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Farmland Prices

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Farmland is an essential input for agricultural production and a source of wealth for farmland owners. For these reasons alone, changes in the price of farmland are a subject of interest and anxiety. Public sensitivity to these prices has grown with the value of farmland itself, which is now at record levels. Given the recent bust in the US housing sector and memories of the farm financial crisis of the mid-1980s, an examination of real estate price and its relationship to the factors that influence its value may shed light on the farmland market.

Determining the price of any particular parcel of land is always difficult as the price depends on its quality (e.g., soil type, heat units) and location (e.g., is it next to a hazardous waste site or the home farm?). That said, a number of groups gather information on farmland prices in an effort to examine general trends. Statistics Canada, for example, gathers data on asset values including farmland. We use this data in Figure 1 to illustrate the price of Ontario farmland and buildings, after accounting for inflation.

Not surprisingly, the price of farmland trends upwards even after adjusting for inflation. The only exception to this trend was in the early 1980s during the farm financial crisis when interest rates reached record high levels and land values declined, but since then land values have doubled. Recently the upward trend appears to have accelerated. Based on the Farm Credit Corporation's (FCC) Farmland Values Reports, the national price of farmland has increased annually by approximately 10% since the start of the commodity price boom in the fall of 2006, about twice as fast as in first part of the decade.

In 2009, the last year reported in Figure 1, the per-acre price of Ontario farmland was nearly \$4,000. It is important to note that this is the average price for all of Ontario. Hence, it is not inconsistent with observations of high per-acre prices like \$10,000 per acre in the most productive regions. For example, sales data from FCC's Farmland Values Online indicates a wide range of prices within and across regions. For example, in 2010 land sold for \$2,600/acre in Bruce county, \$5,000/acre in Huron county, and \$6,000/acre in Middlesex county with highs of \$8,000 and lows of \$2,000.

The above figures result from observed exchanges between a willing seller and a buyer. These prices can be compared with implicit prices derived by other approaches. One simple method is to ask how much would you pay for an asset today that would provide a steady stream of payments into the future. Two key pieces of information are required to estimate the value of a piece of farmland using this method: (1) the annual returns that the farmland can generate; and (2) the rate of return the landowner expects to receive, often proxied by the long-term borrowing rate.

While commodity prices help to determine the value of land the amount a farmer has to pay to rent farmland is an excellent measure of its income earning potential. In the summer of 2010 we surveyed farmers and asked them what they paid to rent land. Using the same three counties as above, the weighted average cash rent was \$90 per acre for Bruce, \$136 for Huron, and \$200 for Middlesex. These are averages with maximum values up to \$300 per acre.

An estimate of the value of land under different assumptions of the rental value of land and the interest rate is provided in Table 1. Using Middlesex county, its \$200 land rent with a 4% interest rate suggests the appropriate value of farmland is \$5,000 per acre. However, a slight drop in the interest rate from 4% to 2% results in the land's value rising to \$10,000 per acre.

The interest rate that results in the calculated land value equalling the average selling price of land is around 3.25% for all three counties.

Table 1. Value of Farmland (\$/acre)

Land Rent (\$/acre)	Interest Rate		
	2%	4%	8%
50	2,500	1,250	625
100	5,000	2,500	1,250
150	8,750	4,375	2,188
200	10,000	5,000	2,500
250	12,500	6,250	3,125

The values in Table 1 give an indication of what is a reasonable amount to pay for land and emphasizes the important role of both the expected return from owning the land (the rental rate) and interest rates. Focusing on these two factors helps explain historical trends in farmland prices: i.e., higher land rents and lower interest rates place upward pressure on land prices.

Both land rents and interest rates are not only supporting higher land prices but, interestingly are at levels that are close to historic highs in the case of crop prices and lows in the case of interest rates. Projections for crop prices remain bullish with stock-to-use ratios for most of the major crops at low levels. The markets appear edgy and subject to price jumps on the news of any bad weather conditions such as what happened for wheat this summer. However, the valuation method we use assumes that the current return from renting land will continue far into the future and not just temporarily. Interest rates are at extreme lows as illustrated in Figure 2. While most current forecasts suggest only modest interest rate increases over the next year, any increase will put downward pressure on farmland prices.

We do not have a crystal ball and hence we are not in a position to predict with certainty the future price of farmland. That said, we have illustrated the important role that interest rates and rental rates will play in determining the price of rural farmland. Our approach is not applicable to farmland facing high non-agricultural development pressure. When we look to the past with “market fundamentals in mind” we can see that currently high commodity prices and low interest rates have placed upward pressure on farmland prices. Future increases in farmland prices will depend on crop prices remaining at current levels and low interest rates. Thus, any land buyer needs to account for a potential downturn in crop prices and an uptick in interest rates in making cash flow estimates for repayment.

