The Impact of the "Grain Glitch Fix" on Specialized Cooperatives

This paper examines the influence of the tax rule changes associated with the Tax Cuts and Jobs Act of 2017 ("TCJA 2017") and the Consolidated Appropriations Act of 2018 ("CAA 2018") fix to the Grain Glitch on the financing decisions and after-tax returns of Specified Cooperatives and their patrons. I show Specialized Coops can increase their qualified distribution to eligible patrons and resulting after-tax returns by passing-down their Section 199A(g) deduction in a manner that doesn't impact their explicit tax position. I also show Specialized Coops that adopt the "pooling method" can increase the after-tax returns of high-income patrons. Depending on the situation, I show that Specialized Coops will have incentive to issue qualified or non-qualified distributions to their patrons in the form of equity to increase their level allocated equity as well as to provide their patrons future cash flow flexibility. Finally, I suggest that the ability of Exempt Coops to take the Section 199A(g) deduction on non-patronage income may increase their incentive to organize as a Section 521 Exempt Specialized Coop.

1: Introduction

This paper examines the influence of the tax rule changes associated with the Tax Cuts and Jobs of 2017 ("TCJA 2017") and the Consolidated Appropriations Act of 2018 ("CAA 2018") on the financing decisions and after-tax returns of cooperatives that manufacture, grow, extract or market agricultural or horticultural products ("Specified Coops") and their patrons. TCJA 2017 reduced the income tax rate on Specified Cooperative taxable income to 21% and eliminated their ability to take the Domestic Production Activities Deduction. In its place, it created the IRC Section 199A Qualified Business Income Deduction ("QBID") which applies to non-corporate farmers and allows those who sell their product to agricultural corporations a non-cash deduction equal to 20% of their Qualified Business Net Income. If, however, the same farmer sold the same product to a Specified Cooperative, Section 199A allowed them to compute their QBID based on 20% of the gross qualified distribution received from the coop. This disparity, known as the "grain glitch", represented an unintended consequence of Section 199A and created an incentive for farmers to sell their product to Specialized Cooperatives rather than agricultural corporations to obtain a higher QBID and maximize their after-tax returns [Greenberg, 2018].

CAA 2018 addressed the "grain glitch" disparity by amending Section 199A in two ways. First, it modified IRC Section 199A(a) to require patrons receiving qualifying distributions from Specified Coops to recognize the fair value of the distribution into their Qualified Business Income ("QBI"). This insures that Specialized Coop patrons Section199A(a) deduction will be calculated in a similar manner as farmers who sell their product to agricultural corporations. Second, it introduced IRC Section 199A(g) which provides a new deduction for Specialized Coops based on 9% of their Qualified Production Activity Income ("QPAI") while also providing them the option of retaining or passing through some or all of this deduction to eligible patrons (individuals and/or partnerships) for use on their own returns. Under the new law, since Specialized Coop eligible patrons may be able to take both a Section 199A(a) and 199A(g) deduction on their own returns, the 2018 Act requires them to reduce their Section 199A(a) deduction by as much as 9% of their QBI ("Section 199A(b)(7) reduction"). This latter reduction applies regardless of whether the Specified Coop passes on their Section 199A(g) deduction to eligible patrons or not and has the effect of limiting their QBID to as little as 11% of QBI or expanding it up to as much as 29% of QBI [Greenberg, 2018].[1]

In this paper, I explore whether the flexibility CAA 2018 provides Specified Coops to retain or pass-through their Section 199A(g) deduction to eligible patrons allows them to manage their distribution strategies so to maximize their after-tax returns and those of their patrons. I show that Specialized Coops can increase their qualifying distribution amount to patrons by passing-through their Section 199A(g) deduction to eligible patrons in a manner that doesn't impact their own tax burden. The patron's after-tax returns increase by the same qualifying distribution amount that is "sheltered" from taxation by the associated passed-down 199A(g) deduction and also by an additional "bump" in after-tax returns associated with increased distributions combined effect on the patron's net Section 199A(a) deduction. I also show the impact of the grain glitch fix to eligible patron after-tax returns is an increasing function of the tax benefit

[1] The 2018 Act retro-actively takes effect beginning January 1, 2018.

associated with interaction between their Section 199A(g) deduction and 199A(b)(7) reduction. I suggest the Specialized Coop may wish to consider distributing this incremental tax benefit in the form a qualifying equity distribution rather than cash. This provides the Specialized Coop the opportunity to increase their allocated equity but also provide the patron the flexibility to redeem the equity in the future in a tax-free manner at a time of their choosing. I also show Specialized Coops that adopt the "pooling method" can increase the after-tax returns of high-income patrons without impacting the after-tax returns their other patrons. Additionally, since Specialized Coops are unable to pass-through their patronage-related Section 199A(g) deduction to ineligible patrons (primarily C Corporations), I show their use of the 199A(g) deduction results in them issuing them relatively lower qualifying distribution payments. Consistent with Kenkel [2019], I suggest Specialized Coops may have incentive to make up the qualifying distribution difference by issuing ineligible patrons non-qualified distributions. This allows the patron to redeem the coop equity in the future at a time that is tax-advantageous for them and tax-deductible for the Specified Coop. Finally, I show the ability of Exempt Specified Coops to claim the 199A(g) deduction on non-patronage income reduces their non-patronage taxable income comparable to Non-Exempt Coops. I suggest the Exempt-Coop's response to receiving this tax benefit depends on their non-patronage income distribution policy. If their policy is to distribute non-patronage net margins to patrons, Specialized Coops will have incentive to issue non-qualified distributions to make up for their lower qualified distribution amounts attributable to taking the Section 199A(g) deduction. On the other hand, if their policy is to retain non-patronage income to increase unallocated equity, then the Section 199A(g) deduction will serve to increase after-tax returns by reducing non-patronage taxable income. I further suggest that if the marginal benefit associated with either strategy exceeds the marginal cost of qualifying as an Exempt Coop under Section 521, this will increase the incentive of Specialized Coops to organize as an IRC 521 Exempt Cooperatives. This paper contributes to existing literature on the impact that both the TCJA 2017 and CAA 2018 have on the after-tax returns of both Specified Coops and their patrons.

