# Elementary financial analysis of the Forests of the Czech Republic, state enterprise

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**ABSTRACT**: The basic feature of an economic reform of the forestry in the Czech Republic after 1990 was separation of supervision in the state forests from operating performance. The Forests of the Czech Republic, state enterprise, was charged with management and supervision, hence economic activities of the subject are provided on the basis of contracts by entrepreneurial units called contractors in the forestry. The purpose of the paper is economic analysis of the Forests of the Czech Republic, state enterprise, in the period 1998–2002. The objective is the construction and testing of an elementary method of financial analysis as well as outline of financial situation and development of the chosen subject generally. The paper contributes to branch economy analysis, common in agriculture and wood-processing industry.

Keywords: forestry; state forests; state enterprise; financial analysis

One of the conditions of enterprise competitiveness in the market is permanent and exact monitoring and assessment of its own economic situation, notably financial situation. The most common method coping with this problem is financial analysis.

Financial analysis is a systematic process of analysing the data acquired mostly from company's accounting, enlarges the information capability view on the quality of company's management and makes a possibility to make informed decision. Financial analysis is not only a part of the economic analysis of the company, but also a necessary source for financial planning (GRÜNWALD, HOLEČKOVÁ 2001).

Besides company's management, the methods of financial analysis are used by external subjects for different purposes – analysing of competitors, appraisal of business partner, bank rating, auditing, etc. (Kupčák 2003b).

In Anglo-Saxon literature the state when the situation of the company is satisfactory is often called "financial health" of the company. The feature of the financial health of company was described by VALACH et al. (1999).

There are many techniques of financial analysis to be applied: besides the basic analysis of accounting data from financial statements and their changes (interannual, time series, etc.), percent analysis ratios, Altmann formula, DuPont pattern and pyramidal analysis (SYNEK et al. 2002).

From the point of view, the analysis is divided into fundamental and technical analysis. Fundamental analysis is based on sophisticated knowledge of mutual connections between economic and non-economic phenomena (Sedláček 2001).

Technical analysis uses mathematical, mathematical-statistical and other algorithmised methods for quantitative processing of data from financial statements (Černá et al. 1997).

Technical analysis deals with extensive and intensive (relative, proportional) indicators.

SEDLÁČEK (2001) set apart state, differential, flow and non-financial indicators from extensive ones.

SYNEK et al. (2002) described the typical representatives of differential quantities (for example working capital). At the same time he dealt with the analysis of trend extensive ratios, particularly with comparison of balance sheet values in time.

Analysis of components investigates the percentage representation of individual items in the complex in one time period. Vertical analysis makes it

easier to compare financial statements and makes it possible to compare companies of different size (Grünwald, Holečková 2001).

Intensive indicators are interpreted as two extensive indicators being measured. The items being compared have a mutual context. Typical intensive indicators – ratios are profitability, solvency (indebtedness) and liquidity, activity and capital market ratios (VALACH 1999).

NEUMAIEROVÁ (1998), KISLINGEROVÁ and NEUMAIEROVÁ (2000) and other authors also worked with methods of financial analysis. KOVANICOVÁ and KOVANIC (1997) was concerned with detailed utilisation of elementary (and higher) methods of financial analysis.

The results of financial analysis are necessary to evaluate in the conception of field specifics, and/or with specifics of manufacturing companies. Particularly Kovanicová and Kovanic (1997) pointed to the problem of comparison of ratios values with industry averages, and negative influences connected with "recommended values".

Synek et al. (2002) classified enterprises according to business activity into industrial, agricultural, forestry, construction, transport, connection, forwarding, commercial, tourist industry, bank, monetary and services.

Economic aspects emerging from the character of forestry, the system of forest management, unusualness of forestry production and last but not least economic reforms in forestry in the Czech Republic after year 1990 were described by Kupčák (1998, 2003a,b). Fiscal and accounting aspects must be taken into account in the forestry, arising primarily from valid legislation (Kupčák 1999). Hajdúchová (2000) dealt with financial analysis of the company and evaluation of financial ratios under forestry circumstances in Slovakia.

