AGRICULTURAL COOPERATIVES
A YEAR IN REVIEW

CPAs / ADVISORS

blue

ABOUT

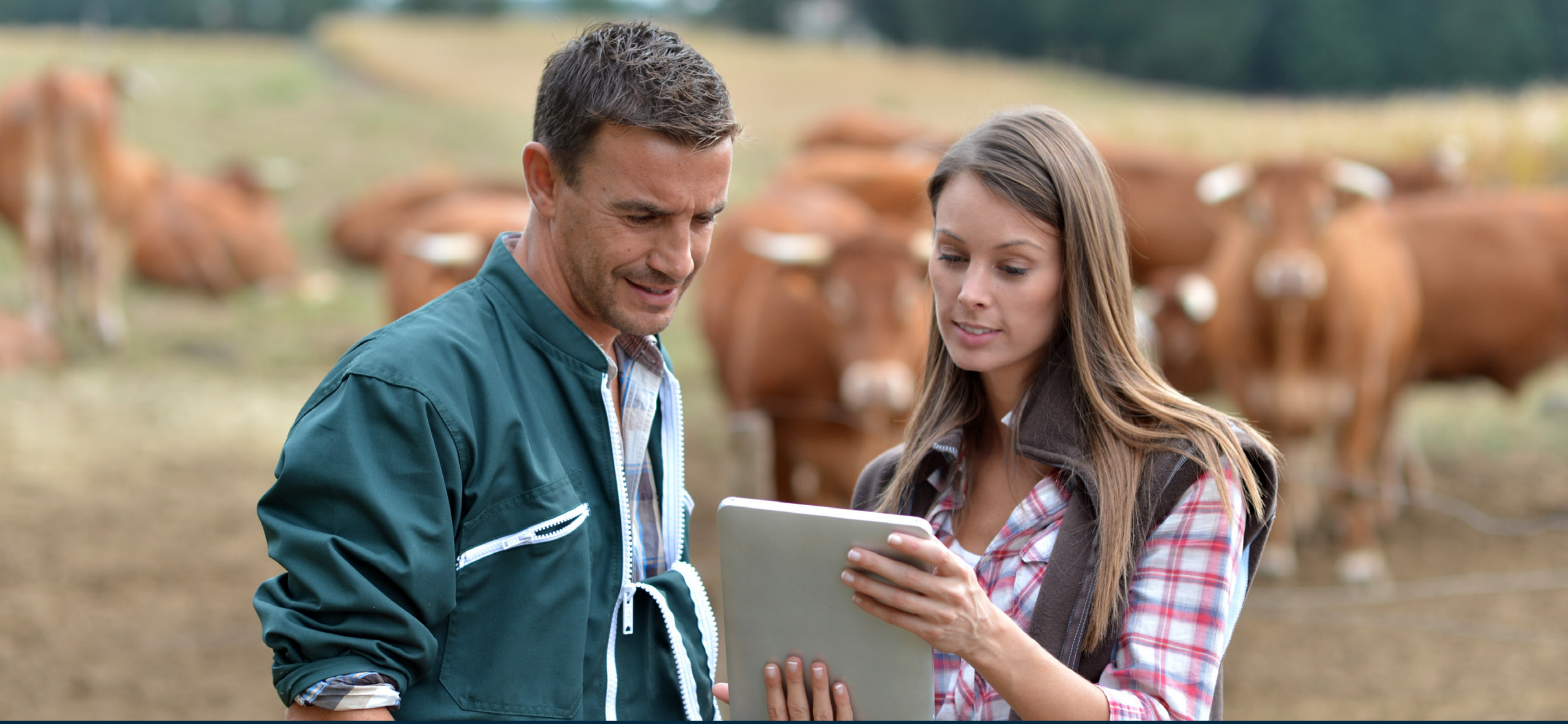
Blue & Co., LLC has provided services to the agricultural cooperative sector for over 20 years. Blue's agricultural cooperative client base comprises entities serving over 130 counties in Illinois, Indiana, Kentucky, Michigan, Mississippi, Ohio, and Tennessee. Blue annually accumulates certain operational and financial data from these entities as part of preparing peer analyses which are presented to management and boards.

The following high-level analysis is a summary of selected information from Blue's ag cooperative client base from 2017–2021, broken down by area of interest. Our goal in sharing this overview is to help our clients, their board members, and others, better understand trends we see in our client base. These trends are unique to this set of entities and may not be representative of entities not included herein.

