Evaluation of the financial situation of farms

Posouzení finanční situace zemědělských podniků

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Abstract: The study deals with the comparison of financial situation of farms in the Czech Republic. Three groups of farms are compared – co-operatives, business companies and individual farmers. The data were analysed within the years 1994 and 2000. The analysis of financial situation was done by the means of indexes describing liquidity, activity and profitability as well as some other additional indicators such as labour productivity and costs levels etc.

Key words: agricultural enterprises, financial situation, liquidity, activity, profitability

Abstrakt: Příspěvek se zabývá porovnáním finanční situace zemědělských podniků v České republice. Porovnání finanční situace je provedeno u zemědělských družstev, zemědělských obchodních společností a u soukromě hospodařících zemědělců za léta 1994–2000. Analýza finančních ukazatelů využívá ukazatele likvidity, zadluženosti, aktivity, rentability a doplňujících ukazatele zohledňující produktivitu práce, nákladovost apod.

Klíčová slova: zemědělské podniky, finanční situace, likvidita, aktivita, rentabilita

Financial situation belongs to the key characteristics of every enterprise. Enterprises, including agricultural enterprises in the conditions of free market economy, have to know how to deal with difficult financial situation. It means to have and to use knowledge of financial management and enterprise financing.

New entrepreneurial decisions asks for financial evaluation based on financial analysis, which should show, what is the financial situation and how it can be changed.

The basic methodological tool of financial analysis is the framework of indicators which characterise financial situation of the enterprise. Comparison of these indicators from the enterprise point of view can be done:
– in the time horizon for individual indicators,
– with normative values, with sector values from the standpoint of various criteria,
– territory comparison of indicators based on the same time horizon is possible with the respect of the competitiveness comparison.

OBJECTIVES AND METHODOLOGY

The study deals with comparison of the financial situation of agricultural firms in the sample file of agricultural co-operatives, agricultural business companies and individual farms in the Czech Republic in years 1994–2000. The comparison is carried out with the data of the above listed agriculture enterprises included in the framework of tested enterprises with the factual indicators of: liquidity, indebtedness, activity, profitability, cash flow and bonity. Other complementary indicators as labour productivity, cost level, material and energy demand etc. are compared for a wider view of an enterprise.

The total number of respondents in the framework of the tested farms in the Czech Republic in the year 2000 represents 1 218 enterprises (legal entities and individual farms), which represent 28.82% of total agricultural land area in the CR. In the group of legal entities, there are 276 agricultural co-operatives with 43.03% of total agricultural co-operatives' land area, 285 business companies with 28.97% of total agricultural business companies' land area. There were represented 633 individual farms in the year 2000 with 9.13% of total individual farms' land area.

There are used the following indicators to evaluate the financial situation of agricultural legal entities:
– indicators No. 1–6 are liquidity indicators
– indicators No. 7–13 are indebtedness indicators
– indicators No. 14–20 are activity indicators
– indicators No. 21–25 are profitability indicators
– indicators No. 26–30 are cash flow indicators
– indicators No. 31–36 are supplement indicators
– indicator No. 37 is bonity indicator according to the Altman's formula.

There are used the following indicators to evaluate financial situation of individual farms:
– indicators No. 1–5 are liquidity indicators
– indicators No. 6–9 are indebtedness and finance indicators

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– indicators No. 10–14 are activity indicators
– indicators No. 15–18 are profitability indicators
– indicators No. 19–23 are supplement indicators.

RESULTS AND DISCUSSION

Financial results of farms in the Czech Republic reached the following level in the years 1996–2000, in billions CZK:

1996 –0.5
1997 –1.3
1998 –0.4
1999 –2.1 (significant price drop of agriculture producers)
2000 +3.7 (extreme drought and its compensation).

Analysis of the financial situation of agriculture legal entities

There are major differences mostly in indebtedness indicators in the development of financial situation of agricultural co-operatives and business companies. Other indicators do not show major differences and describe problems of all agricultural enterprises – the payment ability aspects. For more details see Table 1 and 2.