The remainder of this paper is structured as follows. Section 2 discusses the tax rules associated with Specified Coop tax rules while Section 3 discusses both the TCJA 2017 and CAA 2018 Grain Glitch fix. An analysis is contained in Section 4 while Section 5 provides a summary and conclusion.

Part 2: Taxation of Specified Cooperatives

Specified Cooperatives are a subset of cooperatives ("Specified Coops") that manufacture, produce, grow, or extract agricultural or horticultural products. [2] They provide a means for farmers who are both owners and primary users of the cooperative ("patrons") to pool their resources in areas such as processing, transportation, packaging and distribution as well as to

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[2] Proposed IRC Section 1.199A-8(a)(4) provides the definition of a Specified Cooperative based on the types of agricultural or horticultural products they are associated with, including: horticultural, viticulture and dairy products, livestock, the products of poultry and bee raising, edible products of forestry and all products raised or produced on farms and processed or manufactured products within the United States.

gain access to markets that are individually beyond their reach (Burt, 2004).[3] Any Specified Coop organized as a corporation or LLC "operating on a cooperative basis" by distributing their net margins to patrons are subject to taxation under Subchapter T of the Internal Revenue Code ("IRC") regardless of its organizational status [Kenkel 2019].

Specified Coops primary source of income derives from activities that are tied directly to the volume of business conducted by its patrons ("patronage income").[4] As with any trade of business, Specified Coops may deduct ordinary and necessary business expenses to determine patronage net margins [Frederick, 2019]. Subchapter T additionally allows Specified Coops to deduct two types of distributions to patrons: Patronage Dividends and Per-Unit Retains. The tax consequences to both the Specified Coop and patron depends on whether distribution is classified as Qualified or Non-Qualified and are discussed below.

Patronage Dividends are classified as "Qualified" when:

a. At least 20% of the property distributed is in cash with the remainder being paid in equity;
b. The distribution is made within 8 and ½ months of the tax year in which the patronage income is earned;
c. Each patron consents to having the fair value of equity portion of the distribution recognized into gross income in the current year.[5]

Qualified Patronage Dividends are deductible from patronage net margins with patrons required to include the like-value of cash and/or fair value of equity received into gross income in the year of distribution.[6] The Specified Coop uses a *Qualified Written Notice of Allocation* to notify each patron of the qualified patronage dividend distribution well as its cash and/or fair value of equity portions. Patronage dividends not meeting the qualified distribution criteria are classified as Non-Qualified Patronage Dividends. While the cash portion of a non-qualified patronage dividend is always considered qualified and currently deductible to the Specified Coop (and included in the member's gross income) the equity portion is not currently deductible to the Specified Coop nor is the patron required to include its fair value into gross income. Rather, the Specified Coop is allowed a deduction in the year it redeems in cash the non-qualified equity previously allocated with the patron also being required to include the cash received into gross

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[3] The definition of "patron" includes any person who does business on a cooperative basis, whether a member or non-member of the Specified Coop. This can include individuals, trusts, estates, or other corporations operating on a cooperative basis (IRC Regulation 1.1388-1(e)).
[4] Patronage income (or deduction) is produced by a transaction that facilitates the accomplishment of the coops marketing, purchasing or services activities with the income or deduction arising from patronage sources. The classification of patronage or non-patronage is determined using the "directly related test" (IRC Section 1388(j)(4) and Regulation 1.1388-1(f)).
[5] Consent is evidenced with each patron either: a) having the option to redeem the equity with cash within 90 days after the distribution is made, or b) either: (1): agreeing in writing to this arrangement, (2) joining or continuing as a member of the coop after it adopted a bylaw providing that membership constitutes agreement to Subchapter T taxation, (3) endorsing or cashing the qualified check paid distribution.

[6] See IRC Sections 1382(b) and 1385.

income.[7] Non-qualified Distributions can be used to increase a Specified Coop's allocated equity and offer the coop an alternative means for distributing coop net margins that may be preferred by certain classes of patrons, such as patrons with relatively higher marginal tax rates relative to the coop [Royer and Wissman, 1989].

Per-unit retains represent an investment in a coop made by the patron. In contrast to patronage dividends, per-unit retains don't depend on cooperative net margins but rather the coop "retains" an amount of equity for each unit of commodity handled.[8] Recipients consent to include the fair value of the retain certificate amount in gross income by agreeing in writing or by joining a Specified Coop with a bylaw (or membership) agreement specifying its per-unit retain policy.[9] If the recipient agrees to include the per-unit retain certificate in taxable income, the certificate is a qualified per-unit retain certificate and the Specified Coop deducts the amount of the certificate from its income in determining taxable income, otherwise its classified as a non-qualified per-unit retain. In this event, the Specified Coop cannot deduct the value of the certificate in determining taxable income (nor is the patron required to include its fair value into gross income). Rather, the Specified Coop is allowed a deduction (and patron required to include into gross income) in the year it redeems the non-qualified per-unit retain amount.

The Specified Coop's ability to deduct from patronage net margins it's qualified distributions (patronage dividends and/or per-unit retains) is consistent with the rationale for cooperative taxation under Subchapter T whereby coops are an extension of their patrons and therefore its income is only subject to tax once, either at the Specified Coop or patron level. Any remaining un-distributed patronage net margins are taxed at the corporate tax rate of 21%.[10]

Taxation of Specified Cooperative Non-Patronage Income

Specified Coops may also generate incidental income that is not directly related to the marketing, purchasing, or service activities of a cooperative and merely enhances the coops overall profitability ("non-patronage" income).[11] This income may include rents, investment revenues, gains on sale of assets as well as income from business done with nonmembers and retained by the coop as unallocated equity. Subchapter T allows Specified Coops to deduct allocated non-patronage related ordinary and necessary business expenses to determine non-patronage taxable income. If the Specified Coop is classified as a Non-Exempt, then any remaining taxable income is subject to the corporate tax rate of 21%.

