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# ***Farm Business Equity is Partly Illusion***

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Market value balance sheets are required to appropriately assess the collateral position of a farm borrower. However, in most cases, part of the equity listed on the farmer's balance sheet is really an illusion. For example, John Smith owns \$1 million of farm assets and has debts of \$400,000. Thus, he has \$600,000 of equity in his business. However, he does not have \$600,000 that he can use for retirement. He would not have \$600,000 if he decided to quit farming and do something else. If his wife divorces him and he gives her \$300,000 for "her half" of the business, he has likely grossly overpaid.

Why do John and his lender think that he is worth more than he is? Because his balance sheet does not include the taxes he would have to pay if he sold the farm. The Farm Financial Standards Council recommends that these taxes be shown on a market value balance sheet and calls the taxes that would be paid "deferred taxes." The equity that the farmer thinks he has, but which would be paid in taxes if the farm were sold, is really equity illusion—it appears to be there, but it is only a mirage.

## ***An Example***

Deferred taxes are the income taxes that a farmer would have to pay if the farm were sold. For example, assume John's farm was purchased several years ago for \$500,000. Depreciation totaling \$50,000 has been taken on the buildings and other improvements, leaving a net tax basis of \$450,000. The farm would now sell for \$1 million, but sales commissions and other selling costs of \$100,000 would be expected to be incurred, leaving a net sale price of \$900,000. This implies a taxable gain of \$450,000 (\$900,000 minus \$450,000) from the sale of the property. If the average tax rate on

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the sale of this property were 25 percent (20 percent federal and 5 percent state), the farmer would owe \$137,500 in taxes on the sale of the property. The \$137,500 represents deferred taxes. They do not have to be paid (are deferred) until the property is sold.

John has a mortgage and machinery debt, which, together, total \$400,000. When he subtracts this debt from the \$1 million value of the farm, he gets the \$600,000 of equity he thinks he has. More realistically, using the \$900,000 as the value of the property, he might estimate his equity at \$500,000. In fact, the equity that he could use to retire on, or take to another business venture, is only \$362,500 (\$500,000 minus \$137,500). This is 28 or 40 percent less than he thought when he estimated his equity at \$500,000 or \$600,000, respectively. If his retirement plans counted on \$600,000 being available, those plans would have to be changed.

### *Estimates of Deferred Taxes*

To estimate the magnitude of deferred taxes, data for farm businesses participating in farm management programs in several states were used. Actual data on the market value and tax basis of farm assets were used in tax estimation routines to determine the taxes that would have to be paid if the farm were sold on the day of the balance sheet. In some cases assumptions were made about exemp-

tions, deductions, nonfarm income, and similar tax characteristics and these assumptions may be slightly different between states. However, the difference in assumptions would have a very modest effect on tax estimates.

Data are presented below for 228 Illinois grain farms, 85 Kansas grain farms, 84 New York dairy farms and three years of data on 12 Iowa grain/livestock farms (basic farm characteristics are shown in table 1). These farms do not represent average farms for these states, but are representative of farms that are interested in keeping records on their business. They generally tend to be somewhat larger and better managed than average.

Deferred taxes include federal income taxes, state income taxes and self employment taxes (on sale of current assets). Clearly, deferred taxes can be a very significant amount (table 2). They are over \$100,000 on a high proportion of the farms. They are large enough that they should be taken into consideration in the assessment of the financial position of any farm business. They represent a claim on the assets that farmers and lenders must observe. Those doing retirement planning must bear in mind the large tax bite that would occur if the assets were sold. Debt and deferred taxes must be subtracted from the asset value to determine the amount of money available for retirement or

**Table 1. Description of Farms**

<b>Balance Sheet Item</b>	<b>New York Dairy</b>	<b>Illinois Cash Grain</b>	<b>Kansas Cash Grain</b>	<b>Iowa Grain/Stock</b>
Total Assets	794,493	1,043,330	813,709	1,377,330
Total Liabilities	444,919	424,150	225,574	330,160
Equity	350,023	619,180	588,136	1,047,170



**Table 2. Deferred Taxes By Farm Size**

<b>Assets Per Farm</b>	<b>New York Dairy</b>	<b>Illinois Cash Grain</b>	<b>Kansas Cash Grain</b>	<b>Iowa Grain/Stock</b>
Under \$400,000	44,671	45,344	36,552	<sup>a</sup>
\$400,000 - 599,999	97,765	90,532	69,096	94,438
\$600,000 - 799,999	135,256	111,404	112,273	<sup>a</sup>
\$800,000 - 999,999	193,700	144,278	130,269	137,242
\$1 million or more	350,535	233,432	213,347	373,941
All Farms	160,982	151,203	118,142	292,342

<sup>a</sup> Insufficient number of farms to report.

reinvestment in some other activity.