The most common source of information on forestry is annual Report on the State of Forests and Forestry in the Czech Republic (i.e. "green reports"), published also on the Internet sites (http://www.mze.cz/); reports for the years 1995–2002 are available. Data and analysis in the chapter *Economics in the Forestry Sector* express the economic situation of forest owners<sup>1</sup> and besides that (from 1998) also

the situation of entrepreneurs in the forestry as well as economic situation of forestry contractors. Basic published indicators comprise:

- trend of average prime costs of selected operations on relevant unit,
- profit of forest owners in CZK/ha (state forests, communal forests, private forests),
- financial outcome of forestry contractors (CZK/ha of forest).

The branch analysis of forestry, similar for example to the method of collecting and processing of agricultural data FADN (Farm Accounting Data Network)<sup>2</sup>, or financial analysis of enterprises in the wood-processing industry, according to the methodology of Ministry of Industry and Trade of the Czech Republic, are missing.

The already mentioned specifics of forestry in the Czech Republic are connected with Forests of the Czech Republic, state enterprise. The basic sources of information on this enterprise are annual reports available on the Internet sites (http://www.lesycr. cz); nowadays reports for the years 1998–2002<sup>3</sup> are available. Financial analysis is applied to this enterprise, and/or elementary financial analysis with the use of available data, applied for the five-year period 1998–2002, which is the purpose of the paper. The main goal is to propose the unification of methods and contribute to the elaboration of industry average values, applicable to the evaluation of financial situation of companies in the forestry, judgment of the forestry economy as an organic whole or a part of industry in the national economy.

#### Basic profile of the Forests of the Czech Republic, state enterprise

Forests of the Czech Republic, state enterprise, (hereinafter LČR) was established on the 1<sup>st</sup> January 1992 with the foundation charter by Ministry of Agriculture of the Czech Republic of the 11<sup>th</sup> December 1991, reference number 6677/91-100, with the headquarters in Hradec Králové. The identification number of the company is 42196451. On the basis of the founder's decision of 12<sup>th</sup> August 1997, r. n. 3217/97-1000, the change of the foundation charter was entered according to Act No. 77/1997

 $<sup>^{1}</sup>$  The sector statistical assessment is carried out among forest owners with the area over 200 ha.

<sup>&</sup>lt;sup>2</sup> The Farm Accounting Data Network FADN is one of the main systems used in the EU for assessment of financial outcomes and economic situation of agricultural enterprises. This system has defined methods and organisation with obligatory legislation in EU with the aim to acquire comparable information about agricultural enterprises of all member states of EU. In the Czech Republic this system has been implemented since 1995.

<sup>&</sup>lt;sup>3</sup> By 2000 annual reports comprised also financial analysis of chosen ratios (e.g. ROE, inventory turnover period ratio, prompt ratio).

on State Enterprise, § 20 Article 1. At the present time LČR is conducted by State Enterprise Act and by instruction of the Ministry of Agriculture of the Czech Republic.

On the basis of the founder's decision the designated property of LČR is as follows:

- lands appointed to fulfilment of forests functions.
- buildings with the acquisition value higher than 10 millions CZK,
- intangible and tangible fixed assets declared as a cultural landmark.

The nominal capital of the state enterprise was set as to the 1<sup>st</sup> January1993. Minimal level of owner's capital which the company is obliged to maintain amounts to 5.5 milliard CZK.

The designated content of the enterprise is managing more than 1.4 millions hectares of state-owned forests and management of almost 20 thousand kilometres of water streams. Annual fellings have a constant level, it is about 7 mil. m<sup>3</sup>.

The organisational structure of LČR was two-levelled in 2002. The first level was created by headquarters and 17 regional inspectorates. The second level consisted of 85 forest districts, 5 forest enterprises (Boubín, Dobříš, Kladská, Konopiště, Židlochovice), seed production plant Týniště nad Orlicí and 6 regional administrations of streams.

The number of employees amounted approximately to 3.5 thousand.

The main object of business activities of LČR, registered in Company Register (according to Act No. 513/1991, Commercial Code), is to provide operating performance assuring optimal fulfilment of all the forest functions by means of selected entrepreneurial subjects, possibly in own overheads.