This overview includes information related to a majority of the entities included. For example, while a number of entities have marketing activities, the majority do not. Similarly, several entities have feed or livestock operations, but the majority do not. Some entities have these operations in joint ventures or other entity structures. As such, this summary focuses on areas of commonality across the group to ensure the population of data is sufficiently broad to offer meaningful insights.

CPAs / ADVISORS

blue



OVERVIEW

The group has seen investments in marketing-related assets (primarily grain) over the past five (5) years and a shift in revenue mix between supply and marketing accordingly. The split of total operating income (TOI) between gross margin and service revenue has remained relatively consistent over this timeframe. Growth in other categories has pushed the percentage of petroleum sales down in 2020 and 2021. Understanding this mix and split is important when comparing to the group average, as differences in revenue mix can cause differences in trends and financial relationships based on the nature of marketing-related operations.

	2017	2018	2019	2020	2021
Supply % total sales	86.1%	85.2%	84.0%	83.4%	79.1%
Marketing % total sales	13.9%	14.8%	16.0%	16.6%	20.9%

	2017	2018	2019	2020	2021
Margin % total operating income (TOI)	76.8%	77.2%	77.7%	76.9%	78.6%
Service revenue % TOI	23.2%	22.8%	22.3%	23.1%	21.4%

	2017	2018	2019	2020	2021
Supply - Petroleum	28.0%	29.8%	27.8%	23.8%	22.7%
Supply - Propane	4.0%	4.9%	4.5%	4.4%	3.9%
Supply - Plant Food	22.8%	22.0%	23.2%	23.6%	24.1%
Supply - Chemical	14.8%	13.3%	12.7%	14.3%	13.4%
Supply - Seed	8.3%	7.2%	7.1%	7.3%	6.1%
Supply - Other	8.2%	8.1%	8.7%	10.0%	9.1%
Total Marketing Sales	13.9%	14.8%	16.0%	16.6%	20.9%

REVENUE

Gas and diesel volumes remain relatively consistent over this timeframe. Propane volumes are subject to more variation due to weather and grain drying impacts. Bulk plant food has seen the most growth as the group has grown this category by almost 300,000 tons since 2017. Ammonia sales are relatively consistent and also subject to variation based on pricing and planting season constraints. Chemical sales have also seen overall growth with an approximate $50 million increase. Seed sales have seen almost no growth over this time period.

Sales of gas and diesel reported herein relate to bulk plant, transport or wholesale sales, and do not include retail fuel operations. Gas margins have seen slight improvement during the past two (2) years, while diesel and propane margins have seen little movement. Bulk plant food (liquid and dry, excluding direct sales) saw the most margin movement in 2021 based on supply chain constraints and price appreciation in the market. This increase was a primary driver of TOI growth and translated into improved profitability for the group.

Given that the group includes a mix of summer and calendar year-ends, the fall application margins seen by the calendar year-end clients benefited from continued price appreciation. Ammonia margins are relatively consistent with the exception of 2019 which saw outstanding results. Chemical margins continue to operate within a relatively tight range and seed margins have seen only slight improvements over 2020 and 2021. The overall margin percent fell in 2021 due to the impact of rising prices.

	2017	2018	2019	2020	2021
Gas gallons (millions)	32	33	33	32	30
Diesel gallons (millions)	96	100	100	101	98
Propane gallons (millions)	45	57	56	58	53
Bulk plant food tons (thousands)	739	863	875	967	1,017
Ammonia tons (thousands)	151	164	130	170	170
Chemical sales (millions)	237	244	240	264	286
Seed sales (millions)	131	132	134	137	130

	2017	2018	2019	2020	2021
Gas CPG margin	0.266	0.269	0.275	0.313	0.313
Diesel CPG margin	0.322	0.322	0.325	0.332	0.324
Propane CPG margin	0.562	0.585	0.633	0.626	0.633
Bulk plant food $ / ton margin	67	67	72	68	81
Ammonia $ / ton margin	86	84	102	88	92
Chemicals % margin	26.6%	29.6%	29.5%	26.9%	27.3%
Seed % margin	10.9%	11.7%	11.9%	12.6%	13.1%
Overall % margin	15.3%	14.8%	14.9%	15.6%	14.5%

EXPENSE

The below analysis includes several major expense categories of interest. Total employee costs (salaries, bonuses, payroll taxes, retirement, group insurance, and other employee costs) saw improvement in 2021 as a % of TOI as TOI increased faster than this cost category increased. Employee costs represent the largest cost category and the ability to manage these costs relative to TOI growth is a primary determinant of profitability change.

