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THE DIFFERENCES BETWEEN THE FREEDOM TO FARM ACT AND 30 PERCENT NORMAL FLEX ACRES ALTERNATIVES ON NORTH DAKOTA REPRESENTATIVE FARMS

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Executive Summary

- Under the **Flex** scenario, the average net farm income falls by $7,200 to $49,500 in 2000 but rises to $50,400 by 2003.

- Under the **Freedom** scenario, the average net farm income falls by $7,800 to $48,900 in 2001 but rises to $49,400 by 2003.

- On average, the representative farm would be willing to pay $99 per acre less for cropland in 2003 than in 1995 under the **Flex** scenario. Under the **Freedom** scenario, that farm would be willing to pay $106 less in 2003 than in 1995.

- On average, the representative farm under both scenarios would be willing to pay $6 per acre less for cash rent on cropland to produce the five program crops in 2003 than in 1995.

- Average and high profit representative farms' debt-to-asset ratios do not rise enough to jeopardize creditworthiness under either of the two scenarios evaluated. The debt-to-asset ratio for the low profit representative farm rises to levels that may adversely affect creditworthiness under both of the scenarios evaluated. Debt-to-asset ratios of the low profit farms rise above 0.62 under the scenarios evaluated.

- Differences between the impacts on the representative farms for the two scenarios are relatively minor during the forecast period.

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The objective of this analysis was to compare the impact of farm program spending caps passed by the House and Senate on the net income, cropland prices, cash rental rates, and debt-to-asset ratios of representative farms selected from the North Dakota Farm and Ranch Management Association farm records.

In this analysis we looked at the impact of two spending cap alternatives (Table 1). The savings in FY 1996 are $0.6 billion under the Freedom to Farm Act (House version) scenario and $1.27 billion under the 30 percent Normal Flex acres (Senate version) scenario. The savings over the five year period from 1996 to 2000 are $8.4 billion under the Freedom to Farm Act scenario and $9.05 billion under the 30 percent Normal Flex Acres scenario. The savings over the seven year period are $13.4 billion, the same in each of the scenarios. The alternatives evaluated are summarized as follows:

1. **The Freedom to Farm Act (Freedom)** - Reduce spending for government farm programs from its 1995 approved outlay level of $14 billion to levels that would achieve a savings of $11.0 billion over a seven-year period beginning in 1996. FAPRI assumes $2.4 billion in budget savings to be obtained from the Dairy, Peanuts, and EEP programs for a total budget savings of $13.4 billions. The Freedom to Farm Act decouples farm program payments from production by establishing a decreasing payment based on historical deficiency payments and marketing loan gains. Marketing loans at 70 percent of the preceding 5 year national average cash price will be available. Producers have complete planting flexibility within their total acreage base. ARP is eliminated and conservation compliance is continued. CRP funding is maintained but renewals of contracts will be at rental rates no higher than 75% of current rates.

2. **The 30% Normal Flex Acres (Flex)** - Reduce spending for government farm programs from the 1995 approved outlay level of $14 billion to levels that would achieve a savings of $11.0 billion over a seven-year period beginning in 1996. FAPRI assumes $2.4 billion in budget savings to be obtained from the Dairy, Peanuts, and EEP programs for a total budget savings of $13.4 billion. The 30% Normal Flex program increases non-paid flex acres to 30%. It allows production of alternative

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Table 1. Proposed Reductions from Current Baseline Funding Levels

	Freedom to Farm Act	30 Percent Normal Flex Acres
	----------dollars--------	
FY 1996	0.6 bil	1.27 bil
5 yrs	8.4 bil	9.05 bil
7 yrs	13.4 bil	13.40 bil

crops on total acreage base. Price support loans will be established under the 1990 Farm Act formulas. EEP is reduced by 20% per year and CRP acreage will decline over the forecast period to around 17 million acres in 2003 as a result of fixed outlay caps on the program. The basic structure of the current Farm Program is the foundation for the **Flex** alternative. Individual year deficiency payments will be subject to caps.

Procedure

This analysis is based on the North Dakota Representative Farm and Ranch Model which uses the FAPRI price projections as an input. The model has 12 representative farms, three farms in each of four regions: the Red River Valley (RRV), North Central (NC), South Central (SC), and Western (WEST). The farms in each region are representative of the average, high, and low profit farms enrolled in the North Dakota Farm and Ranch Business Management Association. The representative farms are developed from the North Dakota Vocational Agriculture Department farm record system data provided by cooperating North Dakota farmers.

This study focused on differences in net farm income, cropland prices, cash rental rates, and farm debt-to-asset ratios for high, average, and low profit farms. Changes in cropland prices and cash rental rates are for land used to produce five major crops: wheat, barley, corn, soybeans, and sunflowers under the alternative farm program options.

Characteristics of average representative farms in each region are shown in Table 2. The average representative farm is an average of all farms in the Farm and Ranch Management Records program for the state or for each production region. The high profit representative farm is an average of farms in the top 20 percent of farm profitability for the state or for each production region. The low profit representative farm is an average of farms in the low 20 percent of farm profitability for the state or for each production region.