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[7] See IRC Section 1383.

[8] A *Per-Unit Retain Certificate* is any written notice that discloses to the recipient the dollar amount of the pre-unit retain allocation. A coop must issue a certification before 8.5 months after the close of the tax year to deduct the certificate from their taxable income.

[9] See IRC Section 1388(f) thru 1388(g).

[10] See IRC Section 1381.

[11] See IRC Regulation 1.1338-1(f).

Part 3: Tax Law Changes

The Domestic Production Activity Deduction ("DPAD") was created as part of the American Jobs Creation Act of 2004 ("AJCA 2004") to incentivize businesses (including Specified Coops) engaged in "qualifying production activities" to keep and/or create jobs in the United States.[12] IRC Section 199 allowed Specified Coops a non-cash deduction equal to 9% of their qualified production activity income ("QPAI"), computed before considering the DPAD or qualifying distributions to patrons.[13]. Specified Coops had the option, however, of retaining their DPAD or passing it down to patrons for use on their own tax returns. In this event, the Specified Coop was reduced their qualified distribution deduction by the amount of the "passed-down" DPAD.[14] Additionally, patrons were required to exclude qualified payments associated with the passed-down DPAD in their own QPAI for the purposes of determining their DPAD deduction ("no double counting rule").[15]

TCJA 2017 allowed IRC Section 199 to expire by creating the IRC Section 199A Qualified Business Income Deduction ("QBID"). Section 199A provides taxpayers with domestic businesses organized as sole proprietorships, partnerships, S corporations, trusts or estates a non-cash deduction of up to 20% of Qualified Business Income ("QBI").[16] Section 199A allows non-corporate farmers who sell their product to agricultural corporations a non-cash QBID equal to 20% of QBI. If the same farmer, however, delivered the same product to a Specified Cooperative they were able to compute their QBID based on 20% of the gross qualifying distributions received from the Specified Coop's. This disparity, known as the "grain glitch", represented an unintended consequence of Section 199A and created an incentive for non-corporate farmers to sell their product to Specialized Cooperatives rather than agricultural corporations to obtain a higher QBID and maximize their after-tax cash flows [Greenberg, 2018].

CAA 2018 amended Section 199A to fix the Grain Glitch with the Treasury providing additional guidance to taxpayers with by issuing Proposed Regulations 1.199-7 thru 1.199-12. Under the fix, the QBID rules for non-corporate farmers who sell grain to agricultural corporations don't change. The fix, however, revises the QBID for Specialized Coop patrons ("SCQBID") by revising the definition of QBI for the purpose of computing their 199A(a) deduction as well as adding a new 199A(b)(7) reduction and potential Section199A(g) DPAD-like deduction as follows:

$$SCQBID = 199A(a) - 199A(b)(7) + 199A(g)$$

[12] A qualified production activity includes but is not limited to: (a) manufacturing based in the United States and/or (b) selling, leasing, or licensing items that have been manufactured in the United States.
[13] If taxable income before the DPAD was lower than the deduction is computed using this amount. The DPAD was also subject to a 50% of qualifying W-2 wages paid limitation.
[14] See IRC Section 1.199-6 (repealed).
[15] See IRC 1.199-6(l)—repealed.
[16] QBI is defined as: "of qualified items of income, gain, deduction or loss with respect to any trade or business within the United States" (IRC Reg. 1.199A-3(b)).

The revision reiterates that Specialized Coop patrons organized as individuals, partnerships, trusts, and estates are eligible for the section 199A(a) deduction ("eligible patrons")[17]. Additionally, it continues to be computed as 20% of the eligible patron's QBI.[18] Eligible patrons receiving Specialized Coop qualifying distributions, however, are required to include the fair value of the distribution received into QBI: (1) to the extent these payments are related to the patron's trade or business; (2) are qualified items of income and/or a deduction or loss at the Cooperative trade or business level.[19] This insures that Specialized Coop patrons Section199A(a) deduction will be calculated in a similar manner as farmers who sell their product to agricultural corporations.[20]

Per Proposed Regs 1.199A-8 the Specialized Coop's 199A(g) deduction is calculated as follows:

Step 1: Identify patronage domestic production gross receipts ("DPGR") as well as related advance payments to patrons for product delivered ("AP") and deductible trade or business expenses (CEXP).

Step 2: Determine Qualified Production Activity Income ("QPAI") as follows: DPGR less AP less CEXP. QPAI is computed without considering the Specialized Coop's Section 199A(g) deduction or current year qualifying distributions.

Step 3: The 199A(g) deduction is calculated as follows: QPAI times 9%.[21]

A Specified Coop, may at its discretion, retain or pass-through all, some, or none of its Section 199A(g) deduction to eligible patrons. Assuming they make this election, they are required to reduce their qualified distribution deduction by the Section 199A(g) amount with the patron including the "passed-down" Section 199(g) deduction into their QBID computation. Since the W-2 limitation was already applied at the Specified Coop level, it's not subject to any further W-2 wage limitations a second time at the eligible patron level.[22]

Under the new rules, eligible patrons may be able to take both a Section 199A(a) and 199A(g) deduction on their own returns. Accordingly, IRC Section 199A(b)(7) ("199A(b)(7) reduction") requires them to reduce their 199A(a) deduction by as much as 9% of their QBI allocated to Specified Coop qualified payments less related trade or business deductions.[23] This reduction is

