

Comparing the stock market and Iowa land values: A question of timing, continued from page 1

(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.

Figure 1: Yearly Percent Change in Iowa Farmland and Dow Jones Industrials

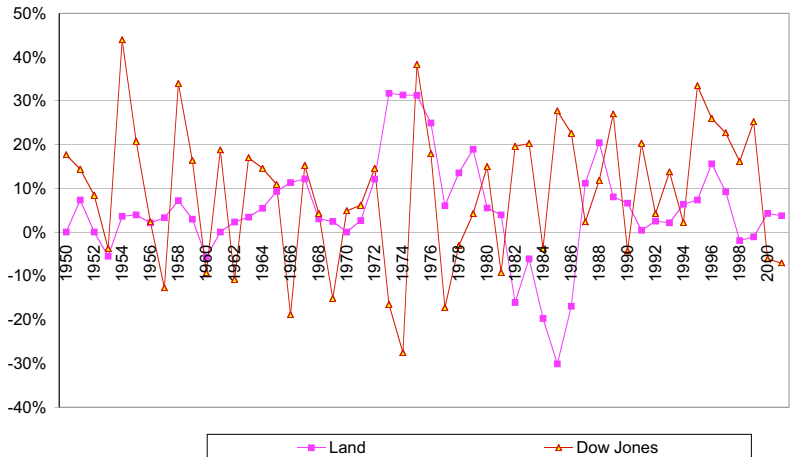


Figure 2: Value of \$1000 Invested in 1950 Land or the Stock Market

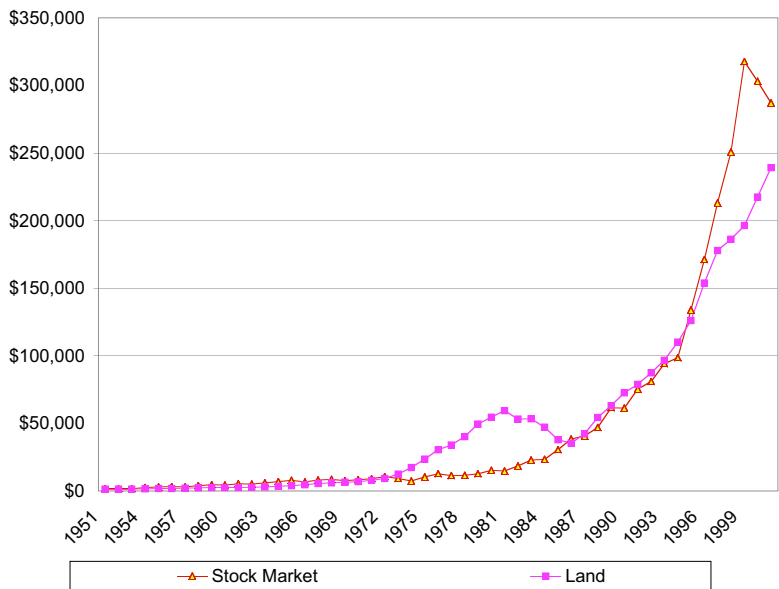
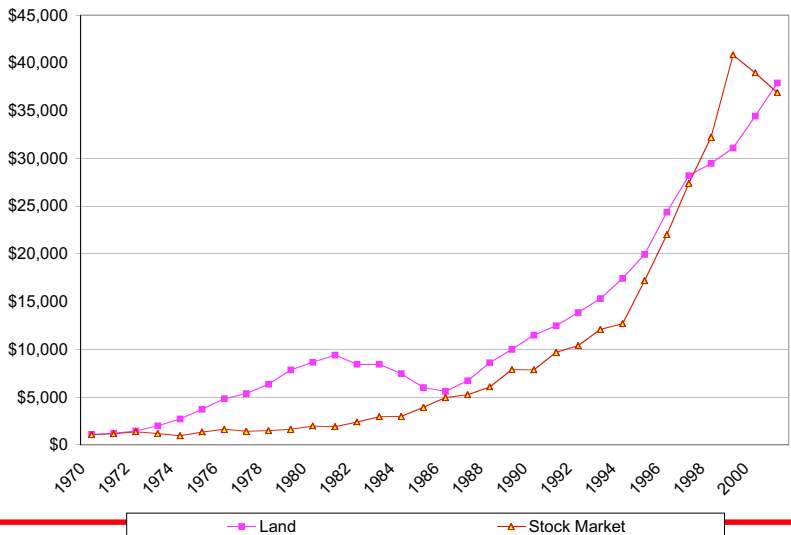


Figure 3: Value of \$1000 Invested in 1970 in Land or the Stock Market



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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