Table 2. Characteristics of Average Representative Farms in North Dakota

	RRV	NC	SC	WEST
	----------acres----------			
Cropland	1234	1181	1369	1017
Owned land	217	385	504	489
Wheat	550	733	706	625
Barley	162	217	142	90
Sunflower	66	61	136	0
Corn	77	0	43	0
Soybeans	244	0	37	0
Sugarbeet	55	0	0	0
Pasture	23	340	351	927

Net farm income per farm, cropland prices per acre, and cash rental rates for the high, average, and low profit representative farms are calculated by using the North Dakota Representative Farm model operational at the Department of Agricultural Economics, Agricultural Experiment Station, North Dakota State University (Analysis of Alternative Farm Programs).

It is assumed that the farm equipment stock remains constant in the analysis. In other words, depreciation allowances are assumed to be invested back into farm equipment. A market determined capitalization rate is used in calculating cropland prices. Changes in residual income attributable to cropland determine the prices based on a weighted four-year moving average. Changes in cropland prices determine cash rental rates charged for rented cropland based on the market determined relationship of cropland prices to cash rental rates. Cash rental rates adjust on a three-year moving average of cropland prices.

This study assumed that net farm income from livestock operations and production of other crops, including sugar beets, remain constant during the forecast period.

Analyses of alternative farm policy options are reflected in changes in net farm income and cropland prices for the representative farms. These changes in turn affect the debt-to-asset ratios of the representative farms and the cash rental rates for cropland used in production of wheat, barley, corn, soybeans, and sunflowers.

Lower farm income is reflected in reduced allocation of income to owned cropland used in production of the crops in the analyses. Reduced allocation of income to cropland, given the market determined capitalization rate, results in lowered land prices. Reduced land prices result in lower cash rental rates farmers are willing to pay for cropland used in production of

the crops in the analyses. Withdrawal for family living and reductions in owned cropland prices reduce farm asset levels, resulting in an increase of debt-to-asset ratios for representative farms.

The FAPRI updated projected commodity prices (October 26, 1995) for each policy scenario examined are used in these analyses. The representative farm model is used to determine net farm income, land prices, cash rental rates, and farm debt-to-asset ratios under alternative spending caps.

Results

The study results are divided into four parts. The first part focuses on the differences between the two versions on net farm income. The second part focuses on the differences in cropland prices. The third part focuses on differences in cash rental rates. The fourth part focuses on differences in debt-to-asset ratios for high, average, and low profit representative farms.

Differences in Net Farm Income Under the Alternative Spending Caps

Figure 1 shows the state average net farm income for the representative farms under the alternative spending caps. Under the **Flex** scenario, the average net farm income falls from $56,696 in 1993-94 to $49,462 in 2000 but recovers in 2003 to $50,442. Under the **Freedom** scenario, average net income falls from $56,696 in 1993-94 to $48,880 in 2001 but recovers in 2003 to $49,389. The **Freedom** scenario maintains a higher net farm income than the **Flex** scenario early in the projection, but the net farm income is higher for the **Flex** scenario in the last four years of the projection.

Table 3 shows the net farm income under alternative scenarios for North Dakota for average profit representative farm. The differences between the two scenarios is the greatest in 2001, at $1,290, or 2.6%. Over the forecast period the difference is less than 0.2%. Deficiency payments under the **Flex** scenario are inversely related to market prices when prices are below the target price. At or above the target price, no deficiency payments are made. Conversely, under the **Freedom** scenario a fixed pool of funds is allocated for annual transition payments to growers over the seven year term of the USDA contract with participating growers. Hence, the size of the growers annual payments are certain and are unaffected by market prices for the crops produced. If the deficiency payments are greater than the transition payments under the **Freedom** scenario, the **Flex** scenario would provide higher net farm income than the **Freedom** scenario. On the other hand, if deficiency payments are less than transition payments, the **Freedom** scenario would provide higher net farm income. Since deficiency payments are inversely related to market price while transition payments are predetermined, net farm income under these scenarios depends upon market prices.