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[17] The Section 199A deduction is not available for C Corporations or Cooperatives that are C Corporations. Additionally, patrons who are C Corporations are not eligible for the Section 199A deduction ("ineligible patrons").
[18] If the patron's taxable income ("TI") before the QBID and qualified distributions is lower than that amount is used to compute the Section 199A(a) deduction. An eligible patron's Section 199A(a) deduction may also be limited by wages/capital limitation. Additionally, eligible patrons with taxable income levels exceeding certain pre-defined amounts will have their Section 199A(a) phased out. Finally, an eligible patron's Section 199A(a) deduction cannot exceed their taxable income.
[19] See Proposed Reg. 1.1999(c)(7).
[20] If the patron's taxable income ("TI") before the QBID and qualified distributions are lower than that amount is used to compute the QBID. The QBID is also restricted by wages/capital limitation if the patron's taxable income exceeds certain pre-defined levels.
[21] If taxable income ("TI") is lower than QPAI the Section 199(g) deduction is computed as TI*9%. The 199A(g) deduction cannot exceed 50% of patronage W-2 wages allocable to DPGR incurred at the Coop level.
[22] The patron's Section 199A(g) deduction, however, cannot exceed their taxable income.
[23] See IRC Proposed Reg. 1.199A-7(f)(2).

required regardless of whether the Specified Coop passes through all, some, or none of its Section 199A(g) deduction to the patron.

Part 4: Analysis

The relaxing of the 'no double counting rule" under CAA 2018 allows Specialized Coops and eligible patrons to deduct differing parts of the SCQBID in determining their taxable income. Patrons are allowed the Section 199A(a) deduction but must also apply the Section 199A(b)(7) reduction to this amount to determine their "Net Section 199A(a)" deduction. Specialized Coops are allowed the 199A(g) deduction but may elect to pass-down this deduction to eligible patrons who can utilize it on their own tax returns to offset the Section 199A(b)(7) reduction. In this section, I examine whether the Specialized Coop's ability to retain or pass-down their Section 199A(g) deduction to eligible patrons provides them opportunity to manage their distribution policies so to maximize the after-tax cash returns to both themselves and their patrons. This is done by asking four questions:

1. What impact, if any, does a Specialized Coop's ability to retain or pass on their Section 199A(g) deduction to eligible patrons impact their patronage net margin distribution policies and resulting after-tax cash flows to both themselves and eligible patrons?
2. Does the use of the pooling method of accounting impact the after-tax returns of Specialized Coop patrons?
3. What impact, if any, does a Specialized Coop's inability to pass on their Section199A(g) deduction to ineligible patrons impact their patronage net margin distribution policies and after-tax cash flows to both themselves and ineligible patrons?
4. Section 199A(g) deduction to patrons impact their non-patronage net margin distribution policies and after-tax cash flows to both themselves/patrons and the incentive of Specialized Coops to be organized as Exempt Coops under IRC Section 521?

Question 1: Patronage Net Margin Distributions-Eligible Patrons

Assume a Specialized Coop processes, markets and sells product delivered by patrons on the domestic market. They make an advance payment to eligible patrons for agricultural product delivered to the Coop (AP) and incur allocable trade or business expenses (CEXP) to generate domestic sales (DPGR). The Coop's qualifying distribution (QD) consisting of both patronage dividends and/or per unit retains (cash and/or equity) are set to an amount that reduces their QPAI to zero. Their decision to retain or pass-down their Section 199A(g) deduction to eligible patrons is modelled as follows[24]:

1) DPGR – AP – CEXP = QPAI - (QPAI*9%) – **QD1** = 0
--199A(g)--

2) DPGR – AP – CEXP = QPAI– (QPAI*9%) – [(**QD2**) - (QPAI*9%)] = 0
--199A(g)--

[24] This assumes the Specialized Coop has sufficient taxable income and W-2 wage levels to preclude restriction of their Section 199A(g) deduction.

Equation 1 models the Specialized Coop's decision to retain its Section199A(g) deduction.[25] In this instance, QPAI is reduced by the Section 199A(g) deduction with remaining net-QPAI distributed to eligible patrons based on patronage in a qualifying distribution (QD1). Equation 2 models the Specialized Coop's decision to pass-down their Section 199A(g) deduction to eligible patrons. In this instance, the qualifying distribution amount (QD2) is increased by the amount of the Section 199A(g) passed down to patrons, which in turn, reduces the Specialized Coop's qualifying distribution deduction amount.

The after-tax return (ATR) to eligible patrons assuming the Specialized Coop retains or passes-down its Section 199A(g) deduction is modelled below. Assume the eligible patron group's QBI consists Specialized Coop's advance payment (AP) and qualifying distribution (QD) less allocable ordinary business expenses incurred at the patron level that are allocable to the qualifying distribution (PEXP) as follows[26]:

3) AP+QD1–PEXP=QBI1–{[QBI1–[(QBI1*20%)–(QD1–PEXP)*9%)]] * MTR} = ATR1
199A(a) 199A(b)(7)
--------------SCQBID--------------------
------------------Explicit Tax Paid---------------------------------

4) AP+QD2–PEXP=QBI2–{[QBI2–[(QBI2*20%)–(QD2-PEXP)*9%)]+199A(g)] *MTR}=ATR2
199A(a) 199A(b)(7) 199A(g)
-------------------------SCQBID---------------------
---------------------------Explicit Tax Paid---------------------------

Equation 3 models after-tax return to eligible patrons assuming the Specialized Coop retains their Section 199A(g) deduction (ATR1). Their Qualifying Business Income (QBI1) consists of Specialized Coop advance payment (AP) plus the qualifying distribution (QD1) received less patron level ordinary business expenses (PEXP). QBI1 is reduced by the explicit taxes paid by the patron (the difference between their QBI1 less SCQBID multiplied by the patron's marginal tax rate (MTR) to arrive at their after-tax return amount (ATR1). This results in the following observations:

- Eligible Patrons with high/lower marginal tax rates will pay higher/lower levels of explicit taxes and have lower/higher after-tax returns.
- Eligible patrons whose 199A9(b)(7) reduction is reduced by the W-2 limitation will have a higher QBID and therefore pay lower explicit taxes, thus resulting in higher after-tax returns.