Forestry, particular economic activities of LČR, are provided to a prevailing extent (more than 90% of the consigned total forest area) on the basis of contracts, by suppliers, thus by order from entrepreneurial subjects – contractors (excluding the above-mentioned forest enterprises, where operating activities are provided in a complex way). This circumstance is one of the most considerable features and peculiarities of transformation of Czech forestry after 1990 and company LČR itself. LČR's business strategy is based on complex contracting out of forestry operations on the basis of contracts for carrying out silvicultural operations and on the other hand selling and purchase of timber (in a simplified way: LČR pays for provided services

– silvicultural operations and collects takings from logging timber for the price at the stump). LČR concludes these contracts on a set of operations complying with requirements of particular regional units, distinguished within individual forest districts. The bearer of the contract is so-called "contractual regional unit", with identification of specific forest stands and individual activities.

The formulation and acquisition of the contract in a selection procedure belongs to basic steps towards the conclusion of the contract. Speciational part of contractual interrelationships is negotiations about price coming out from a model system of converting timber into money and model costs, with projection of objectified local operating conditions, whose results are price lists of timber and price lists of silvicultural operations.

#### **METHODS**

The following basic statements for financial statement analysis are the main source (balance sheet, income statement, statement of cash flows), annual reports, various statistical inquiries, data from managerial accounting, etc. The duty to publish selected information about companies – legal entities and natural persons and their availability are confirmed in the constitution<sup>4</sup>. Main sources of data are Companies Register, Business Bulletin and the other sources of information. The problems with availability, even with keeping back of accounting data about companies, are relative.

With elementary knowledge of financial statements (potentially with creating of time periods) it is possible to analyse from the balance sheet: structure of assets, depreciation of fixed assets, state and changes of inventories, proportion of receivables and liabilities, proportion of own and loan sources of capital covering the company assets, etc.; from the income statement: structure of amounted profit either in basic segmentation into profit from operations, profit from financial operations and profit from extraordinary items, or in segmentation according to costs and yields classification and their changes (Kupčák 2002).

For the analysis of LČR we preferentially used publicly available data from annual reports of LČR, state enterprise, for the period 1999–2002, also accessible on web sites. Actual data were drawn particularly from supplements to the published financial statements in unabridged form – Balance Sheet, Income Statement, according to Precaution of Ministry of

<sup>&</sup>lt;sup>4</sup> The duty of the releasing of accounting data arises from Accountancy Act – Act 563/1991, with reference to Act No. 513/1991, Commercial Code, as amended following regulations. Legal entities have had the duty since 1992.

Finance reference number 281/71 701/1995, which determines the contents of annual financial statement for entrepreneurs (until 2001). According to this precaution notation of references to selected and used data below was used.

In the first step, for the period 1998–2002, we did the vertical analysis for chosen state quantities of assets and liabilities, the same process was used for flow quantities – costs and yields. From the total amount of assets proportional representation of fixed and current assets was analysed, namely tangible fixed assets, financial assets and shortterm receivables. From liabilities proportion of own equity and foreign funds, from that share capital, capital funds, profit funds, provisions, long-term and short-term liabilities. Consumption in production, personnel costs, depreciation, provisions formation and financial costs were analysed from total costs. Production of manufactured goods and services, clearance of reserves and financial yields from total yields were analysed.

The focus of methodical procedure is the application of financial statement analysis. It means indicators, quantified mainly as financial ratios. Each ratio is expressed by a relation into which pertinent accounting data are substituted.

Profitability ratios mainly measure generation of profit, with relation to utilised company sources, and its effectiveness. Profitability of invested capital also expresses the ability of companies to generate new sources.

Solvency and liquidity ratios analyse the financial situation of the enterprise as a whole and liquidity of the assets and/or payment ability of the company including relevant financial risks, with relation to the state and changes in indebtedness.

Activity ratios reflect the level of turnover of available capital — rate of turnover of whole or rate of turnover of each component of assets and liabilities, and at the same time they evaluate capital boundedness in specific forms of assets. The analysis uses ratios representing the level of turnover of measured assets in days (in practice 360 days are applied).

With regard to the state enterprise market value ratios were not evaluated.

For the methodical purposes 22 ratios were chosen, inclined to the structure also used in auditing practice (according to Act No. 254/2000).

#### 1. Profitability analysis

When profitability is analysed, mostly these ratios are measured: Return on Assets, Basic Operating Force, Return on Equity, Profit Margin, Costs Rate.

For the purposes of the analysis in this paper these ratios were selected and constructed:

- 1.1 Return on Assets (ROA), when
  - Return on Assets = Profit from current year/Total Assets (1)

In the literature this ratio is interpreted as return on total invested assets. Profit from current year in the numerator can have other modifications. For example VALACH et al. (1999) used earnings before interests and taxes = EBIT. Most authors (e.g. ČERNÁ et al. 1997) use net profit.