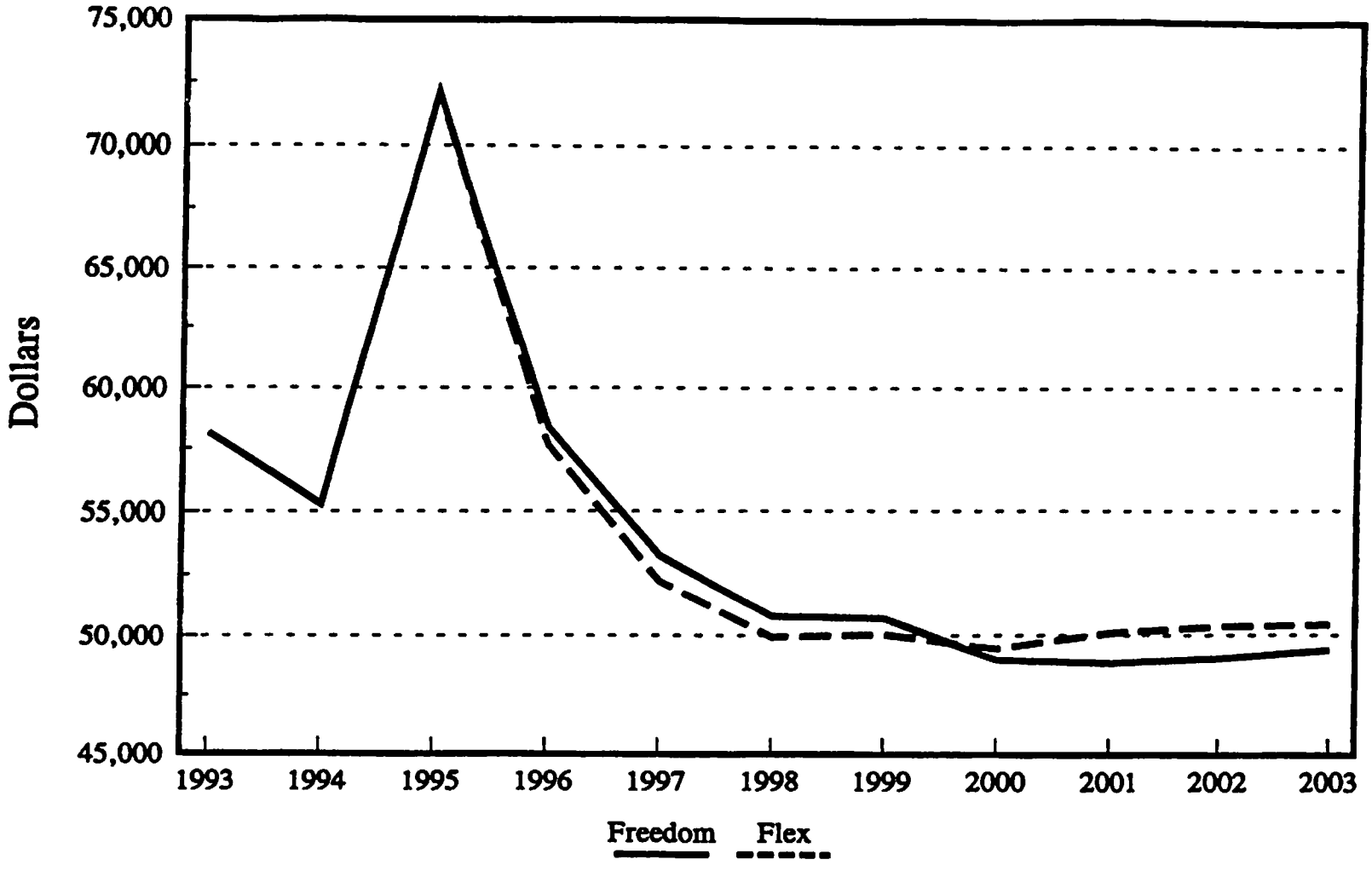

Figure 1. Net farm income per Average representative farm under alternative farm program scenarios

Table 3. Net Farm Income Under Alternative Farm Policy Scenarios

	Freedom	Flex	Difference Freedom - Flex	
	----------$----------			--%--
1993	58125	58125	0	0.00
1994	55267	55267	0	0.00
1995	72099	72099	0	0.00
1996	58362	57657	705	1.21
1997	53229	52210	1019	1.91
1998	50775	49936	839	1.65
1999	50690	50024	666	1.31
2000	49005	49462	-458	-0.93
2001	48880	50097	-1217	-2.49
2002	49062	50353	-1290	-2.63
2003	49389	50442	-1053	-2.13
5 year avg	52412	51858	554	1.06
8 year avg	51174	51273	-99	-0.19

Debt-to-Asset Ratios for Representative Farms

Figures 2-4 indicate the debt-to-asset ratio forecast for the high, average, and low profit representative farms under the two alternative scenarios. The **Freedom** scenario results in the largest rise in debt-to-asset ratios for each representative farm over the forecast period. At the end of the forecast period, the differences in debt-to-asset ratios between the two scenarios were less than 0.1 percent. Neither of the spending cap scenarios appear likely to jeopardize the creditworthiness of the high income and average income representative farms.

However, in the case of the low profit representative farm, each scenario results in debt-to-asset ratios over 0.62 at the end of the forecast period. Lenders might require federal loan guarantees on new borrowing by the low profit representative farm by the end of the forecast period. Table 4 indicates the debt-to-asset ratios for high, average, and low profit farms under each of the spending cap scenarios.