### ***Equity Disappears***

The amount of equity that will be consumed by deferred taxes depends on a number of factors. The amount of equity the farmer has is an obviously important factor. Farms with very little equity may find that deferred taxes exceed their equity. Selling the farm may leave them with little more than a tax bill! On the other hand, farms with a high proportion of equity in their business may find that deferred taxes are a much smaller part of their equity.

The tax characteristics of the farm are also important. Deferred taxes will be higher for farms with (1) real estate that was purchased many years ago which has increased in value, (2) depreciated machinery that has been well cared for and, thus, still has considerable value, or (3) lots of raised livestock with a zero tax basis. Deferred taxes will be lower for (1) the young farmer who has just purchased most of the assets or (2) the farmer who has just built a large new livestock facility that cost a lot of money but added only part of that cost to the market value of the real estate.

These factors lead to a lot of variability in the level of equity illusion,

that is, the proportion of the equity that would be consumed by taxes (table 3). Over 50 percent of the farms would lose 11 to 30 percent. However, 20 percent of the farms would lose over 40 percent. For an average farm situation, about 30 percent of the equity would be used to pay taxes.

### ***More Stable Compared to Assets***

Rough estimates of deferred taxes are likely more reliable when based on assets rather than equity. When assets are the base for the calculations, the level of debt used by the business, which does not affect taxes, is not a factor. Farm to farm variability results from differences in tax characteristics only.

Deferred taxes for the various farm types ranged from less than 10 percent to over a quarter of assets. The average level of taxes appears to be around 15 percent for crop farms and around 20 for livestock farms. The higher rates for livestock farms result from significant investment in raised livestock, which have a zero tax basis. Taxes would have to be paid on 100 percent of the value of these animals when they are sold.

### ***Your Ratios are Changed***

Including deferred taxes on the bal-



**Table 3. Distribution of the Amount of Equity Consumed by Taxes**

<u>Percent of equity consumed by taxes</u>	<u>New York Dairy</u>	<u>Illinois Cash Grain</u>	<u>Kansas Cash Grain</u>	<u>Iowa Grain/Stock</u>
<i>Percent of farms</i>				
10 or less	1	12	13	0
11 to 20	12	32	35	6
21 to 30	36	27	21	64
31 to 40	28	11	8	11
41 to 60	18	11	13	19
61 or more	5	7	10	0

**Average deferred taxes as a percent of equity**

All farms	31	32	30 <sup>a</sup>	31
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<sup>a</sup> Excludes two farms with negative equity.

**Table 4. Proportion of Assets Consumed by Deferred Taxes**

<u>Deferred Taxes as % of assets</u>	<u>New York Dairy</u>	<u>Illinois Cash Grain</u>	<u>Kansas Cash Grain</u>	<u>Iowa Grain/Stock</u>
<i>Percent of farms</i>				
10 or less	5	18	34	3
11 - 15	21	28	24	8
16 - 20	26	35	15	28
21 - 25	37	11	16	39
26 or more	11	8	11	22

**Average deferred taxes as a percent of assets**

All farms	19	16	14	21
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ance sheet increases the level of liabilities, and, thus, changes several ratios that are often used in analysis of the business. For example, solvency ratios deteriorate. That is, the debt/asset ratio increases and the percent equity declines. Thus, standards of comparison must change.

The debt/asset ratios in table 5 are averages, just like the ratios without deferred taxes refer to average farm situations. These data are illustrative of the change in standards that farmers and lenders should use in assessing the relative debt situation on

a farm business. For example, an average Illinois grain farmer with a 50 percent debt/asset ratio would have a debt asset ratio of about 68 percent when deferred taxes are included. If the lender's underwriting standards indicate that any debt/asset ratio below 50 percent is acceptable excluding deferred taxes, any debt/asset ratio below 68 percent to be considered acceptable when deferred taxes are included.

It is important to remember that including deferred taxes on the market value balance sheet does not make



**Table 5. Debt/Asset Ratio Standards Including Deferred Taxes**

<b>Debt/Asset Ratio</b>	<b>New York</b>	<b>Illinois</b>	<b>Kansas</b>	<b>Iowa</b>
<b>Standard without</b>	<b>Dairy</b>	<b>Cash Grain</b>	<b>Cash Grain</b>	<b>Grain/Stock</b>
<b>Deferred Taxes</b>				
	<i>Equivalent Standard Including Deferred Taxes</i>			
Strong - less than 30	47	46	44	50
Caution - 50	67	68	67	66
High risk - over 70	87	88	81	87

the business a more risky venture. The same assets are included, the same debts are recognized and tax laws are unchanged. The Kansas farms in table 5 with a 30 percent debt/asset ratio without deferred taxes are exactly the same business and have exactly the same risk when deferred taxes are included on the balance sheet and the debt/asset ratio increases to 44 percent.