Equation 4 models the after-tax cash flows to eligible patrons assuming the Specialized Coop passes-down the Section199A(g) deduction to its eligible patrons (ATR2). Their Qualifying Business Income (QBI2) consists of Specialized Coop advance payment (AP) plus the qualifying distribution (QD2) received less patron level ordinary business expenses (PEXP). QBI2 is

[25] This assumes the Specialized Coop has sufficient taxable income and W-2 wage levels to preclude restriction of their Section 199A(g) deduction.
[26] This assumes the eligible patron's Section 199A deduction is not subject to restriction.

reduced by the explicit taxes paid by the patron (the difference between their QBI2 less SCQBID multiplied by the patron's marginal tax rate (MTR) to arrive at then after-tax return amount (ATR2)[27]. This results in the following observations:

- Both QD2 and QBI2 increase by the amount of the 199A(g) deduction passed on to the patron.
- Both the Section 199A(a) deduction and 199A(b)(7) reduction amounts increase by the inclusion of QD2 and QBI2 in their respective computations.
- The incremental increase in QBI2 is sheltered from taxation by the patron's ability to deduct the Section 199A(g) deduction.

By setting both Equations 3 & 4 equal, the impact of passing-down the 199A(g) deduction on eligible patron after-tax returns is modelled as follows:

5) ATR2 = ATR1 + 199A(g) + [(199A(g) * 20%) – (199A(g)* 9%)] * MTR]

Equation 5 assumes that the eligible patron's Section 199A(b)(7) reduction is not subject to a W-2 limitation. The patron's after-tax return increases by portion of the qualifying distribution (QD2) attributable to the Section 199A(g) amount that that the SCQBID shelters from taxation. Additionally, the patron receives a minimum 11% "bump" in their after-tax return attributable to embedded QD2 distribution embedded Section 199A(a) deduction and Section 199(b)(7) reduction amounts attributable to the QD2 increase attributable to the 199A(g) pass-down. The "bump's" tax benefit is higher for patrons with relatively higher MTR's and lower for those with relatively lower MTR's.

Kenkel [2019, pg. 6] suggests that many patrons have little to no W-2 wages and this restriction is a major limiting factor for them. Assuming a Specialized Coop patron's Section 199A(b)(7) reduction is restricted by their W-2 limitation their increase in their after-tax returns (ATR3) is modelled as follows:

6) ATR3 = ATR1 + 199A(g) + [[(199A(g) * 20%) + {(QD1 – PEXP)*9%}] * MTR]

Equation 6 assumes that, at the limit, the eligible patron loses their entire Section 199A(b)(7) reduction (Equation 3) while retaining their Section 199A(g) deduction. Consistent with Equation 5, the patron's after-tax return increases by portion of the qualifying distribution (QD2) attributable to the Section 199A(g) amount that that the SCQBID shelters from taxation. The patron's "bump" in after-tax returns increases, however, by an amount equal to (QD1 – PEXP)* 9%. Patrons with relatively higher/lower marginal tax rates will experience a greater/lower "bump" in after-tax returns.

Next, I examine the impact of 2018 Grain Glitch fix on the after-tax returns of Specialized Coop patrons. Consistent with prior examples, I assume the Coop makes an advance payment to

[27] This assumes the eligible patron's taxable income ("TI") levels do not drop below or go above prescribed levels that would cause the 199A(a) deduction to be limited.

patrons for agricultural product delivered to the Coop (AP) and incurs allocable Coop level expenses (CEXP) to generate domestic sales (DPGR). The Coop's passes-down their Section 199A(g) deduction to eligible patrons to maximize their qualifying distribution (QD2) to patrons in an amount that reduces QPAI to zero. The difference in patron after-tax returns assuming pre-CAA2018 and post-CAA2018 rules apply is modelled as follows:

7) AP+**QD2**–PEXP=QBI2–{[QBI2-{QBI2*20%)] *MTR}=ATR4
199A(a)
--PRE CAA2018 SCQBID—
---------------------------Explicit Tax Paid----------------------------

4) AP+**QD2**–PEXP=QBI2–{QBI2–[(QBI2*20%)–(QD2-PEXP)*9%)]]+199A(g)]*MTR}=ATCF2
199A(a) 199A(b)(7) 199A(g)
---------------- POST CAA2018 SCQBID---
----------------------------Explicit Tax Paid------------------------

Equation 7 models the after-tax returns to patrons that deliver their product to non-specialized coops. It shows their after-tax return is the difference between their QBI2 and explicit tax paid (which are a function of their QBI2 less their 199A(a) deduction multiplied by their marginal tax rate. Equation 4 shows that, under the new law, the patron's post CAA2018 SCQBID is impacted by their 199A(b)(7) reduction and the 199A(g) deduction passed-down by the Specialized Coop.

The incremental impact of the 2018 Act Grain Glitch Fix on Specialized patron after-tax returns is modelled by setting Equations 4 & 6 equal follows:

8) AFR2 = AFR3 + {{[(QPAI * 9%) – [(QD2–PEXP)*9)]]*MTR
199A(g) 199A(b)(7)

Further analysis of Equation 8 provides the following observations:

- Since QD2 is based on the Specified Coop's QPAI and therefore equal to it (see equation 2), the patron's increase in after-tax return can be stated as (PEXP * 9%) * MTR. Patrons with relatively higher deductible expense at the patron level will have greater incremental increase in after-tax returns attributable to the grain glitch fix.
- To the extent the W-2 limitation reduces or eliminates the eligible patron's 199A(b)(7) reduction amount, by the 199(g)-deduction amount passed-down by the coop multiplied by the patron's marginal tax rate, the patron's after-tax return is maximized by the 199A(g) deduction amount multiplied by the patron's MTR.
- The net increase in the specialized patron's after-tax returns is a function of their marginal tax rate. Patrons with higher MTR's will experience a greater increase to their after-tax returns. Conversely, patrons with relatively lower marginal tax rates will not see their after-tax returns materially impacted by the grain glitch fix.