If we continue in the evaluation of the individual groups of indicators development, we can say, that liquidity indicators (mostly 1st degree liquidity) show the low payment ability of agricultural companies, especially of business companies. The value of 3rd degree liquidity meets the set standards for both types of companies.

Table 1. Financial situation indicators for agriculture cooperatives (average values)

	Indicator	1994	1995	1996	1997	1998	1999	2000
1	1st degree liquidity	18.51	20.24	15.51	14.56	18.8	21.19	27.62
2	2nd degree liquidity	68.31	77.87	81	78.12	85.18	95.2	112.51
3	3rd degree liquidity	184.28	213.64	229.09	225.14	249.1	255.21	292.41
4	Share of claims in fl. assets	26.48	26.1	27.72	27.09	25.37	26.82	24.84
5	Share of inventory in fl. assets	62.93	63.55	64.64	65.3	65.81	62.7	61.52
6	Net working capital	45.73	53.19	56.35	55.58	59.86	60.82	65.8
7	Share of equity	42.09	41.3	42	39.7	39.58	43.17	46.55
8	Indebtedness	57.43	58.04	57.19	59.47	59.5	55.81	52.25
9	Interest rate coverage	–1.66	0.1	0.03	–0.24	0.76	–0.07	2.06
10	Coverage of installments	–1.66	0.1	0.03	–0.24	0.76	–0.07	2.06
11	Coverage of assets	0.98	0.99	0.99	0.97	0.99	0.98	1.01
12	Long-term indebtedness	38.97	42.42	42.45	44.3	45.79	42.75	40.27
13	Credit indebtedness	13.59	18.65	26.69	31.64	28.01	24.74	21.23
14	Inventory turnover	2.09	2.26	2.31	2.25	2.32	2.34	2.33
15	Inventory turnover time	171.99	159.06	156.14	160.23	155.36	153.76	154.5
16	Turnover of total capital	0.46	0.5	0.53	0.53	0.56	0.53	0.55
17	Turnover time of total capital	2.18	2	1.88	1.9	1.8	1.9	1.81
18	Average collection time	72.37	65.32	66.96	66.46	59.9	65.78	62.37
19	Turnover of equity	1.09	1.21	1.26	1.32	1.4	1.22	1.19
20	Turnover time of equity	0.92	0.83	0.79	0.76	0.71	0.82	0.84
21	Sales profitability I.	–3.37	–0.06	–1.32	–3.05	0.46	–2.07	3.72
22	Sales profitability II.	–2.97	0.19	0.07	–0.92	2.94	–0.21	4.81
23	Return on equity	–3.68	–0.07	–1.66	–4.04	0.64	–2.53	4.42
24	Return on total capital	–1.55	–0.03	–0.7	–1.61	0.25	–1.09	2.06
25	Cost profitability	–2.88	–0.05	–1.15	–2.56	0.39	–1.7	3.16
26	Sales profitability	7.94	10.26	8.39	5.68	9.96	9.16	14.24
27	Return on equity	8.67	12.43	10.61	7.51	13.98	11.19	16.89
28	Return on total capital	3.65	5.13	4.46	2.99	5.53	4.83	7.86
29	Indebtedness ratio	6.3	8.74	7.68	4.96	9.16	8.5	14.71
30	Debt maturity	14.77	10.67	12.29	19.13	10.25	10.94	6.18
31	Assets' reproductive ability	23.12	16.84	19.95	25.03	16.15	18.59	11.63
32	Labor productivity	525.9	443.63	303.88	383.64	569.95	576.72	615.24
33	Profit per one employee	–17.74	–0.26	–4	–11.71	2.6	–11.94	22.91
34	Annual profit increase	0	–97.94	1547.0	128.68	–119.01	–605.08	–100.44
35	Cost	0.96	0.99	0.98	0.96	0.99	0.97	1.02
36	Supply and energy demand	45.43	45.77	47.13	48.43	46.67	46.79	46.84
37	Rating	0.99	1.12	1.15	1.06	1.2	1.17	1.45

The large ratio of stocks to flowing assets in agricultural sector decreases its representatives, because stocks are the least liquid assets.

