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Comparing the stock market and Iowa land values: A question of timing
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Which is a better investment—the stock market or farmland? This question is frequently asked when there is a significant change in one of the investments or when they move in opposite directions.

Returns on an investment
Returns are composed of two parts. The first is capital gains or the increase in value. Obviously, there can also be a capital loss in the event of a decrease in value. The second component is the annual return. The annual average rent and the average dividend are used as the proxy for the income from the two investments. Table 1 (page 3) shows the average values and rents for Iowa farmland since 1950. The table also shows the yearly closing DJI average and the average yearly Dow Jones Industrial (DJI) dividend paid.

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2002 Livestock Enterprise Budget Prices — File B1-20 (1 page)

2002 Livestock Enterprise Budgets — File B1-21 (23 pages)

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Variability of returns
Figure 1 (page 2) shows the yearly percentage changes in the DJI and Iowa land values. Considerable yearly variation occurred in both investments. For land, the average percentage change is 5 percent with a standard deviation of 12 percent. Percentage changes for land range from a plus 32 percent to a negative 30 percent.

The Dow Jones Industrials show an average percentage change of 9 percent with a standard deviation of 16 percent. The yearly percentage change in the DJI ranges from a plus 44 percent to a negative 28 percent.

The average land rent since 1950 has been $63 per acre. The average dividend for the Dow Jones Industrials has been $60.

Which investment is better?
To address the question of which is the better investment, I will make two assumptions. First, I will assume $1,000 is invested in each alternative at the beginning of the period discussed. The amount of land or stock purchased will depend on the existing value. The $1,000 will increase or decrease by the change in value during the year. Second, rents and dividends will be reinvested back into the land and stock market. So, the investment increases

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(decreases) based on the annual increase (decrease) in value plus the rent or dividends. Taxes are not considered.

• **1950 investment** — Figure 2 shows the return to $1,000 invested in 1950. At that time, $1,000 would have purchased 4.6 acres or 4.3 shares of the DJI. Using the assumptions above, the value of the land at the end of 2001 would be $239,111 versus a DJI value of $286,970. In other words, the land investment would be valued 20 percent lower than the stock investment.

• **1970 investment** — Figure 3 shows the return to $1,000 invested in 1970. At that time $1,000 would purchase 2.4 acres or 1.2 shares in the DJI. At the end of 2001 the land investment would be worth $37,880, while the DJI investment would be worth $36,880. A land purchase in 1970 would currently be worth three percent more than a DJI investment.

• **1980 investment** — Figure 4 (page 4) shows the return to $1,000 invested in 1980. In 1980, the $1,000 investment in land would have only purchased .5 acres of land or one share of the DJI. At the end of 2001, the land investment would be worth $4,597 while the DJI investment would be worth $20,134. The DJI investment would be worth almost 340 percent more than the land investment.

• **1990 investment** — Figure 5 (page 4) shows the return to $1,000 invested in 1990. In 1990, the $1,000 would purchase .8 acres of land or .4 shares of the DJI. The $1,000 in land would be worth $3,574 at the end of 2001 and the DJI would be worth $4,889. The DJI investment would be 37 percent higher than the land investment.

• **2000 investment** — Things are somewhat different in the immediate past. The $1,000 invested in land in 2000 would be worth $1,155 at the end of 2001, while the DJI investment would be worth $895.
It has been said that timing is everything in the success of a rain dance. It would appear the same could be said for determining whether land or the stock market is a better investment. For the most part, it appears that the returns to the stock market are higher; however, there are time periods when an investment in land would produce higher returns.

Related questions
This raises several interesting questions. It is important to remember the majority of farmland purchasers are existing farmers. In 1990 and 1991, existing farmers represented over 80 percent of the purchasers. This number dropped to 67 percent in 2001. This is important because farmers generally do not buy land strictly as an investment. They buy land for a variety of reasons and the expected return is only one.

The proportion of land purchasers who are investors has risen considerably over the past several years. In 1989, investors represented only 12 percent of the purchasers, but in 2001 they represented 27 percent of the purchasers. This raises the question: if financial returns to land are low compared to stocks, why would an investor be interested in land?

One reason is that land is a tangible asset that adds to its value for many people. In addition, many of the purchases over the past few years have been for a variety of nonagricultural uses including summer homes, hunting camps, and other recreational purposes. High returns in the stock market have fueled many of these purchases.

Investors also may purchase farmland to diversify their financial portfolios. Given what happened to the stock market over the past two years, the lessons learned in the land market during the 1970s and 1980s should not be forgotten; that is, what goes up also can come down, and there is no such thing as a market that will always increase.

Future trends in land values
What will happen to the value of farmland over the next several years? As always, the future is hard to predict but in this case it is especially difficult. There are several factors that will have an immediate impact on land values and other longer-term factors that will determine the future performance of land.

Government program
In the short term, the future of government farm programs will affect values. As noted, farmers are the primary purchasers of farmland and net farm income determines how likely farmers are to entertain thoughts of buying land. Over the past several years, the majority of net farm income has come from direct government payments. In 2002 there will be a new farm bill. No one

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yet knows the final provisions of this bill, but if it greatly reduces payments to farmers and if there is no substantial change in the commodity markets, there will be an impact on land values.

Stock market performance
Another major unknown is the performance of the stock market over the next few years. If the market experiences a substantial decline, this could have an impact on investor interest in farmland. Land that was purchased for recreational purposes could come back on the market and depress prices. The Federal Reserve will take steps to prevent major problems in the overall economy and if this includes raising interest rates, there will be an impact on land values. Finally, a declining stock market may encourage investors who are looking for a safer place for their money to consider land purchases. There could be positive and negative effects on land values from a prolonged decline in the stock market. At this time it is not possible to know which factors will exert the most pressure.

Variability of returns
Land values are always influenced by returns. Annual returns are affected by the levels of production and demand. Weather and technological changes have a tremendous influence on the supply. And, in the global economy, changes in supply and demand conditions around the world can impact Iowa land values.

Structure of agriculture
In the longer term, changes occurring in agriculture will have an influence on land values. One of these is the structural change of increasing farm size. If this trend continues, there will be fewer farms and farmers. This will influence many segments of the rural countryside, including land values.

Age of landlord
Another element of change is the increasing age of Iowa farmland owners. In 1977, 38 percent of Iowa farmland was owned by people over the age of 65. This means that over the next few years a sizeable percentage of Iowa farmland will change hands. Will it enter the market, will family members retain control, or will it be divided? No one knows for sure, but this is likely to have an impact on land values.

Conclusion
The stock market has outperformed land over the past 50 years, especially during the past 10 years. But, timing has been important. What are the future trends? What will happen to land values? These questions are difficult to answer. At present, in my opinion, land values will continue to hold steady with only slight changes. There will continue to be year-to-year variations depending upon the current conditions and outlook for agricultural returns. In the long run, I think that land values will increase. But, for how long and by how much, no one knows.