- 1.2 Basic operating force, when
  - Basic operating force = Profit from operations/Total Assets (2)
- 1.3 Return on Equity (*ROE*), when
  - Return on Equity (ROE) = Profit from current year/Equity and capital funds (3)
    The abbreviation ROE has its roots in Anglo-Saxon literature (Grünwald, Holečková 2001).
- 1.4 Return on revenues Profit margin, when

  Profit margin = Profit from current year/Total

  Revenues (4)

The ratio indicates profit that is earned from one crown of revenues. In the literature (e.g. Synek et al. 2002) this ratio is interpreted as Return on Sales = ROS.

- 1.5 Costs rate, when
  - Costs rate = Total Costs/Total Revenues (5)
    This ratio has a lot of modifications, with respect to items of costs substituted in the numerator or revenues substituted in the denominator. As generally accepted trend is logically concerned decreasing of results (Kupčák 2003a,b). Another possible interpretation is the use of the profit when Costs = 1 Profit/Revenues = 1 ROS (Grünwald, Holečková 2001).
- 1.6 Effectiveness, when
  - Effectiveness = Total Revenues/Total Costs (6) is reciprocal to the costs rate, in the process it is apparent that effectiveness needs a positive value higher than 1 (Effectiveness > 1).

#### 2. Solvency (indebtedness) analysis

Indebtedness expresses the fact that the company uses loan capital in order to finance its assets (assuming that revenues which could be raised from it and return on assets will be higher than costs connected with using and calling a loan). The proportion of own and foreign capital is different for companies in different fields of business, however generally it holds good that the low ratio of own to foreign capital is considered as financial dependence and threatens the financial stability and vice versa. In

the EU countries the proportion of foreign sources is approximately 35% (Kupčák 2003a,b).

When the analysis of solvency was done, these ratios were evaluated: Creditor's risk ratio, Long-term indebtedness, Common indebtedness, Financial independence.

#### 2.1 Creditor's risk, when

Creditor's risk = Total Obligations (liabilities)/Total Liabilities (7)
SEDLÁČEK (2001) interprets this ratio as total indebtedness. The proportion Equity and capital funds/Total Assets is a supplement to the ratio of total indebtedness; their sum is equal 1 (Grünwald, Holečková 2001).

#### 2.2 Long-term indebtedness, when

Long-term indebtedness = Long-term Liabilities/
Total Liabilities (8)
The ratio should be analysed according to the way of foreign capital use. If it is a bank loan intended as investment into fixed assets (particularly tangible ones), with expecting yields in the future, it is a positive phenomenon (Kupčák 2003a,b).

#### 2.3 Common indebtedness, when

Common indebtedness = Short-term Liabilities/ Total Liabilities (9) Long-term indebtedness ratio and Common indebtedness ratio are analytical ratios of total indebtedness.

#### 2.4 Financial independence, when

Financial independence = Equity and capital funds/Total Liabilities (10)

The ratio expresses the situation when company assets are financed by the capital of owners. Some authors (for example Černá et al. 1997; Grünwald, Holečková 2001) use the ratio "indebtedness of own equity".

#### 3. Liquidity analysis

Liquidity ratios (pay-ability ratios) derive solvency from the proportion between current assets, as the most liquid form of assets, and short-term liabilities. In the paper these most common ratios were analysed: Current ratio and Prompt ratio. The significance of the turnover cycle of funds emerges from the character of analysis, following first of all from time and relation of receivables and obligations (liabilities). This is the reason for appraisal of receivable turnover period ratio and mutual relation of receivables and liabilities. Working capital – differential indicator is associated with liquidity ratios, or in the narrow sense of the word with possibilities of using disposable capital sources.

#### 3.1 Current ratio, when

Current ratio = Current Assets/Short-term Liabilities (11) testifies how many times current assets cover the short-term liabilities of the enterprise or how many crowns of current assets cover one crown of short-term liabilities (Mařík 1998).

#### 3.2 Prompt ratio, when

Prompt ratio = (Current Assets – Inventories)/
Short-term Liabilities (12)
is the measure of immediate solvency. In the literature this ratio is sometimes called Quick asset ratio (e.g. Valach et al. 1999). Some authors (e.g. Sedláček 2001) analyse "Cash-position ratio", when the denominator is the item disposable cash.