I suggest that Specialized Coops will have an incentive to issue their qualifying distribution in the form of stock in an amount equal to the incremental increase in patron's after-tax cash flows

attributable to their actual SCQBID percentage being greater than 20% of QBI if the marginal tax benefit exceeds the marginal costs of issuance. We further suggest that this incentive will be greatest for Specialized Coops with patrons who have higher marginal tax rates, incrementally higher attributable expenses and/or Section 199A(b)(7) limitations. This allows the Specialized Coop to increase their level of allocated equity and provide the patron the opportunity to redeem the stock in the future at a time of their choosing in a tax-free manner.

Question 2: Pooling Specialized Cooperatives

Pooling Cooperatives combine the crop volumes of numerous patrons under the marketing skills of a Coop. The market pool concept is attractive to patrons if they receive higher returns from the Coop than they could by selling their product themselves [Hammonds, 1976]. Pooling Specified Coops distribute cash to patrons in the form of per-unit retains paid in money, or PURPIMS. Pooling coop patrons deliver their commodities to the coop, but their value is not determined until the commodities are processed and sold and the expenses of the pool are deducted. Patrons receive an PURPIM intermediate payment when the product is first delivered to the Coop and then get their final PURPIM payment when the commodity is sold and the pool is closed out. The final payment is thought of as being equivalent to a patronage payment but in a pooling coop there is no bright line between the commodity payment and the profit distribution.

The availability of the Section 199A(g) deduction provided incentive for many Specialized Coops to change their accounting method for classifying patron distributions to the pooling method [Kenkel, 2019]. As a result, they were able to classify their advance payments for product delivered from patrons as PURPIMS rather than product purchases (classified as cost of goods sold). This allowed them to generate a higher QPAI and Section 199A(g) deduction than if they used the "non-pooling" method of accounting since qualifying PURPIM payments are deducted after the Specialized Coop's determination of both QPAI and the Section 199A(g) deduction amounts.

Assume a Pooling Specialized Coop processes, markets and sells product delivered by patrons on the domestic market. They incur allocable trade or business expenses (CEXP) to generate domestic sales (DPGR). They make both an advance PURPIM payment to eligible patrons for agricultural product delivered and a final PURPIM payment(s) when the pool is closed out. I examine the impact of the pooling accounting method to Specialized Coops by first comparing

the Specialized Coop's decision to use the pooling or non-pooling method as follows[28]:

Pooling Specified Coop:

9. DPGR – CEXP = PQPAI – (PQPAI*9%) – [(**PURPM**) - (PQPAI*9%)] = 0
   P199A(g)   P199A(g)

Non-Pooling Specified Coop:

2. DPGR – AP – CEXP = QPAI – (QPAI*9%) – [(**QD2**) - (QPAI*9%)] = 0

Equation 9 models the Specialized Coop's use of pooling accounting while Equation 2 models a Specialized Coop's use of non-pooling accounting. Based on the results above, I assume that the Specialized Coop passes-down their Section 199A(g) deduction to eligible patrons. The pooling Specified Coop's qualified production activity income (PQPAI) is greater than the comparable amount using the non-pooling method (QPAI) by the advanced payment (AP) deducted as cost of goods sold using non-pooling but included in the PURPIM amount using the pooling method. Consequently, the Specified Coop's 199A(g) deduction using the pooling method increases by an amount equal to AP*9%. Total distributions patrons, however, remains the same as the total amount distributed to patrons thru PURPIMS equals the amounts non-pooling Specified Coops distribute thru a combination of advanced payments (AP) and qualifying distributions (QD2).

The after-tax returns to eligible patrons assuming the Specialized Coop passes-down their Section 199A(g) deduction and either uses the pooling or non-pooling method of accounting is modelled below: Assume the eligible patron group's QBI consists Specialized Coop's advance payment (AP) and qualifying distribution (QD) less allocable ordinary business expenses incurred at the patron level that are allocable to the qualifying distribution (PEXP) as follows[29]:

Pooling:

10) PURPM–PEXP=PQBI–{[PQBI–[(PQBI*20%)–(PURPM-PEXP)*9%)]+199A(g)]*MTR}=PATR
P199A(a)   P199A(b)(7)   P199A(g)
----------------------SCQBID---------------------
---------------------------Explicit Tax Paid-------------------------

Non-Pooling:

2) AP+QD2–PEXP=QBI2–{[QBI2–[(QBI2*20%)–(QD2-PEXP)*9%)]+199A(g)]*MTR}=ATR2
199A(a)   199A(b)(7)   199A(g)
----------------------- SCQBID---------------------
---------------------------Explicit Tax Paid-------------------------

Equation 10 models after-tax return to eligible patrons assuming the Specialized Coop uses the pooling method of accounting. Their Qualifying Business Income (PQBI) consists of their

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[28] This assumes the Specialized Coop has sufficient taxable income and W-2 wage levels to preclude restriction of their Section 199A(g) deduction.

[29] This assumes the eligible patron's Section 199A deduction is not subject to restriction.

PURPIM payments less patron level ordinary business expenses (PEXP). PQBI is reduced by the explicit taxes paid by the patron (the difference between their PQBI less PQBID multiplied by the patron's marginal tax rate (MTR) to arrive at their after-tax return amount (PATR)[30]. Equation 2 models the after-tax return to eligible patrons using the non-pooling accounting method and is discussed earlier in this paper. This results in the following observations:

- Since PURPIM equals (AP + QD2) then PQBI equals QBI2.
- Since PQBI equals QBI2, the Section 199A(a) deductions computed under the pooling method (P199A(a)) and the non-pooling method (199A(a)) are the same.