Average Crop Land Prices

Figure 5 indicates the average cropland price the North Dakota average profit representative farm would be willing to pay for cropland on which to produce wheat, barley, corn, soybeans, and sunflowers. Remember net farm income, on average, fell over the period for the average representative farm, leaving it with less money to annually allocate to cropland. Cropland prices that the representative farm, on average, would be willing to pay fell farthest under the **Freedom** scenario, by $106 over the forecast period. Conversely, prices fell least under the **Flex** scenario, by $99 over the forecast period. Recall that cropland prices are adjusted in the representative farm model on the basis of a weighted four-year moving average of the return to cropland. Table 5 indicates the decline in cropland prices the average representative farm would be willing to pay under the two scenarios.

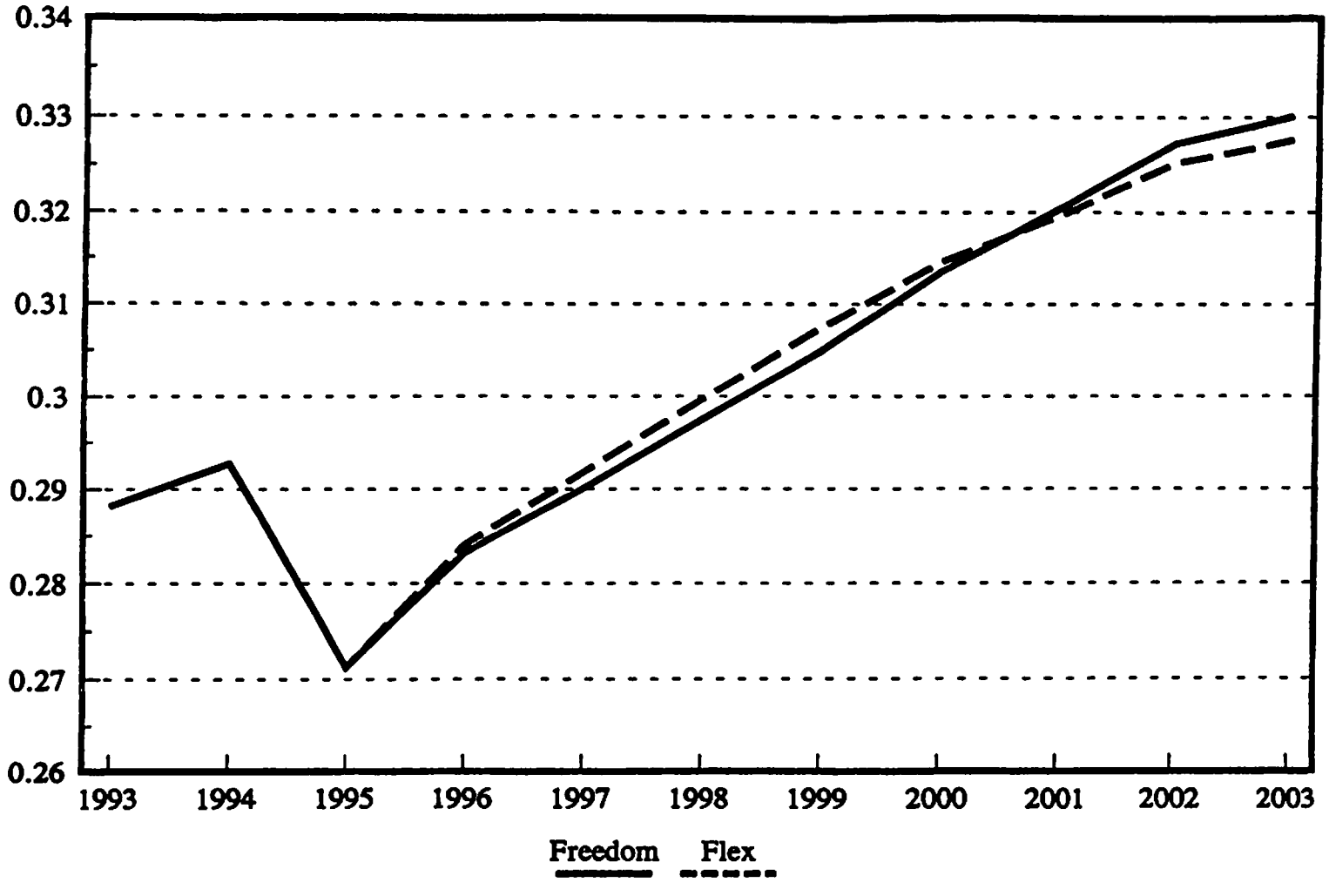

Figure 2. Debt/asset ratio for High profit representative farm under alternative farm policy scenarios