#### 3.3 Receivable turnover period ratio, when

Receivable turnover period ratio = Short-term Receivables/Daily takings (13) is the time period which passes from the billing of production (manufacturing of goods, services) to the day of converting to cash (encashment). In the literature this ratio is also called Debtors collection period, Average collection period, etc. (Synek 2002).

## 3.4 Proportion (rate) of receivables and liabilities, by the relation

Rate of Receivables and Liabilities = Short-term Receivables/Short-term Liabilities (14) measures the proportion of using of business credit. When the value of the ratio increases, the supplier gives more credit to the purchaser and contrariwise.

#### 3.5 Working capital, when

Working capital = Current Assets - Short-term Liabilities (15)

The value of working capital should be a positive number, if not, it is considered as "unfunded debt".

#### 4. Activity analysis

Activity ratios report how intensively and efficiently the company utilises its available resources. Effectiveness is given by the turnover time period, e.g. measures the time in which a concrete asset is in other words "turned". That is the reason why the value of ratios is a function of time. Inverted values logically express the number of turnovers for the given time period.

When the activity analysis was measured, these ratios were investigated: Inventory turnover period ratio, Current liability turnover period ratio, Total Assets turnover, Equity capital turnover, Foreign

funds turnover, Fixed Assets turnover, Current Assets turnover.

- 4.1 Inventory turnover period ratio, when Inventory turnover period ratio = Inventories/ Daily takings (16)
  In the literature this ratio is sometimes mentioned as Stock-holding period, and is modified in many ways (e.g. Černá et al. 1997; Synek et al. 2002; Κυρčáκ 2003a,b).
- 4.2 Current liability turnover period ratio, when Current liability turnover period ratio = Short-term Liabilities/Daily takings (17) also Creditor payment period, Credit days received, etc. measures duration in days in which the company pays off its liabilities towards suppliers.
- 4.3 Total Assets turnover, when

  Total Assets turnover = Total Revenues/Total Assets

  (18)

- refers how many times total assets are projected to total year revenues in the investigated period. Analogically the following three ratios are evaluated.
- 4.4 Equity capital turnover, when

  Equity capital turnover = Total Revenues/Equity
  and capital funds (19)
- 4.5 Foreign funds turnover, when

  Foreign funds turnover = Total Revenues/Liabilities (20)
- 4.7 Current Assets turnover, when

  Current Assets turnover = Total Revenues/Current

  Assets (22)

Table 1. State and changes of selected state accounting items of LČR in the years 1998–2002

Balance sheet (th. CZK)		Line -	Year						
			1998	1999	2000	2001	2002		
Total assets		001	65,325,328	66,495,050	66,078,342	65,639,565	65,800,532		
A	Receivables for equity and capital funds	002							
В	Fixed assets	003	61,600,918	62,842,074	61,929,322	60,925,586	60,514,663		
B.I.	intangible fixed assets	004	50,017	74,105	94,071	143,563	132,024		
B.II.	tangible fixed assets	012	61,300,345	62,320,519	61,320,054	60,532,436	60,165,931		
B.III.	financial investments	022	250,556	447,450	515,197	249,587	216,708		
С	Current assets	028	3,688,652	3,572,555	4,046,837	4,653,596	5,239,682		
C.I.	inventories	029	158,933	138,980	145,882	151,982	163,701		
C.II.	long-term receivables	036	130,790	104,150	22,410	15,194	3,005		
C.III.	short-term receivables	042	1,251,911	1,008,316	1,070,785	1,147,680	1,280,562		
C.IV.	financial assets	051	2,147,018	2,321,109	2,807,760	3,338,740	3,792,414		
D	Other assets	055	35,758	80,421	102,183	60,383	46,187		
Total liabilities		061	65,325,328	66,495,050	66,078,342	65,639,565	65,800,532		
A	Equity and capital funds	062	61,893,523	63,351,919	62,822,962	62,549,149	62,248,225		
A.I.	share capital	063	5,737,325	5,666,821	5,624,632	5,816,149	5,905,117		
A.II.	capital funds	066	54,579,743	55,541,318	54,469,718	53,428,884	52,769,543		
A.III.	profit funds	071	1,175,352	1,280,249	1,299,728	2,709,589	3,291,966		
A.IV.	profit from previous year	075		284,774	825,137				
A.V.	profit from current year	078	401,103	578,757	603,747	594,527	281,599		
В	Liabilities	079	3,382,330	3,096,010	3,196,524	3,018,907	3,448,099		
B.I.	provisions	080	2,819,990	2,633,815	2,593,711	2,496,168	2,652,430		
B.II.	long-term liabilities	084							
B.III.	short-term liabilities	091	562,340	462,195	602,813	522,739	795,669		
B.IV.	bank loans and overdrafts	101							
B.IV.1.	from that: long-term bank loans	102							
С	Other liabilities	105	49,475	47,121	58,856	71,509	104,208		