Group insurance and repairs and vehicle expense have both been very consistent over this period. Depreciation expense had been increasing over this period until 2021, when the growth in TOI exceeded this as the group captured the value of prior investments. From 2017–2020, the increase in depreciation expense as a % of TOI was a primary driver of declining profitability as the group had seen higher expense levels without the necessary growth in revenues to offset this.

	2017	2018	2019	2020	2021
Employee costs % TOI	47.1%	45.9%	46.4%	47.5%	46.4%
Group insurance % TOI	5.8%	5.3%	5.8%	5.5%	5.6%
Repairs and vehicle expense % TOI	13.0%	13.5%	13.5%	13.6%	13.7%
Depreciation % TOI	12.4%	14.0%	13.9%	14.7%	13.8%

RETURN

Local income saw marked improvement in 2021, with 2021 being the second best year on a percentage basis of the past five (5) years. The increase in margins, as aforementioned, and the related growth in TOI outpaced the growth of expenses. Market conditions and volume growth both positively impacted these results. Both return on local equity and return on local assets saw improvement in 2021, but have yet to return to the 2017 levels.

Inflation analysis sets a base year and measures changes from that base year forward. This type of analysis can be meaningful in environments where expenses are expected to move relatively in proportion to revenues. Expanded versions of such analyses allow profitability impacts to be measured over time and evaluated as to causes and potential solutions. If the related inflation in expenses is more fixed than variable in nature, then the focus may need to be on growing total operating income more so than addressing changes in expenses.

TOI has grown 32% since 2017 and employee costs have grown slightly less at 30%. Given the magnitude of employee costs, this relationship is key to the improved profit and return. Fixed facility costs, including depreciation, have grown 54% over this timeframe and the past 4 years have seen differentials versus TOI of +15%, +16%, +23% and +23%. The group continues to see profitability suppressed by this effect as the need for TOI growth continues to be a primary solution in terms of supporting improved profits. The operating expense inflation in 2021 fell back in line with TOI growth positively impacting profitability relative to 2020.

	2017	2018	2019	2020	2021
Local income % TOI	11.6%	9.2%	8.9%	6.6%	10.4%
Return on local equity	7.9%	6.8%	6.3%	4.6%	7.4%
Return on local assets	3.9%	3.2%	3.0%	2.3%	3.3%
TOI inflation	100%	114%	117%	121%	132%
Operating expense inflation	100%	114%	118%	125%	131%
Fixed facility expense inflation	100%	129%	134%	148%	154%
Employee expense inflation	100%	111%	115%	122%	130%

CREDIT RISK MANAGEMENT

Credit risk management varies significantly across this group. Some cooperatives require customer payment in 30 days while others carry unsecured trade credit from planting season through harvest. Some offer internal financing programs while others have varying relationships with outside lenders with varying degrees of recourse. The group has seen little change in the number of days of supply sales in A/R over the past 5 years. A/R over 90 days has seen improvement due to a combination of write-offs, better credit management efforts and improved farm income.

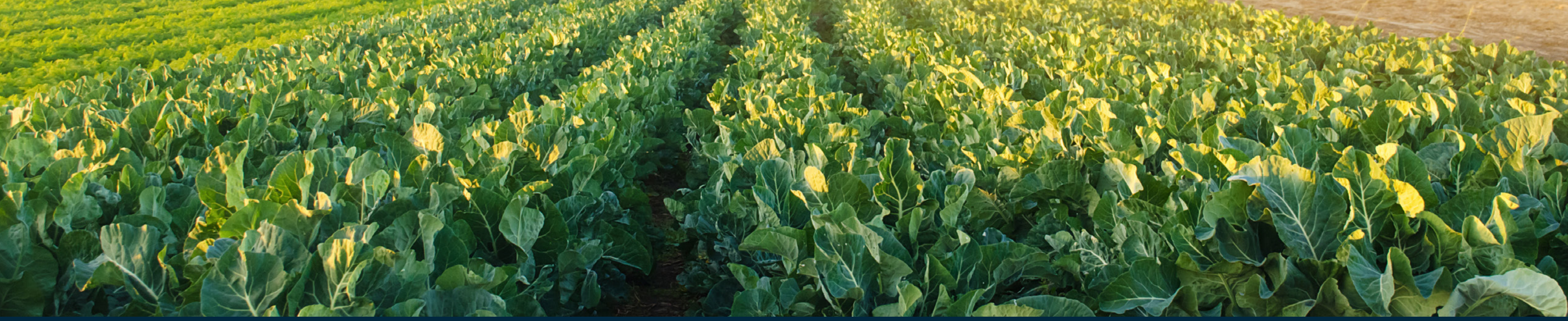
2021 saw the lowest level of net write-offs of the past five (5) years. At the peak, 2018 saw net write-offs of $4.2 million compared to $1.1 million in 2021. Despite the consistency and improvements noted, the allowance percentage has not changed significantly over this period. The impending adoption of ASU 2016-13 (effective for fiscal years beginning after December 15, 2022) related to the current expected credit loss model will impact this group and require enhanced assessment and recognition responses.