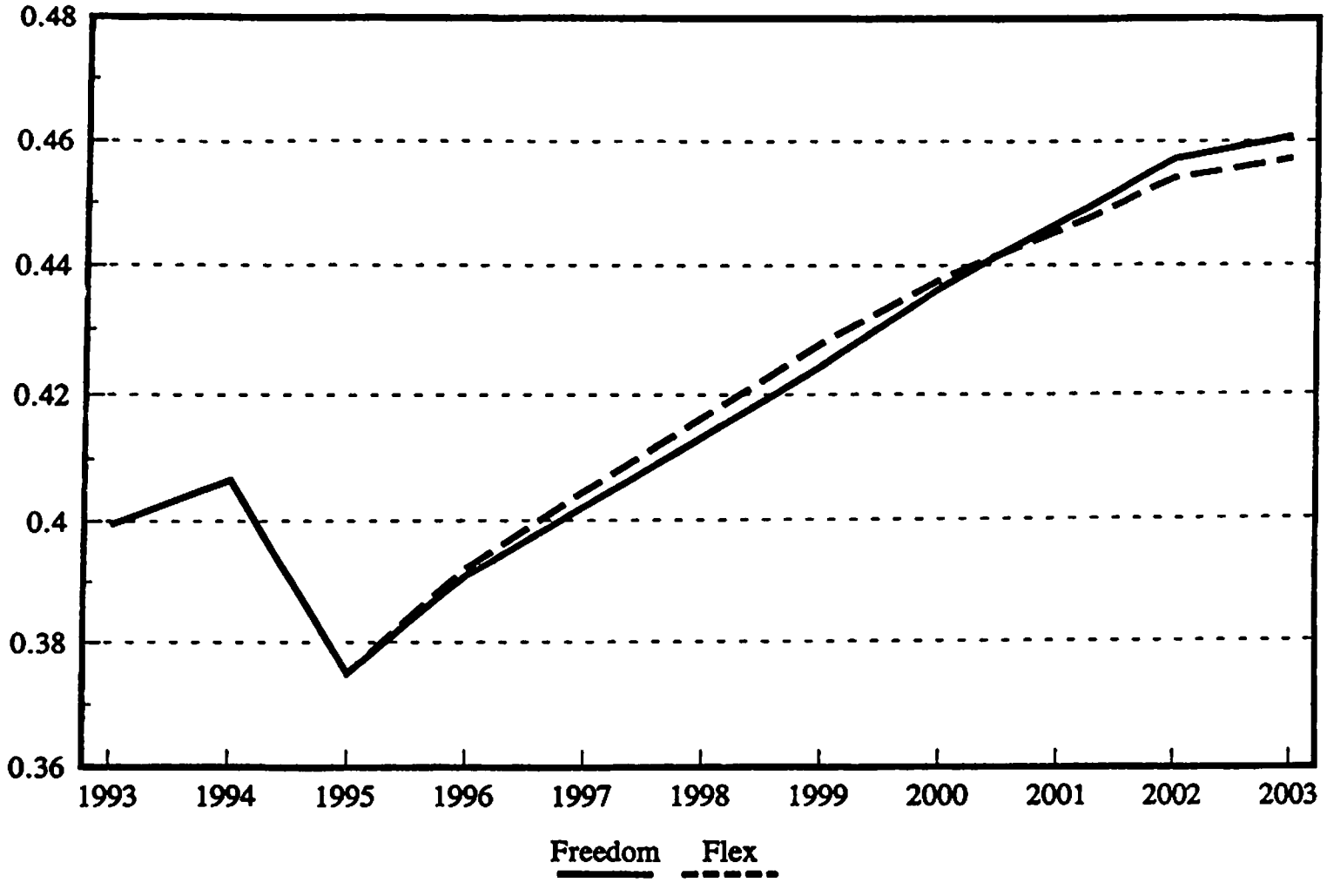

Figure 3. Debt/asset ratio for Average profit representative farm under alternative farm policy scenarios