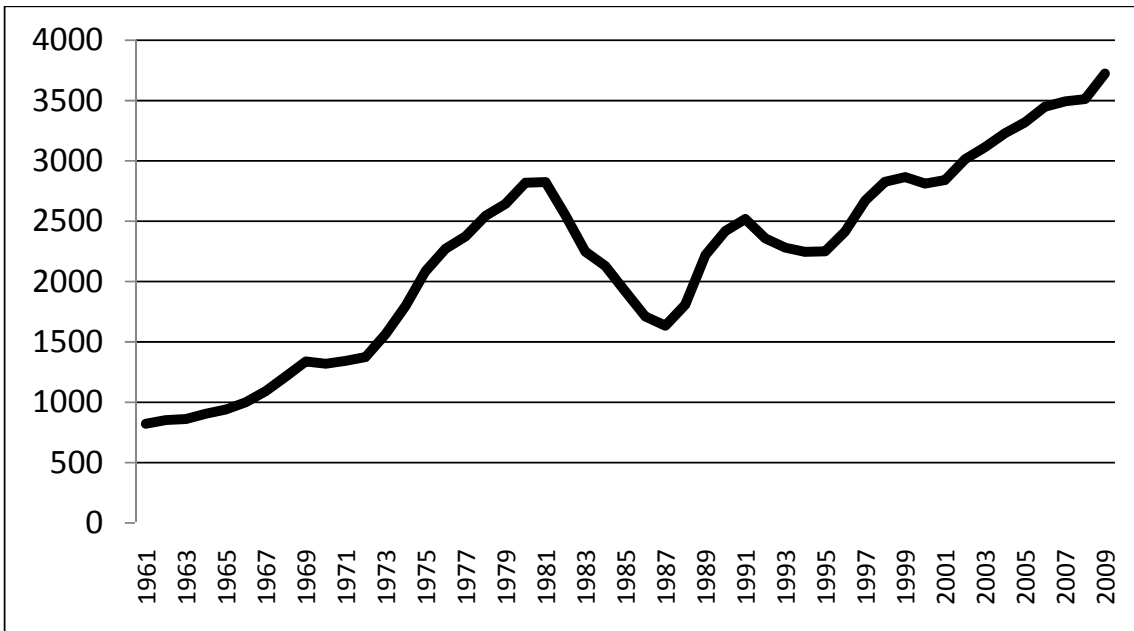


Figure 1. Ontario Farmland Values (Real \$/Acre), 1961-2009

Source: Statistics Canada. 2010. Value of Farm Capital. Catalogue number 21-013-X.
<http://www.statcan.gc.ca/pub/21-013-x/21-013-x2010002-eng.pdf>

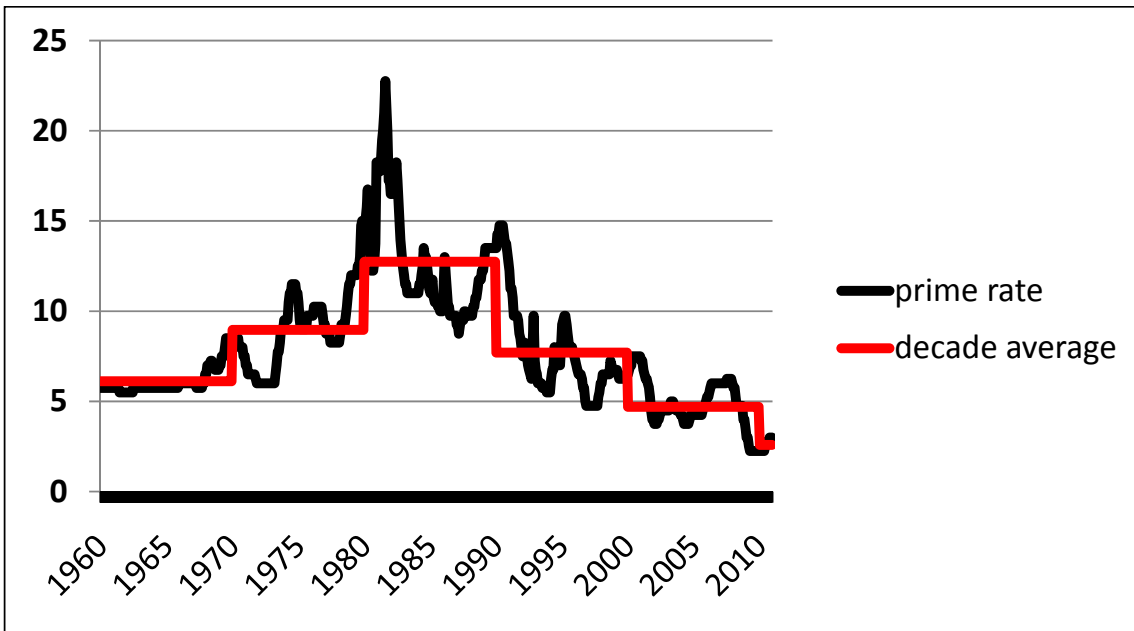


Figure 2. Monthly Prime Interest Rate and Decade Average, 1960-2010.

Source: Statistics Canada. Chartered Bank - Prime Business Rate. Cansim series V122495, Table 1760043.