The indebtedness of business companies measured by the indebtedness ratio indicator shows a continuous decrease since 1997 and in 2000 it reached 36.71%, what is much lower than the indebtedness ratio of agricultural co-operatives, where there was reached a partial decrease to 52.25% in 2000.

It means that corporate stock and outside capital/total assets ratio is opposite at both groups of companies. Business companies are more stable; there are efforts for stable ownership ratios, which are represented in the indicator of long-term indebtedness. Agricultural co-operatives reached the level of about 41% and business companies about 24%.

Economic situation of agricultural companies is also characterised by the decrease of loan indebtedness, the total amount of bank loan reached the level of 16% of corporate stock at the business companies and the level of 21% at agricultural co-operatives. Credit indebtedness was increasing for the first of the followed years, in the years 1998 and 1999; there was a restriction of bank loans for agricultural companies, which was followed by the decrease of loan indebtedness. Most of the companies also started to use other forms of financing, especially financial leasing.

Table 2. Financial situation indicators for trading companies (average values)

	Indicator	1994	1995	1996	1997	1998	1999	2000
1	1st degree liquidity	11.48	10.37	10.19	9.83	15.43	15.31	24.47
2	2nd degree liquidity	61.35	60.49	81.99	84.57	84.41	88.5	109.35
3	3rd degree liquidity	157.04	153.91	183.28	190.21	208.67	218.76	254.81
4	Share of claims in fl. assets	30.26	31.23	37.98	37.03	30.62	30.36	27.77
5	Share of inventory in fl. assets	60.94	60.7	55.27	55.54	59.55	59.54	57.09
6	Net working capital	36.32	35.03	45.44	47.43	52.08	54.29	60.76
7	Share of equity	33.34	35.2	41.65	44.89	56.19	57.16	61.01
8	Indebtedness	64.68	62.96	57.09	53.78	42.5	41.6	36.71
9	Interest rate coverage	–1.76	0.72	0.72	0.3	0.22	–0.03	1.98
10	Coverage of installments	–1.76	0.72	0.72	0.3	0.22	–0.03	1.98
11	Coverage of assets	0.98	1	1	0.99	0.98	0.98	1.01
12	Long-term indebtedness	43.07	41.86	38.27	35.75	27.54	26.17	23.64
13	Credit indebtedness	18.6	25.67	23.84	27.32	19.31	20.54	16.3
14	Inventory turnover	2.67	2.87	2.68	2.8	2.56	2.48	2.71
15	Inventory turnover time	134.68	125.55	134.26	128.75	140.36	145.3	132.99
16	Turnover of total capital	0.6	0.61	0.55	0.57	0.52	0.54	0.6
17	Turnover time of total capital	1.66	1.63	1.83	1.75	1.93	1.86	1.65
18	Average collection time	66.87	64.59	92.26	85.84	72.17	74.08	64.69
19	Turnover of equity	1.81	1.75	1.31	1.27	0.92	0.94	0.99
20	Turnover time of equity	0.55	0.57	0.76	0.78	1.08	1.06	1.01
21	Sales profitability I.	–2.53	1.23	0.22	–1.36	–1.16	–2.28	3.5
22	Sales profitability II.	–2.55	1.52	1.87	1.03	0.85	–0.12	4.49
23	Return on equity	–4.58	2.14	0.28	–1.73	–1.07	–2.14	3.47
24	Return on total capital	–1.53	0.75	0.12	–0.78	–0.6	–1.23	2.12
25	Cost profitability	–2.23	1.1	0.19	–1.15	–0.98	–1.86	2.95
26	Sales profitability	5.2	9.65	8.99	7.15	7.6	8.61	14.54
27	Return on equity	9.41	16.84	11.77	9.11	7.01	8.1	14.4
28	Return on total capital	3.14	5.93	4.9	4.09	3.94	4.63	8.79
29	Indebtedness ratio	4.71	9.15	8.4	7.42	9	10.81	22.53
30	Debt maturity	19.75	10.22	11.23	12.68	10.15	8.43	3.75
31	Assets' reproductive ability	24.44	14.24	19.35	21.35	20.87	19.15	11.17
32	Labor productivity	288.49	570.36	445.52	598.09	582.49	648.51	626.23
33	Profit per one employee	–7.3	7	0.96	–8.12	–6.78	–14.78	21.93
34	Annual profit increase	0	–157.37	–78.7	–820.76	–6.45	201.87	–100.45
35	Cost	0.96	0.99	0.99	0.98	0.98	0.97	1.02
36	Supply and energy demand	44.59	44.84	46.79	49.06	48.87	46.77	47.7
37	Rating	0.96	1.09	1.16	1.21	1.44	1.49	1.9