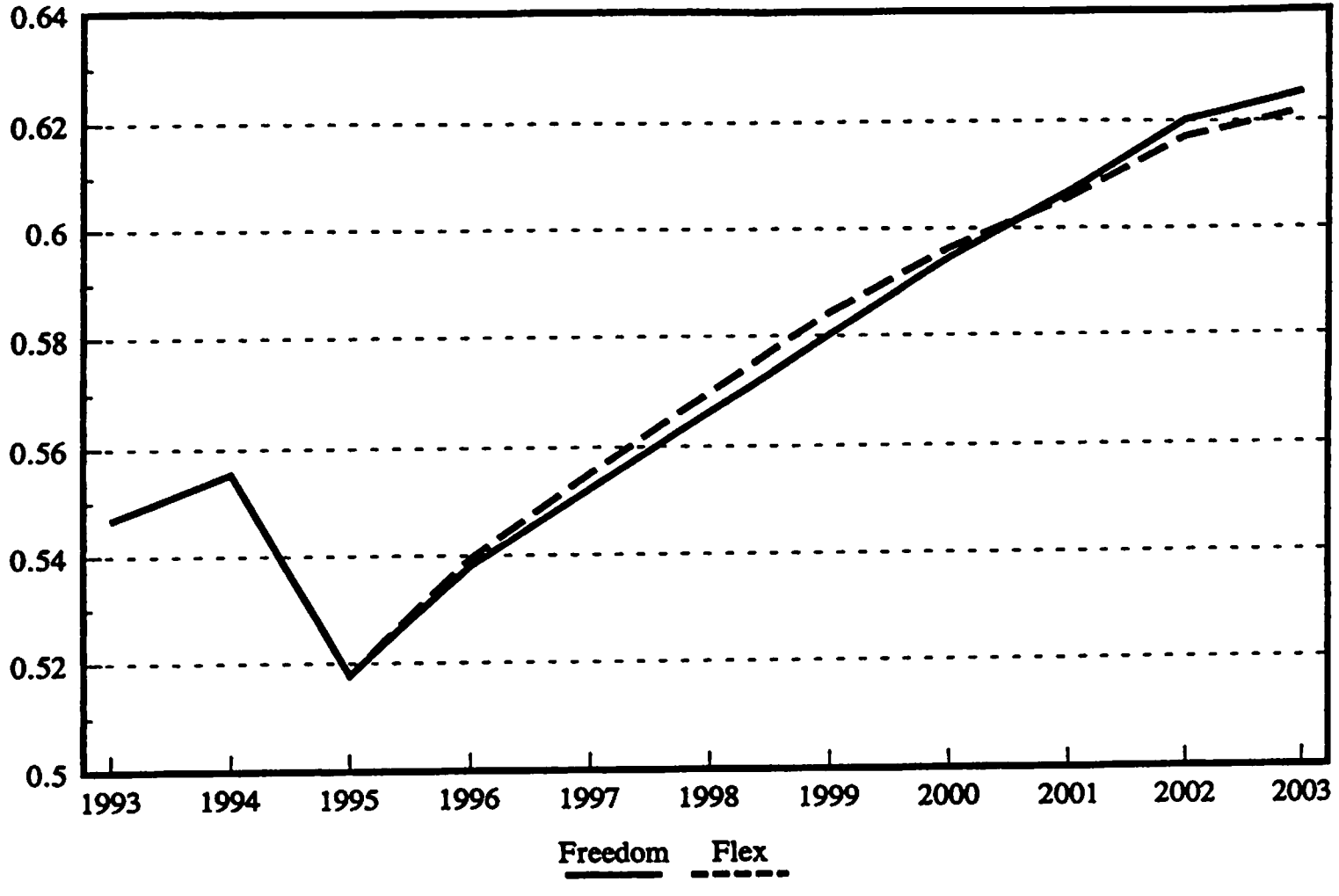

Figure 4. Debt/asset ratio for Low profit representative farm under alternative farm policy scenarios