By setting both Equations 10 & 2 equal, the impact of using the pooling method of accounting on eligible patron after-tax returns is modelled as follows:

$$11)\ PATR = ATR2 + \{[P199A(g) - P199A(b)(7)] - [199A(g) - 199A(b)(7)]\} * MTR$$

Further analysis of Equation 11 provides the following observations:

- Both the patron's 199A(g) deduction (P199A(g)) and199A(b)(7) reduction amounts (P199A(b)(7)) are higher than using the non-pooling method by the advanced payment (AP) included in the PURPIM. However, the difference between [P199A(g) – P199A(b)(7)] and [199A(g) – 199A(b)(7)] is the same. This indicates that, assuming no restrictions, there is no benefit to patrons for using the pooling method as PATR equals ATR2.
- If, at the limit, the patron's 199A(b)(7) is eliminated by the W-2 wage limitation then the patron after-tax return benefit from using the pooling method is estimated as the difference between 199A(g) deduction computed using the pooling method (P199A(g)) and the 199A(g) deduction using the non-pooling method (199A(g), multiplied by the patron's marginal tax rate (MTR).
- The benefit to Specialized Coop patrons with W-2 wage limitations is a function of their marginal tax rate. Patrons with higher MTR's will experience a greater increase to their after-tax returns. Conversely, patrons with relatively lower marginal tax rates will not see their after-tax returns materially impacted by the Specialized Coop's use of the pooling method.

Finally, I relax the "no restrictions" assumption by considering the impact on the use of pooling accounting for "high income" eligible patrons whose Section 199A(a) deduction is phased out

[30] This assumes the eligible patron's taxable income ("TI") levels do not drop below or go above prescribed levels that would cause the 199A(a) deduction to be limited.

due to exceeding taxable income thresholds as follows:

Pooling:
12) PURPM–PEXP=PQBI–{[PQBI – P199A(g)]*MTR}=PATR2

-------Explicit Tax Paid---

Non-Pooling:

13) AP+QD2–PEXP=QBI2–{[QBI2 – 199A(g)]*MTR} =ATR3
------Explicit Tax Paid---

Equation 12 models after-tax return to "high income" eligible patrons assuming the Specialized Coop uses the pooling method of accounting. Their Qualifying Business Income (PQBI) consists of their PURPIM payments less patron level ordinary business expenses (PEXP). Since their 199A(a) deduction has been phased out, they only have their 199A(g) deduction available (P199A(g)) to reduce their explicit tax paid and after-tax returns (PATR2). Equation 13 shows that Non-pooling Specialized Coops patrons are in a similar situation but reduce their QBI2 by their lower 199A(g) deduction to determine their explicit taxes paid and after-tax returns (ATR3). This results in the following observations:

- The value of pooling method of accounting to "high-income" eligible patrons is the difference between the tax benefit received from their higher 199A(g) deduction (P199A(g)) and the 199A(g) deduction that would have been computed using the non-pooling method, multiplied by the patron's marginal tax rate (MTR).
- High income patrons can utilize the 199A(g) deduction passed down by the Specialized Coop without further restrictions at the patron level.
- Patrons with higher MTR's will experience a greater increase to their after-tax returns. Conversely, patrons with relatively lower marginal tax rates will not see their after-tax returns materially impacted by the Specialized Coop's use of the pooling method.

In summary, I show that under the current law a Specialized Coop's use of pooling doesn't impact the after-tax returns of patrons that aren't subject to QBID restrictions but does increase the after tax returns to two groups of eligible patrons: 1) high-income patrons who's Section 199A(a) deduction is eliminated and utilize the 199A(g) deduction passed-down by the Specified Coop without further restriction at the patron level, and 2) Patrons with high marginal tax rates that that have their Section 199A(b)(7) reduction reduced or eliminated due to the W-2 wage restrictions. will have incentive to use the pooling method of accounting if its associated marginal benefit exceeds the marginal cost of doing so.

Question 3: Patronage Income-Ineligible Patrons

While Specified Coops are allowed a Section 199A(g) deduction on patronage income derived from product provided by ineligible patrons (primarily C Corporation) they are not allowed to pass it down to them. Assume a Specialized Coop processes, markets and sells product delivered by ineligible patrons on the domestic market. The Specified Coop makes an advance payment

for their agricultural product (IAP) and incurs trade or business expenses related to this product (ICEXP) to generate domestic sales (IDPGR). Finally, they set their qualifying distribution level to ineligible patrons (IQD) in the form of cash or stock to an amount that reduces its QPAI level to zero. The impact of retaining the Section 199a(g) deduction on Specialized Coop after-tax returns is provided below[31]:

14) IDPGR – IAP – ICEXP = IQPAI - (IQPAI2*9%) – IQD = 0
199A(g)

As shown in Model 14, the Specified Coop's 199A(g) deduction is retained by the Specified Coop and added to unallocated equity [Kenkel and Boland, 2017]. Accordingly, the Specified Coop sets their distribution level (IQD), after considering the Section 199(g) deduction, to an amount that reduces their taxable income to zero.

The impact on ineligible patron after-tax returns is provided below. Assume the qualified business income allocated to ineligible patrons (IQBI) consists of their product advanced plus their qualifying distribution (IQD) less ordinary business expenses incurred at the patron level that are attributable to the qualifying distribution (IPEXP). Their resulting after-tax cash return (IATR) is modelled as follows:

15) IAP + IQD – IPEXP = IQBI – [IBQI – {IQBI *(1- MTR)}] = IATR
--------Explicit Taxes--------

Equation 15 shows the ineligible patron's after-tax rate of return (IATR) is the difference between their explicit taxes paid on this income. Ineligible patrons with higher/lower MTR's will have lower/higher after-tax returns.

I suggest the Specialized Coop has a choice of what to do with the unallocated equity generated from their 199A(g) deduction. They can keep it and used the funds to support current operations. Alternatively, consistent with Kenkel and Breggeman [2019], they may have incentive to issue non-qualifying distributions in the form of stock to ineligible patrons equal to the reduced qualifying distribution amount attributable to the Section 199A(g) deduction taken. This allows the ineligible patron to obtain the tax benefit in a year of their choosing in a manner that is tax deductible to the specialized coop. We suggest Specialized Coops will have incentive to issue non-qualified distributions to ineligible patrons when the benefit doing so to both the Specified Coop and patron exceeds the marginal costs of issuance.