Values of activity indicators used for evaluating profitability of used assets in agricultural companies in the Czech Republic can be find in Table 1 and 2, indicators No. 14 to 20. For the last years of the followed period, it is evident that the values of all indicators are improving, that means faster turnover, also decrease in the turnover time of all individual assets. Especially of those assets used most in agriculture, that means stocks and claims.

The combined influence of indebtedness, liquidity and activity indicators is reflected in profitability indicators. Profitability is the measure of companies' ability to create new resources, to create profit with the use of the invested capital. Agricultural co-operatives in the Czech Republic listed negative development tendencies up to 1997. In 1998, agricultural co-operatives listed a positive financial result. The profitability indicators showed gain for the first time, not loss. In 1999, the situation was similar as in 1997. Positive financial result was listed in both groups of companies in 2000. Situation of business companies is also negative, with the exception of the years 1995, 1996, and 2000.

The development of cash flow tendencies is positive for both groups of agricultural companies. The cash flow indicators (No. 26–30) showed favourable values. Especially in evaluating the profitability of corporate stock, there is a major difference between indicators based on profit and cash flow.

The analysis of financial situation of agricultural companies can be extended by some other selected supplement indicators (No. 31–36). The indicator of assets reproductive ability, measured by the ratio of total assets and profit including depreciation, shows in what time are the assets restored by disposable resources. Also this indicator showed positive values in 1998 and 2000, linked with the reached profit of agricultural co-operatives. Nevertheless, it remains on a very low level in the agricultural sector. Second of the supplement indicators is labour productivity, which shows the volume of sales per one average worker. Values of this indicator fully represent the general tendencies in Czech agriculture, when after 1990, a severe decrease of workers occurred. There are no changes in costs, which show the efficiency of used resources due to price increase of agriculture inputs. This tendency was also showed by the activity indicators.

The evaluation of bonity of business companies is, the same as for other agricultural enterprises, very unpleasant. The companies which have the bonity indicator, i.e. the value of Altman's formula, bigger than 2.99, are regarded as financially stable. The listed value for both groups of agricultural companies in The Czech Republic is substantially lower.

Analysis of the financial situation of individual farms

The analysis of financial situation of individual farms is based on the data collected from the sample file in years 1996–2000 and it is showed in Table 3.

Liquidity of individual farms is much higher, better, than that of agricultural co-operatives and other legal entities, as shown in Table 3. The 3rd degree liquidity meets set standards for this indicator (i.e. greater than 200) from 1998. The 1st degree liquidity is very variable among the years. In 2000, the value of this indicator significantly improved compared to previous years (besides 1998) up to 65%. Increase of this indicator is caused mainly by the drought subsidies granted in 2000.

The share of claims in flowing assets is also variable in the listed years and in 2000, it is comparable with that of agricultural co-operatives. The indicator of net working capital is a ratio indicator and shows the share of net working capital in flowing assets. The value of the net working capital can never be negative. Negative value of this indicator would mean that long-term assets are covered by short-term resources, which is absolutely impossible. The value of this indicator should be somewhere between 30–50%. The value of this indicator for individual agricultural farms is in the whole followed period 1996–2000 higher than the recommended values and higher than the value of this indicator for co-operatives and other legal entities. It is mainly because the short-term debts of individual farms are much lower than the ones of legal entities (short-term debts in 2000 were about 1 200 CZK per hectare for individual farms).