	2017	2018	2019	2020	2021
Days supply sales in A/R	57.4	49.9	55.1	53.7	54.4
A/R > 90 days	15.4%	15.8%	11.8%	11.9%	7.8%
Net write-offs % TOI	0.7%	1.1%	0.4%	0.9%	0.2%
Allowance % A/R	7.5%	7.6%	6.9%	7.0%	6.2%

INVENTORY RISK MANAGEMENT

The supply chain issues in 2021 and continuing into 2022 led the group to increase the investment in both inventories and prepaid inventories. While pricing increases impact the calculation, the group was taking affirmative steps to secure inventories to meet customer demands. The group also shifted strategy and engaged its customer base to a greater degree than in prior years. In prior years, the cooperatives were accepting a higher degree of price risk on behalf of the customer base and at least some cooperatives were purposely engaging customers in 2021 in shifting this risk to the extent possible. Clearly, the cooperatives continue to retain the major portion of price risk in this area though.

	2017	2018	2019	2020	2021
Days in supply inventory	53.1	60.1	59.8	59.3	73.3
Days in prepaid supply inventory	23.4	23.9	24.3	24.5	41.1
Customer deposits / inventory & prepaid supply inventory	17.8%	13.3%	19.2%	18.1%	23.7%
Days supply sales in customer deposits	11.3	8.8	12.5	11.6	20.7



ASSET LEVERAGE

At the beginning of this five (5) year period, the group saw large investments in feed mills and marketing-related assets in particular. The group has also seen a number of organic expansions in new facilities. The past two (2) years have seen much lower investments when comparing fixed asset purchases to depreciation expense demonstrating more of a maintenance posture than a growth posture. This approach is responsive to the need to capture the value of the prior investments to address their impact on profitability. The group has also seen approximately $30 million of equity method investments over this timeframe.

TOI leverage to both fixed assets and working capital have been almost unchanged over the entire timeframe. The decrease in TOI to local assets is caused by the increases seen earlier in inventories and prepaid inventories. The significant investment in fixed assets drives the increase in depreciation and fixed facility costs referenced previously. Despite the fixed asset investments noted, the group has maintained a relatively consistent trend of working capital relative to the growth in equity over the past five (5) years.

	2017	2018	2019	2020	2021
Fixed asset investment (millions)	79.6	82.6	72.7	59.0	68.3
Fixed assets investment % depreciation	185%	150%	128%	95%	109%
TOI / net fixed assets	1.1	1.0	1.0	1.0	1.1
TOI / working capital	1.2	1.4	1.4	1.3	1.4
TOI / local assets	0.33	0.35	0.34	0.35	0.32
Working capital % equity	44.2%	40.2%	40.2%	42.7%	39.0%

DEBT LEVERAGE

Debt to equity increased in 2021 due to the growth in accounts payable, lines of credit and customer deposits which support the related increase in inventories and prepaid inventories on the other side of the balance sheet. Without this effect, the downward trend in debt to equity would have continued into 2021. Fixed charge coverage has been consistent and strong for the group. The overall downward trend in term debt is due to fewer major projects and more debt paydown than new term debt issued. The group continues to see significant debt capacity to support new investments and growth. ASC 842, *Leases* will undoubtedly push debt to equity ratios higher starting in 2022 for calendar year-end cooperatives.

	2017	2018	2019	2020	2021
Debt to equity	0.75	0.76	0.80	0.71	0.87
Fixed charge coverage	4.61	4.23	3.92	4.00	4.00
Term debt to net fixed assets	27.3%	23.7%	23.1%	26.8%	20.6%
Debt capacity 2.5x leverage (millions)	1,177.1	1,239.4	1,269.1	1,402.0	1.359.2

EQUITY MANAGEMENT

The drop in equity as a percent of total assets is also caused by the growth of inventories and prepaid inventories in 2021. Without this impact, this relationship would have crossed 60% this past year. The group has a strong equity base and significant balance sheet strength. The amount of allocated equity to members continues to decrease. While there is a wide range from high to low for this relationship among the group, the group is focused on paying a higher cash patronage percentage and has not been growing its members' investment in the cooperatives.