The farmer and lender do, however, have a more reliable indicator of the financial risk position of the business. One factor that had previously been ignored, namely taxes, is now explicitly included in the balance sheet.

### ***Current Ratio Changes***

One of the ratios most frequently used in the analysis of farm and non-farm businesses is the current ratio. This ratio is used as a measure of business liquidity. Farms with more current assets relative to current li-

abilities are considered more liquid (stronger) businesses. Current deferred taxes are the taxes that would be paid if the current assets were sold. Including these taxes in the liabilities reduces the current ratio (table 6). For example, including deferred taxes reduces a 1.5 current ratio to 1.0 on the average Iowa Grain/Stock farm in the study.

Inclusion of deferred taxes does not change the liquidity of the business. The same current assets are available for sale. The same debts need to be paid. However, if the current assets were sold to pay off the current liabilities, taxes would have to be paid. Including deferred taxes recognizes that fact. Thus, we have an improved measure of liquidity.

Farms with the highest current ratios are affected most by inclusion of deferred taxes because a larger portion of their current assets are

**Table 6. Current Ratio Standards Including Deferred Taxes**

<b>Current Ratio</b>	<b>New York</b>	<b>Illinois</b>	<b>Kansas</b>	<b>Iowa</b>
<b>Standard without</b>	<b>Dairy</b>	<b>Cash Grain</b>	<b>Cash Grain</b>	<b>Grain/Stock</b>
<b>Deferred Taxes</b>				
	<i>Equivalent Standard Including Deferred Taxes</i>			
Superb - 3.0	1.73	1.65	1.81	1.51
Very Strong - 2.0	1.38	1.24	1.43	1.17
Strong - 1.5	1.12	.99	1.02	1.00
Caution - 1.0	.88	.74	.89	.76
High risk - .8	.64	.63	.69	.64



**Table 7. Rate of Return on Equity Standards Including Deferred Taxes**

<b>Return on equity Standard without Deferred Taxes</b>	<b>New York Dairy</b>	<b>Illinois Cash Grain</b>	<b>Kansas Cash Grain</b>	<b>Iowa Grain/Stock</b>
	<i>Equivalent Standard Including Deferred Taxes</i>			
Very strong - 15%	24	29	20	23
Strong - 10%	15	18	15	14
Acceptable - 5%	8	8	7	7
Weak - 0%	0	0	0	0

usually in the form of salable assets such as grains, feeder livestock, etc.

### ***Rates of Return on Equity Improve***

Because incorporating deferred taxes reduces the recognized level of equity, a business with a given level of profitability will show a higher rate of return to that equity. For example, an Illinois farm with a 10 percent rate of return on equity without consideration of deferred taxes would show an 18 percent rate of return when deferred taxes are included (table 7). These higher rates of return move agricultural rates closer to rates quoted by other types of businesses. However, to be truly comparable to nonfarm businesses, the cost basis of assets would need to be used in calculation return rates.

For the farm types represented in this study, we see that the rate of return on equity rises sharply with inclusion of deferred taxes. Net income of the businesses did not change, but our measure of returns makes the farms appear more profitable.

In some respects, estimating deferred taxes as of the date of the balance sheet is a worst case scenario. It would be most appropriate in

case of a forced sale, liquidation, divorce or other unexpected occurrence. In some cases the amount of taxes to be paid can be reduced somewhat by spreading the sale into more than one year to take advantage of lower tax brackets. This strategy will be of most use for small farms. While the dollar savings may be similar, or a little larger, for large farms, the relative savings will be less important.

When the farm sale is spread into two tax years, care must be taken to be sure that any tax savings are not more than offset by decreases in the value of the assets sold. Selling the cattle and machinery in one year with the expectation of selling the real estate the next can result in a net loss if the farm sells for less because it looks less like a going business without any cattle or machinery around. The net recovery, or income, from the sale is less when the decline in farm value exceeds the tax savings.

### ***Improves Financial Management***

Incorporating deferred taxes does not change the riskiness of a business, but it does provide the lender (and the farmer) with an improved picture of the business, a better measure of that risk. The equity we see on the balance



sheet represents money that the farmer can use, not money he or she will have to pay to the state and federal government. It indicates the cushion available to protect the lender from financial reverses by the business. Also, the change in equity from year to year represents real progress by the business in terms of gain that the farmer could take away from the

business, if he or she so chooses.

By having better measures of the risk involved in a business, a lender should be able to make better financing decisions, reduce losses and other costs, and, as a result, provide higher rates of return to the lender. **jal**

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