For ratios 4.4–4.7 a common trend holds good: the better the resultant value, the favourable the resultant value.

With regard to the fact that LČR has almost 88% of the total assets value comprised in the land value, mostly forest land areas which were inserted into accountancy in 1995 as the main part of nominal (share) capital and in 1997 they were transferred into capital funds, besides the basic analysis (basic variant – Z) the recount of ratios of financial statement analysis without the value of forest land area was carried out (variant 1). Variant evaluation of intensive quantities was concerned with the following ratios (relations): Return on Assets (1), Basic operating force (2), Return on Equity (3), Creditor's risk (7), Long-term indebtedness (8), Common indebtedness (9), Financial independence (10), Total Assets turnover (18), Equity capital turnover (19), Fixed Assets turnover (21).

Factual ratios were processed and evaluated by a spreadsheet program, results were arranged into tables and expressed graphically, including evaluation of figuration of some exponential trends.

Considering the extent of the paper verbal, tabular as well as graphical assessment of resultant values is limited to minimal characterisation. It is obvious that almost all ratios enable to analyse, and to discuss, the quanta of objective and subjective factors, partial influences and weight of state and flow quantities, either in total or separated years.

#### **RESULTS AND DISCUSSION**

The average value of LČR assets in the reference time period oscillates about 65,8 milliard CZK. It has followed from the vertical analysis: out of the total assets fixed assets account for 93.4%, tangible fixed assets for 92.8%, current assets for 6.4%, out of them financial assets amount to 4.4% and short-term receivables to 1.8%.

It follows from the structure of total liabilities: 95% of equity and capital funds, out of that share capital 8.7%, capital funds 82.2%, profit funds 3%. The rate of foreign funds (liabilities) amounted to 4.9%, out of them 4.01% are provisions (reserves), short-term liabilities 0.89%.

From the aspect of state quantities for the reference time period 1998–2002 aggregate profit (after taxes) was achieved at the level of 2.46 milliard CZK, which represents 0,75% return on assets. In the aggregate profit, mainly profit from operations participated at the level of 2.74 milliard CZK, profit from financial operations amounted to 1.05 milliard CZK.

In the time period out of total costs, the consumption in production was 28.2%, personnel costs 6.9%, depreciation 3.1%, creation of reserves 20.2% and financial costs 36.1%.

Production of manufactured goods and services is 40.2%, which is the most important revenue creat-

Table 2. State and changes of selected flow accounting items of LČR in the years 1998-2002

Income statement (th. CZK)		T :	Year						
		Line -	1998	1999	2000	2001	2002		
I + II	Production and sales of goods	01 + 04	5,131,673	5,082,053	5,234,472	5,307,719	5,164,919		
I + II.1.	from that: prod. of manufact. goods and services	01 + 05	5,101,723	5,087,846	5,216,292	5,302,477	5,156,225		
II.2.	Change in inventories of own production	06	26,293	-12,269	9,688	-6,557	-1,939		
II.3.	Capitalization	07	3,657	6,476	8,492	11,799	10,633		
A + B	Consumption in production	02 + 08	3,592,466	3,670,978	3,489,342	3,408,748	3,276,717		
+	Added value	11	1,539,207	1,411,075	1,745,130	1,898,971	1,888,202		
С	Personnel costs	12	798,741	829,854	851,294	883,003	907,927		
E	Depreciation of tang. and intang. fixed assets	18	305,038	387,262	398,951	390,480	416,253		
*	Profit from operations	29	490,077	564,142	725,110	738,678	219,588		
*	Profit from financial operations	47	300,931	216,879	112,544	99,808	316,105		
非非	Profit before extraordinary items	52	399,965	578,566	591,295	591,608	274,083		
*	Profit from extraordinary items	58	1,138	191	12,452	2,919	7,516		
告告告	Profit from current year	60	401,103	578,757	603,747	594,527	281,599		
	Total costs (mil. CZK)		8,865	13,600	16,390	14,143	8,863		
	Total revenues (mil. CZK)		9,266	14,178	16,994	14,738	9,145		