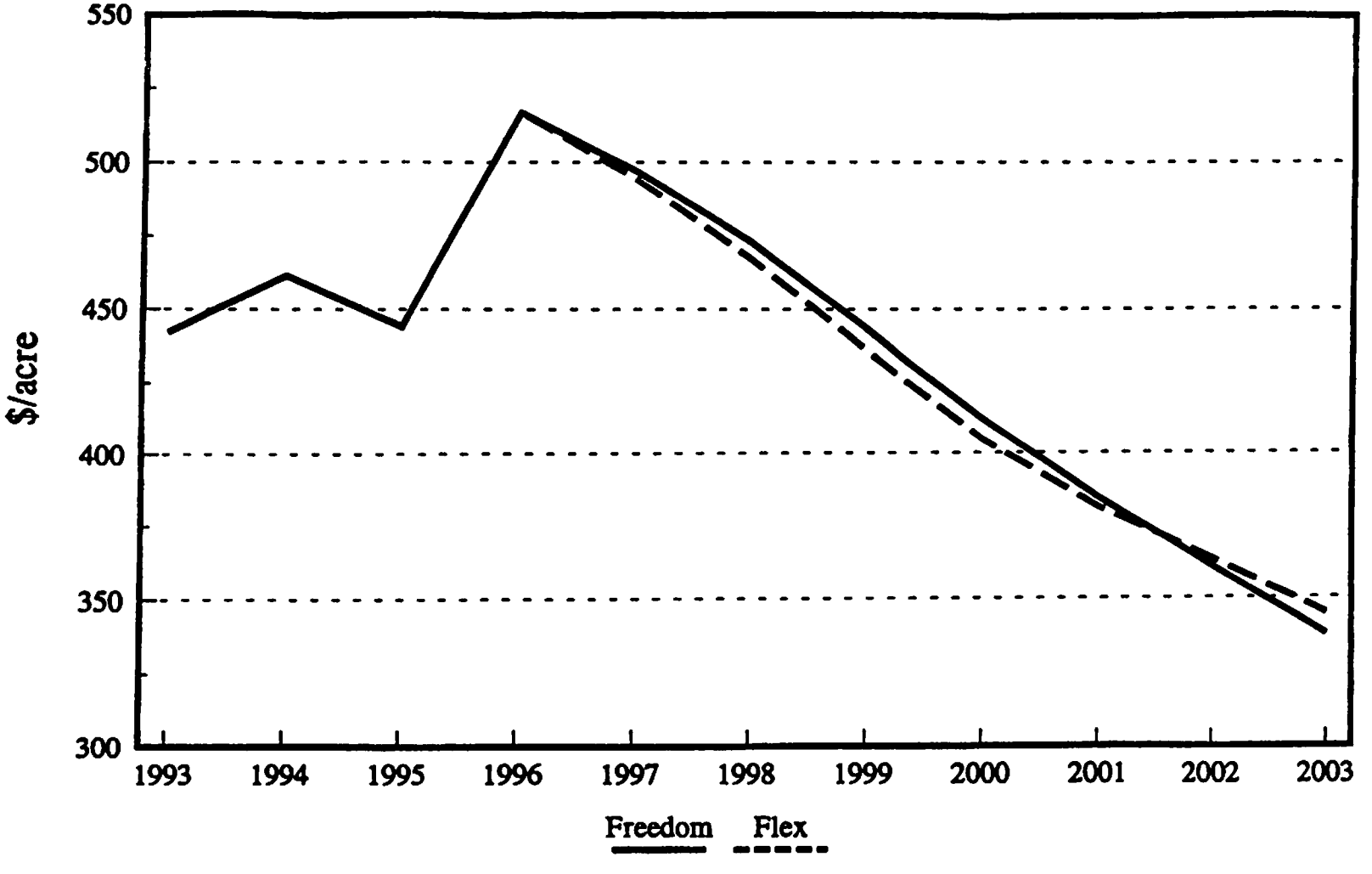

Figure 5. Average prices of cropland for Average representative farm under alternative farm policy scenarios

Table 4. North Dakota Debt/Asset Ratio Under Alternative Farm Policy Scenarios

	Freedom	Flex	Difference Freedom - Flex	
				--%--
High Profit Farm				
1993	0.288	0.288	0.000	0.000
1994	0.293	0.293	0.000	0.000
1995	0.271	0.271	0.000	0.000
1996	0.283	0.284	-0.001	-0.301
1997	0.290	0.292	-0.002	-0.602
1998	0.298	0.300	-0.002	-0.734
1999	0.305	0.307	-0.002	-0.812
2000	0.313	0.315	-0.001	-0.340
2001	0.320	0.320	0.001	0.240
2002	0.327	0.325	0.002	0.620
2003	0.330	0.328	0.002	0.735
5 year avg	0.298	0.300	-0.002	0.301
8 year avg	0.308	0.309	-0.000	0.309
Average Profit Farm				
1993	0.399	0.399	0.000	0.000
1994	0.407	0.407	0.000	0.000
1995	0.375	0.375	0.000	0.000
1996	0.391	0.392	-0.001	-0.318
1997	0.402	0.405	-0.003	-0.622
1998	0.413	0.416	-0.003	-0.748
1999	0.424	0.428	-0.003	-0.812
2000	0.437	0.438	-0.001	-0.314
2001	0.447	0.446	0.001	0.287
2002	0.457	0.454	0.003	0.678
2003	0.461	0.457	0.004	0.766
5 year avg	0.414	0.416	-0.002	0.418
8 year avg	0.429	0.430	-0.000	0.430
Low Profit Farm				
1993	0.547	0.547	0.000	0.000
1994	0.555	0.555	0.000	0.000
1995	0.518	0.518	0.000	0.000
1996	0.538	0.539	-0.001	-0.267
1997	0.552	0.555	-0.003	-0.527
1998	0.566	0.570	-0.004	-0.639
1999	0.580	0.584	-0.004	-0.708
2000	0.594	0.596	-0.002	-0.301
2001	0.607	0.606	0.001	0.185
2002	0.620	0.617	0.003	0.485
2003	0.625	0.622	0.003	0.541
5 year avg	0.566	0.569	-0.003	0.572
8 year avg	0.585	0.586	-0.001	0.587

Table 5. CropLand Prices Under Alternative Farm Program Scenarios

	Freedom	Flex	Difference Freedom - Flex	
	$			%
1993	442	442	0	0.00
1994	461	461	0	0.00
1995	444	444	0	0.00
1996	517	517	0	0.00
1997	497	494	3	0.54
1998	473	467	6	1.19
1999	443	436	7	1.59
2000	412	405	7	1.77
2001	384	381	3	0.84
2002	360	363	-2	-0.68
2003	338	345	-7	-2.06
5 year avg	468	464	5	0.97
8 year avg	428	426	2	0.48

Table 6. Cash Rent for Cropland Under Alternative Farm Policy Scenarios

	Freedom	Flex	Difference Freedom - Flex	
	$			%
1993	36	36	0	0
1994	36	36	0	0
1995	37	37	0	0
1996	38	38	0	0
1997	40	40	0	0
1998	41	41	0	0
1999	40	40	0	0
2000	38	38	0	0
2001	36	35	1	2
2002	33	33	0	0
2003	31	31	0	0
5 year avg	39	39	0	0
8 year avg	37	37	0	0

Cash Rental Rates

Figure 6 indicates cash rental rates the average representative farm would be willing to pay for cropland on which to produce wheat, barley, corn, soybeans, and corn, are lower at the end of the forecast period in 2003 for the two scenarios. Under the **Freedom** and **Flex** scenarios, the cash rental rate falls by $6 by the end of the forecast period. Recall that cash rental rates in the representative farm model are based on a three-year moving average of cropland prices and an assumption that the representative farm does not change the proportion of cropland prices paid in cash rent. Table 6 indicates the cash rental rates the average profit representative farm would be willing to pay under the two program scenarios. The largest difference in cash rental rates between the two scenarios is under 1.7% in 2001.

