Tax Impact on Debt Coverage (Agriculture files)

January 2014

With FINPACK Release 5.5.9 (January 2014), a slight but important change was made to the calculation of *Term debt coverage ratio*. Beginning with this release, income taxes will be calculated on the accrual basis rather than cash income taxes paid. This change impacts Financial Analysis (**FINAN** and **Schedule F Cash to Accrual Analysis**) and Projections (**Monthly** and **Annual Cash Flow Planning**).

Background

Capital debt repayment capacity represents funds generated by the business (or business and family in the case of a sole proprietor) to cover term debt payments. Capital debt repayment capacity is calculated by adding *Depreciation* back to *Net farm income*, adding *Personal income*, then reducing this amount for *Family living/Owner withdrawals*, *Income taxes*, and *Personal debt payments*. Finally *Interest on term debt* is added back.

Because the calculation begins with net farm income, the *Term debt coverage ratio* is based on accrual rather than cash earnings. This washes out the impacts of inventory changes on debt coverage capacity. In effect, debt coverage is based on the revenue earned during the year, whether converted to cash or not. When these accrual earnings are reduced by cash income taxes, it results in an improper matching of earnings and income tax expense. While we will never exactly match earnings with taxes, by converting to using accrual based income taxes (taxes paid – beginning taxes due + ending taxes due) we do a much better job of matching income taxes to the income generated to create that tax obligation.

For example, Sample Farm had a very good year in 2013 resulting in $100,000 of income taxes due and payable in 2014. The projections for 2014 are an average year for Sample Farm with an estimate of total income taxes of $50,000. Of this total $30,000 will be paid during 2014 through withholdings and estimated payments. The remaining $20,000 will be due at the end of the year and paid in 2015. Using cash based income taxes $130,000 would be applied against the lower 2014 earnings, likely resulting in a very weak debt coverage ratio. Using accrual taxes only $50,000 would be included against 2014 income ($130,000 paid - $100,000 beginning + $20,000 ending). In the 2013 analysis, the $100,000 taxes due at the end of 2013 would be properly

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matched with the higher 2013 income. The table below shows this example and the different impact of cash and accrual income taxes on term debt coverage.

	Cash	Accrual
(a) 2013 income tax payable in 2014 (Beginning personal income tax payable)		100,000
(b) Payment of 2013 income tax	100,000	100,000
(c) Payment of estimated 2014 taxes	30,000	30,000
(d) 2014 income tax payable in 2015 (Ending personal income tax payable)		20,000
Total income taxes	**130,000**	**50,000**
	(b + c)	(b + c - a + d)
Example Term Debt Coverage		
Capital debt repayment capacity, before tax	246,661	246,661
Capital debt repayment capacity	116,661	196,661
Term debt payments	120,798	120,798
Term debt coverage	**0.97**	**1.63**

Implementation

Many FINPACK users have typically included income taxes payable in *Personal accounts payable* on their balance sheets. With this release, *Personal income taxes payable* has been added as another account in the Personal Liabilities section of the balance sheet. By entering income taxes payable in this account for both beginning and ending balance sheets FINPACK will handle the accrual calculations in FINAN and the Schedule F Cash to Accrual Analysis. For a FINFLO or Annual Plan, you would enter the income taxes payable on the beginning balance sheet and estimate ending income taxes payable in the Ending Balance Sheet section of the FINFLO or Annual Plan.

Cautionary Note

As with any change of this scale there is need for caution. The issue in this case related to the analysis, either FINAN or Schedule F Cash to Accrual. Moving taxes to this new account will fix this year’s analysis. However, this year’s beginning balance sheet was last year’s ending balance sheet. So if you go back and re-run last year’s analysis, the results will incorrectly calculate accrual based income taxes. There are two suggested solutions:

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1. Adjust all balance sheets to move personal income taxes payable to the new account. The result will be the previous year's analyses will be adjusted to base debt coverage on accrual income taxes.

2. Make a copy of the beginning balance sheet before changing it. Continue to use the original for the previous year's analysis. Adjust the copy and use it for the current year's analysis. The result will be previous year's analyses will match the results previously calculated, with debt coverage based on cash income taxes.

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