Question 4: Non-Patronage Income - Exempt vs Non-Exempt Specialized Cooperatives

Specified Coops can be classified into two groups: Exempt and Non-Exempt Coops. Exempt Coop status is only available to Specified cooperatives that meet the organizational and operational tests of IRC 521. While any Specified Coop can claim general cooperative tax treatment on its tax return, IRC Section 521 status must be applied for and granted by the IRS. The burden is on the cooperative to show continuous compliance with the requirements. Not all

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[31] This assumes the Specialized Coop has sufficient taxable income and W-2 wage levels to preclude restriction of their Section 199A(g) deduction.

Specified Cooperatives qualify for this tax treatment and are classified as "Non-Exempt" Cooperatives. Exempt Coops meeting the organizational and operational requirements detailed in IRC Section 521 can take advantage of two special deductions in addition to those Subchapter T affords all corporations operating on a cooperative basis. They are allowed a deduction for dividends on capital stock and qualified distributions of nonpatronage income made to patrons on a patronage basis. To the extent that an exempt farmers' cooperative complies with the provisions of section 521 of the Code, it may deduct from its gross income most non-patronage distributions it makes to its members, as well as dividends paid with respect to preferred stock owned by non-members. Thus, the exemption under section 521 carries the single level of tax generally available under the Subchapter T for income patronage sources to income from non-patronage sources as well.[32]

Additionally, Exempt Specialized Coops are allowed a Section 199A(g) deduction on their non-patronage sourced domestic income. It's calculated in the same three-step manner as the patronage-sourced 199A(g) deduction but just considers non-patronage income and related deductions.[33] Exempt Specified Coops are not allowed, however, to pass-down its nonpatronage Section 199A(g) deduction to patrons.

The impact on the 199A(g) rules related to non-patronage income for Exempt and Non-Exempt Specialized Coops is shown below. Assume a Specialized Coop generates domestic non-patronage income (NDPGR) and incurs ordinary trade or business expenses related to this income (NPEXP). The after-tax return to both Non-Exempt and Exempt Specialized Coops is modelled as follows[34]:

Non-Exempt Specialized Coop:

16) NDPGR – NPEXP = NQPAI * (1-MTR) = NATR

Exempt Specialized Coop:

Assuming Qualified Distribution

17) NDPGR – NCEXP = [NQPAI - (NQPAI2*9%)] – NQD = 0

---- 199A(g)---

Assuming No Qualified Distribution

18) NDPGR – NCEXP = [NQPAI - (NQPAI2*9%)] * (1-MTR) = NATR1

----199A(g)----

[32] Embedded in the Code description of IRC521 cooperatives is a requirement that business with members and nonmembers must be conducted on a cooperative basis. In practice, this means that while other cooperatives need only make patronage refund allocations and distributions to members, IRC521 makes them to nonmember users as well and on the same basis they are made to members.

[33] See IRC Proposed Regulations 1.199A-8(e). The 199A(g) deduction is also limited to a non-patronage Taxable Income and Net Operating limitation, if applicable.

[34] This assumes the Specialized Coop has sufficient taxable income and W-2 wage levels to preclude restriction of their Section 199A(g) deduction.

Equation 16 models the after-tax return for Non-exempt Specialized Coops. Their after-tax return is computed as the product of their NQPAIR and (1-MTR). Non-Exempt Specialized Coops with higher/lower MTR's will have lower/higher after-tax returns (NATR).

Equation 17 models the Exempt Coop's after-tax return on on-patronage income (NATR) assuming it distributes its net QPAI in a qualified distribution to its patrons. It shows that the patron's qualifying distribution amount (NQD) is reduced by the 199A(g) deduction taken at the coop level and its taxable income is zero. Equation 18 models the Exempt Coop's after-tax return on non-patronage income assuming it retains the Section 199A(g) deduction (NATR1). In this instance, their after-tax return is computed as the product their NQPAI less their 199A(g) deduction and (1-MTR). Depending on the tax benefit Exempt Coops receive from their 199A(g) deduction their after-tax return is expected to be higher than if it were classified as a Non-Exempt coop. Like Non-Exempt Specialized Coops, Exempt Specialized Coops with higher/lower MTR's will have lower/higher after-tax returns.

As shown above, Exempt Coop status provides opportunities to Specialized Coops to manage their after-tax returns of both themselves and their patrons. Consistent with Kenkel [2019], I suggest the Specialized Coops may have incentive to compensate for the reduced qualifying distribution by making a non-qualified distribution to the patron in an amount equal to the reduction amount. This allows the patron to obtain the tax benefit in a year of their choosing in a manner that is tax deductible to the specialized coop. We suggest Specialized Coops will have incentive to issue non-qualified distributions to ineligible patrons when the benefit doing so to both the Specified Coop and patron exceeds the marginal costs of issuance. On the other hand, if Exempt Specialized Coop's policy is to retain non-patronage income to increase unallocated equity, then the Section 199A(g) deduction will serve to increase their after-tax returns by reducing non-patronage taxable income.

I suggest that these benefits will increase the incentive of Specialized Coops to organize as Section 521 Exempt Coops. I further suggest they are most likely to do so if the marginal benefit of either these strategies exceed the marginal cost of organizing and/or maintaining Section 521 status so to maximize the after-tax returns to both themselves or their patrons.

Part 5: Summary and Conclusion

This paper examines the influence of the tax rule changes associated with the Tax Cuts and Jobs Act of 2017 ("TCJA 2017") and the Consolidated Appropriations Act of 2018 ("2018 Act") on the financing decisions and after-tax cash flows of cooperatives that manufacture, grow, extract or market agricultural or horticultural products ("Specified Coop") and their patrons. It contributes to existing literature on the impact that both the TCJA 2017 and 2018 Act has on the after-tax cash flows of Specified Coops and their patrons. Depending on the circumstance, I show that Specialized Coops have incentive to manage their distribution, financing, and organizational structure decisions to maximize the after-tax cash flows to both themselves and their patrons. Future research should examine the impact of the 2018 Act on the Specified Coop's preference to issue stock or cash when making qualified or non-qualified distributions.

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