Conclusion

The differences between the two scenarios are minor for the years projected. The **Freedom** scenario maintains slightly higher net income for the early years, and the **Flex** scenario maintains slightly higher net income later in the projections. Differences in debt-to-asset ratios, cropland value, and cash rents are relatively modest. However, in both scenarios, the upward adjustment in debt-to-asset ratios for low profit representative farms is likely to adversely affect their credit worthiness.

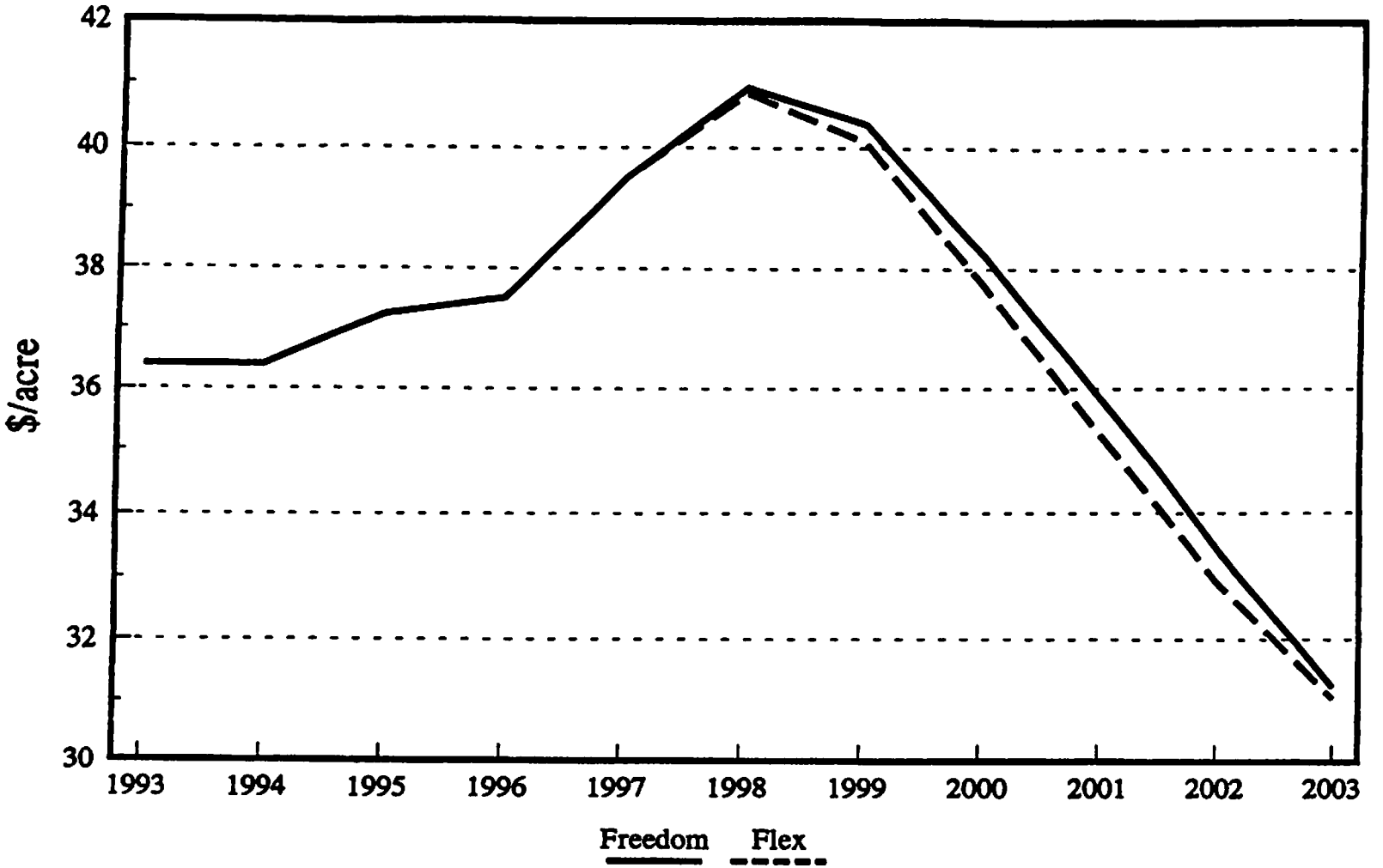

Figure 6. Cash rent paid by average representive farm under alternative farm policy scenarios