.8	13.5	10.3	27.2	11.3	6.6
Accounts Payable / Sales (%)	1	1.7	3	2.6	4	4.7	1.5	1.6	3.3
Profitability	Upper	Median	Lower				Upper	Median	Lower
Return on Sales (%)	12.3	9.7	5.6	2.4	1.1	0.2	4.6	1.8	0.7
Return on Assets (%)	20.7	14.9	7.3	11.8	4.9	1.3	21.6	10.1	3.6
Return on Net Worth (%)	33.2	19.4	11.9	21	12	3.4	29.6	14.7	7.2

Table 5.2 Animal-based ratios per industry part-2

Animal-based industries Key Business Ratios									
Industry	**Fish and Seafood Products**			**Dairy Products Except Dried or Canned**			**Fluid Milk**		
SIC	**5146**			**5143**			**2026**		
Year of Data	**2015**			**2015**			**2012**		
Number of Samples	**Samples: 17**			**Samples: 11**			**Samples: 11**		
Solvency	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Quick Ratio	1	0.7	0.4	2.3	1.4	0.9	1.4	0.9	0.7
Current Ratio	1.5	1.3	1	24	2	1.4	2.8	1.3	1.1
Current Liabilities / Net Worth (%)	111	243.9	560.1	10.4	106.5	245.9	22.3	58	257.6
Current Liabilities / Inventory (%)	112.7	169.3	304.5	117	200.8	207.8	184.4	378.8	486.6
Total Liabilities / Net Worth (%)	135.6	243.9	572	63.5	223.1	663.3	44.3	73.7	260.9
Fixed Assets / Net Worth (%)	4.9	19.4	81.1	2.1	8	20.3	32.2	52.1	63.5
Efficiency	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Collection Period (days)	22.3	32.1	38	20.5	27	34.7	22.6	23.7	27.7
Sales / Inventory (times)	23.4	10.7	7.8	20.3	18.6	15.2	46.8	28.1	19.2
Assets / Sales (%)	14.2	22.1	27.7	11.2	21.1	68.5	20.2	35.4	57.7
Sales / Net Working Capital (times)	64.9	33.6	11.7	26.9	13.8	5.4	81.1	33.6	8.1
Accounts Payable / Sales (%)	3.4	6.1	7.9	3.8	6.7	8.1	2	5	9.6
Profitability	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Return on Sales (%)	2.7	1.3	0.5	4.9	1.2	0.6	2.5	1.6	0.7
Return on Assets (%)	17.7	4.4	3.2	25.7	8	2.9	9.8	6.4	1.8
Return on Net Worth (%)	54.4	18.4	7	52.1	22.3	14.8	28.2	13.9	5.1

Table 5.3 Animal-based ratios per industry part-3

Animal-based industries Key Business Ratios									
Industry	**Cheese, Natural and Processed**			**Sausages and Other Prepared Meats**			**Dry, Condensed and Evaporated Dairy Products**		
SIC	**2022**			**2013**			**2023**		
Year of Data	**2012**			**2015**			**2015**		
Number of Samples	**Samples: 10**			**Samples: 13**			**Samples: 13**		
Solvency	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Quick Ratio	1.6	0.7	0.4	2.2	1.1	0.9	1.6	1.3	0.6
Current Ratio	3.8	1.7	1.1	4.3	2.5	1.8	2.6	2	1
Current Liabilities / Net Worth (%)	11.5	47.9	109	20.6	32.5	97.5	20.5	39.3	64.6
Current Liabilities / Inventory (%)	94.2	106.1	292.3	52.3	113.6	127.3	141.2	223.9	536.2
Total Liabilities / Net Worth (%)	14	109.4	224.7	48.4	111.2	220.7	37.3	51.9	74.8
Fixed Assets / Net Worth (%)	37	63.7	117.7	48.6	55.1	122.8	19.4	65.3	85.9
Efficiency	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Collection Period (days)	21.5	29.2	42.3	15.7	16.4	28.5	17.8	21.9	37.1
Sales / Inventory (times)	12	11.1	9.4	24.6	19	12.9	15.5	14	7
Assets / Sales (%)	52.7	74.5	127.2	22.2	25	30.5	31.3	54.7	99.6
Sales / Net Working Capital (times)	28.7	7.4	4.4	38.3	10.7	8.4	8.4	7.4	5.4
Accounts Payable / Sales (%)	2.8	4.8	10.5	0.3	1.8	2.9	6	10.5	18.8
Profitability	Upper	Median	Lower	Upper	Median	Lower	Upper	Median	Lower
Return on Sales (%)	7.7	5.1	1.3	9.3	2.6	0.3	8.5	2.2	-3.2
Return on Assets (%)	8.5	5.5	2.2	37.6	9.7	2.2	10.7	3	-30.7
Return on Net Worth (%)	18.7	9.6	9.4	56.8	14.6	8.8	15.1	7.2	-11.5

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