Table 1: Investment comparison of farmland versus the stock market

Year	Iowa Farmland *		Dow Jones Industrial **	
	Value	Rent	Closing	Dividend
1950	\$218	\$11	\$235	\$16
1951	234	12	269	16
1952	234	12	292	15
1953	221	13	281	16
1954	229	14	404	17
1955	238	14	488	22
1956	243	15	499	23
1957	251	15	436	22
1958	269	16	584	20
1959	277	17	679	21
1960	261	17	616	21
1961	261	17	731	23
1962	267	18	652	23
1963	276	19	763	23
1964	291	20	874	31
1965	318	21	969	29
1966	354	24	786	32
1967	397	26	905	30
1968	409	29	944	31
1969	419	32	800	34
1970	419	33	839	32
1971	430	34	890	31
1972	482	35	1020	32
1973	635	39	851	35
1974	834	53	616	38
1975	1095	60	852	37
1976	1368	69	1005	41
1977	1450	78	831	46
1978	1646	82	805	49
1979	1958	89	839	51
1980	2066	96	964	54
1981	2147	102	875	56
1982	1801	106	1047	54
1983	1691	106	1259	56
1984	1357	109	1212	61
1985	948	98	1547	62
1986	787	83	1896	67
1987	875	76	1939	71
1988	1054	82	2169	80
1989	1139	96	2753	103
1990	1214	100	2634	104
1991	1219	101	3169	95
1992	1249	105	3301	101
1993	1275	108	3754	100
1994	1356	102	3834	106
1995	1455	105	5117	117
1996	1682	110	6448	131
1997	1837	119	7908	136
1998	1801	119	9181	151
1999	1781	117	11497	169
2000	1857	120	10787	172
2001	1926	122	10022	181
Average		\$63		\$60

* Iowa State University

** Dow Jones Industrial Index

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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.

Figure 4: Value of \$1000 Invested in 1980 in Land or the Stock Market

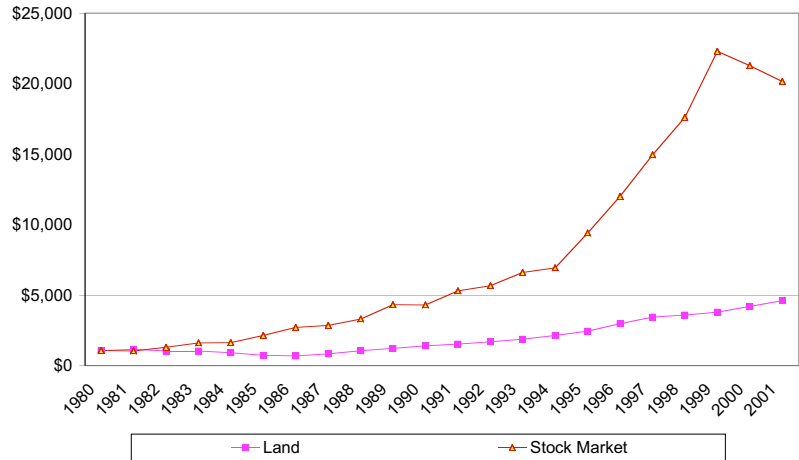
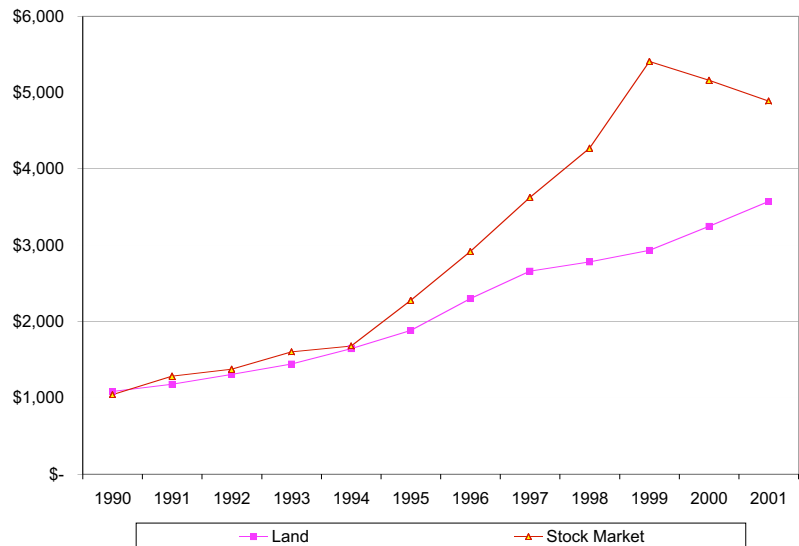


Figure 5: Value of \$1000 Invested in 1990 in Land or the Stock market



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.

Key Supreme Court ruling on plant patents *

by Roger A. McEowen, associate professor of agricultural economics and extension specialist, Kansas State University, member of Kansas and Nebraska Bars; and Neil E Harl, Charles F. Curtiss Distinguished Professor in Agriculture and professor of economics, Iowa State University; member of the Iowa Bar.

A late 2001 U.S. Supreme Court ruling that newly developed plant breeds are patentable under the general utility patent laws of the United States has important implications for farmers, plant breeders and consumers.