The level of indebtedness is shown by indicators No. 6–9. The value of these indicators is lower than the ones of agricultural co-operatives and other legal entities. Especially the indicator of indebtedness measured in 2000 reached the level of 19.26%, which shows a low rate of outside resources for individual farms. The low rate of loan indebtedness also reflects the difficult access to bank loans for individual farms. Interest rate coverage and constant payments coverage is listed only for 1998–2000. For 1996 and 1997, there were no data available from the sample file of individual farms. The value of the interest rate coverage indicator reached 6.46 in 2000. The level of this indicator exceeds the recommended value of 4, which shows the ability to pay the interest from the profit. Other indicator is the indicator No. 9 – coverage of constant payments, which reflects the widely used form of financing – financial leasing. The level of this indicator is 2.55, which is below the recommended value of 5.

The activity indicators (indicators No. 10–14) show the efficiency of assets use in agricultural enterprise. Stock turnover time is positive, total assets turnover time is negative in comparison with legal entities. Average collection time for individual farms is between 30 and 50 days. In 2000, it reached 42 days, which is 20 days less than collection time of agricultural co-operatives.

Profitability of individual farms is in followed time period positive according to the individual indicators, which means that individual farms reached profit in the whole period of 1996–2000, unlike the agricultural co-operatives and other legal entities which reached profit only after 2000 (agricultural co-operatives also in 1998, business companies also 1995 and 1996).

Supplement characteristics as labour productivity, profit per one worker and cost are very different for individual farms than that for agricultural legal entities. La-

Table 3. Financial situation indicators for individual proprietorship farms (average values)

	Indicator	1996	1997	1998	1999	2000
1	1st degree liquidity	33.49	29.36	93.24	28.3	64.74
2	3rd degree liquidity	107.4	108.73	310.29	209.21	326.96
3	Share of claims in fl. assets	33.7	41.09	15.74	27.25	22.51
4	Share of inventory in fl. assets	35.12	31.9	54.21	59.22	57.69
5	Net working capital	77.47	79.29	90.86	83.53	89.45
6	Indebtedness	37.28	33.17	20.56	28.31	19.26
7	Credit indebtedness	35.34	27.41	17.09	22.12	14.45
8	Interest rate coverage	.	.	2.1	2.24	6.46
9	Coverage of installments	.	.	1.42	1.36	2.55
10	Inventory turnover	10.17	14.08	3.72	3.26	3.32
11	Inventory turnover time	35.4	25.56	96.76	110.56	108.41
12	Turnover of total capital	0.56	0.69	0.47	0.51	0.5
13	Turnover time of total capital	1.78	1.44	2.15	1.96	2.01
14	Average collection time	33.97	32.92	28.09	50.88	42.29
15	Sales profitability	5.22	7.72	2.87	2.58	5.61
16	Cost profitability	5.51	8.37	2.96	2.65	5.95
17	Return on equity	4.67	8.02	1.68	1.84	3.45
18	Return of total capital	2.93	5.36	1.34	1.32	2.79
23	Assets' reproductive ability	9.72	7.04	12.09	12.66	11.24
19	Labor productivity	432	493.87	484.63	508.01	550.75
20	Profit per one employee	22.56	38.13	13.91	13.11	30.91
21	Annual profit increase	0	64.99	–63.52	–8.05	132.8
22	Cost	1.06	1.08	1.03	1.03	1.06

bour productivity of individual farms is constantly increasing in the followed period, but it does not reach the level of agricultural co-operatives and other agricultural legal entities at the end of 2000 (about 620 000 CZK of sales per one worker). The profit per one worker is positive in comparison with agricultural co-operatives and other legal entities, but the cost is greater.

CONCLUSION

The knowledge of financial situation belongs to basic characteristics of every enterprise. It makes the decision-making more objective. The ways of comparison of farms financial situation are based on the designed sets of indicators to fit the company's needs. The listed numerical values of individual indicators of farms make comparison possible with the sector values. These values can also be used by the state for correction of agrarian policy tools, by the banking sector for loan policy management, etc.

This paper shows some differences in the followed time period, which exist among the analysed farms, and also shows the week spots of agricultural sector, which are not influenced by the form of enterprise. Financial situation of farms is also reflected in their competitiveness.

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