The extent of member versus non-member business for the group also impacts this as this relationship varies widely among the cooperatives. The continued decrease in allocated equity as a percent of local assets shows less reliance on the members for financing the business and the combined decreases seen versus equity and assets suggest a continued lower level of "skin in the game" by members.

The spike in cash patronage and redemptions in 2021 was caused by one entity which approved special redemptions in this year. The long-term trend in this area remains a return of roughly 35% of local income to the members. The average years to redeem allocated equity has dropped to its lowest level impacted by the special redemption discussed herein. The 2017 result was due to a year-end change and lack of redemptions for one cooperative in that year. Overall, the 12 to 14 year suggested revolvement or redemption timeframe has been relatively consistent.

	2017	2018	2019	2020	2021
Equity % total assets	57.3%	56.8%	55.6%	58.4%	53.4%
Allocated equity % total equity	20.3%	18.5%	17.3%	16.2%	14.6%
Allocated equity % local assets	13.2%	11.8%	10.7%	10.6%	8.6%
Cash patronage & redemptions % local income	32.7%	36.6%	35.2%	34.5%	45.8%
Avg. years to redeem allocated equity	21.8	13.3	12.2	14.3	11.6

PATRONAGE

Except for 2020, the amount of member taxable income returned in the form of patronage has been very consistent around 62%. The percentage returned in cash has also been consistent averaging 65%. While the impact of certain tax deductions and credits have impacted this calculation for the group, the approach taken has seen little change over this timeframe.

	2017	2018	2019	2020	2021
% member income returned in patronage	62.7%	61.9%	61.0%	48.9%	61.6%
Cash % of total patronage	64.4%	60.9%	62.8%	65.3%	64.9%

OTHER

One of the primary challenges for this group has been growth. Growth of TOI is necessary to ensure the long-term sustainability of the cooperatives. While growth of TOI is challenging, the inflation of operating expenses is almost certain. It is critical that the group be able to grow TOI at a pace to offset the effects of expense inflation. The magnitude of this impact can be seen below and at 3% suggests a $10.6 million negative impact on 2022 aggregate earnings.

At the time of this summary, annualized inflation is running at more than double this calculated rate. Local income saw its best result in 2021 as a result of the factors discussed throughout this summary. Local income is also growing faster than TOI (+8%) since 2017 which is a positive. Recasting local income at the same inflation rate as TOI shows the underperformance of the group in profitability in 2018 – 2020 and the aggregate improvement to a positive relationship by $2.7 million in 2021.

	2017	2018	2019	2020	2021
Inflation impact on earnings (3% inflation) (millions)	8.2	9.2	9.6	10.1	10.6
Local income (millions)	31.3	34.2	34.4	25.1	43.9
Local income inflation	100%	109%	110%	80%	140%
Recast local income at TOI growth rate (millions)	31.3	35.6	36.8	38.0	41.2
Local income actual versus recast	-	(1.4)	(2.4)	(12.8)	2.7

SUMMARY

Over the past five (5) years, this group of cooperatives saw numerous opportunities for growth which positively impacted the changes seen in TOI. These included four (4) new organically developed facilities, acquisitions of an independent agronomy business, two (2) refined fuel operations and four (4) grain operations. The group also saw a member-owned cooperative merger, four (4) investments in administrative and rental property, and two (2) new feed mills constructed. Equity method investments included purchasing interests in a feed mill, an agronomy operation, a genetics entity, livestock suppliers and grain elevators.

2021 saw market conditions and cooperative strategic investments produce improved results. After a couple years of expense growth outpacing TOI growth, last year saw this trend flip and the gains in TOI provided the basis for much better local profitability. Market conditions heading into 2022 offer opportunities and challenges. Potential margin opportunities must be balanced against increased credit risk management needs and can be quickly erased by inventory price risk exposure.

Cooperatives are diverse, complex entities impacted by a multitude of factors. We hope this overview provides some insight into the trends experienced by our client base. Benchmarking against peer groups and trend analysis are important metrics to use in defining the direction and focus for any organization. Identifying gaps in performance or negative trends versus the industry are key so management and boards of ag cooperatives can evaluate their next steps.

If you have any questions on the information in this overview, please reach out to Blue & Co.'s agricultural cooperative team.

CPAs / ADVISORS

blue

CPAs / ADVISORS

blue

Visit us online at www.blueandco.com