Facts of the Case

Pioneer held seventeen general utility patents covering the manufacture, use, sale, and offer for sale of its inbred and hybrid corn seed products, and sold the protected seeds under a limited label license that allowed only the production of grain and/or forage, and prohibited the use of the seed for propagation or seed multiplication or the development of a hybrid or different seed variety. J.E.M Ag Supply (J.E.M.) bought patented seeds in bags bearing the license agreement. When J.E.M resold the bags, Pioneer sued for patent infringement. J.E.M. moved for summary judgment on the basis that Pioneer's patents were invalid because plants are not patentable subject matter within the scope of 35 U.S.C. § 101, and that the Plant Patent Act (PPA) and the Plant Variety Protection Act (PVPA) set forth the only statutory protection for intellectual property rights in plants. J.E.M.'s motion was denied and the trial court ruled for Pioneer, the Federal Circuit affirmed, and the Supreme Court granted certiorari. Scope of 35 U.S.C. §101 – the Patentability of Plants 35 U.S.C.§101 provides:

“Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”

In *Diamond v. Chakrabarty*, the Supreme Court concluded that the Congress drafted 35 U.S.C. §101 broadly with the intent that the patent laws be given wide scope, and held that a manmade micro-organism fell within the statute's scope. The Court noted that the Congress made a statutory distinction between products of nature and manmade inventions, rather than between living and inanimate things.

The Court's language in *Diamond v. Chakrabarty* was generally believed to be sufficiently broad to suggest that even plants that could be protected under the PPA or the PVPA could be the object of a

general utility patent. Indeed, this position was confirmed in a 1985 case involving genetically engineered corn, and since that time the U.S. Patent and Trademark Office has issued nearly 2,000 utility patents for plants, plant parts, and seeds under 35 U.S.C. §101. Consequently, the *Pioneer* Court had no trouble holding that newly developed plant breeds fall within the scope of 35 U.S.C. §101.

Exclusivity of PPA and PVPA

The crux of J.E.M.'s position was that the Congress, in enacting the PPA and the PVPA, provided the exclusive statutory means for protecting plant life because both Acts are more specific than 35 U.S.C. §101 and thereby carve out plants from utility patent law for special treatment. However, the Court noted that the PPA did not contain any statutory language indicating that the Congress intended the PPA to serve as sole means of protection for asexually reproduced plants. J.E.M. also maintained that the Congress intended the PPA as the sole means of protection for intellectual property rights in plants because existing general utility patent laws (as of 1930) did not allow for patents on plants, and that there would have been no reason to enact the PPA had general utility patent law allowed plant patents. The Court disagreed, reasoning instead that J.E.M.'s argument failed to account for the state of patent law and plant breeding as of 1930, which involved a general presumption that plants were products of nature and were not amenable to the written description requirement of utility patent law. Thus, when the PPA was enacted, the Congress believed that plants were not patentable under utility patent law because they were viewed as living things not amenable to a written description, and not because they could not have been patentable subject matter under 35 U.S.C. §101.

The Court also rejected J.E.M.'s argument that the PVPA was the exclusive mechanism for protecting intellectual property rights in plants. The Court noted that the language of the PVPA did not restrict the scope of patentable subject matter under 35 U.S.C. §101, and did not contain any statement of exclusivity. The Court took particular note that, at the time of the PVPA's enactment in 1970, the PTO

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had already issued numerous utility patents for hybrid plant processes, and had assigned utility patents for plants since 1985 with no indication from the Congress that such action was inconsistent with the PVPA or the PPA.

Implications of the Court's Opinion

In recent years, seed companies have been taking legal action against farmers for saving seed protected by a utility patent. Much of that litigation was on hold pending the Supreme Court's opinion. It is now expected that the litigation will resume and intensify. An important point is that conventional seed as well as genetically modified seed may be patented. Farmers using such seed do not have the right to save any of the seed for replanting.

The opinion is also anticipated to further accelerate the amount of germplasm that is held privately rather than in the public domain as seed companies devote additional resources to patent any seed that is economically worth planting, whether genetically modified or conventional. That could have serious ramifications for the breeding programs of public

plant breeders. Relatedly, the opinion clears the way for inbred and hybrid seed products developed by public research institutions to be patented consistent with the Bayh-Dole Act of 1980. This could result in public research being directed to a greater extent towards satisfying the desires of the firms that purchase the rights to the patents or otherwise exert pressure on public research, and to a lesser extent towards the desires of farmers and consumers. The opinion could also lead to increased concentration, now approaching monopoly in some areas, of germplasm in private hands, reduced competition and innovation in plant breeding (including that from public breeding), increased concentration due to small seed companies being unable to find new breeding material, and greater control by the firm holding the patent over the crops grown from patented seed. Consumers may ultimately be negatively impacted by such events.

Clearly, the Congress bears the burden to modify the existing statutory language of 35 U.S.C.§101, the PPA or the PVPA if it is desired that plants not be patentable, or the projected impacts of the Court's opinion be avoided.

... and justice for all

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