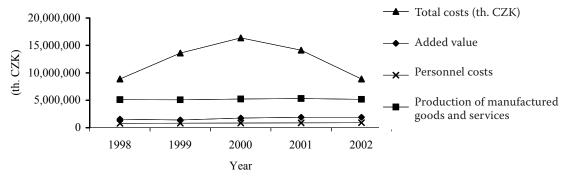


Fig. 1. Changes of costs, revenues and added value

ing item; clearance of reserves amounts to 19.6%, financial earnings 36.3%.

The outline of the structure and changes of selected state accounting items for the period 1998–2002 is given in Table 1.

The structure and changes of selected flow accounting items – costs, revenues and profits are presented in Table 2 and Figs. 1 and 2.

After allowance of forest land value from total assets the variant average value of assets is approximately 12.4 milliard CZK. Out of total assets, 65.3% are fixed assets, tangible fixed assets account for 61.8%; 2.7% are financial investments, current assets amount to 34.2%, out of them inventories 1.2%,

financial assets 23.2% and short-term receivables 9.3%. The variant rate of return of assets for the reference time period, with use of profit after taxes, amounts to 3.96%.

When forest land value is taken out from total liabilities and from capital funds, the structure of total liabilities shows 73.5% of equity and capital funds, out of them share capital 46.3%, capital funds 5.7%, profit funds 15.7%. Foreign funds account for 26%, provisions amount to 21.2%, short-term liabilities to 4.7%.

Overview of the structure and changes of the variant modified basic state quantities – assets and liabilities in the years 1998–2002 is shown in Table 3 and Fig. 3.

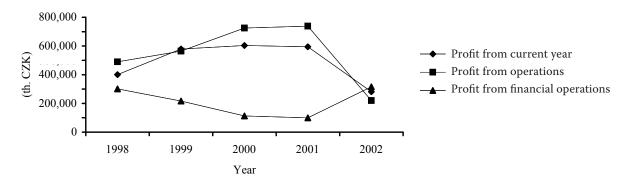


Fig. 2. Changes in profits

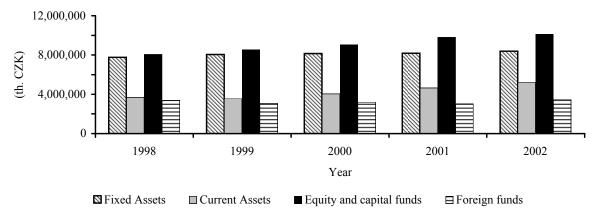


Fig. 3. Changes in Assets and Liabilities

Table 3. State and changes of selected adjusted state accounting items of LČR in the years 1998-2002

Balance sheet (th. CZK)		Line			Year		
Baiance	Balance sheet (ut. CZN)		1998	1999	2000	2001	2002
Total assests		001	11,478,328	11,700,050	12,297,342	12,895,565	13,685,532
A	Receivables for equity and capital funds	002					
В	Fixed assets	003	7,753,918	8,047,074	8,148,322	8,181,586	8,399,663
B.I.	intangible fixed assest	004	50,017	74,105	94,071	143,563	132,024
B.II.	tangible fixed assets	012	7,453,345	7,525,519	7,539,054	7,788,436	8,050,931
B.III.	financial investments	022	250,556	447,450	515,197	249,587	216,708
C	Current assests	028	3,688,652	3,572,555	4,046,837	4,653,596	5,239,682
C.I.	inventories	029	158,933	138,980	145,882	151,982	163,701
C.II.	long-term receivables	036	130,790	104,150	22,410	15,194	3,005
C.III.	short-term receivables	042	1,251,911	1,008,316	1,070,785	1,147,680	1,280,562
C.IV.	financial assets	051	2,147,018	2,321,109	2,807,760	3,338,740	3,792,414
D	Other assests	055	35,758	80,421	102,183	60,383	46,187
Total li	abilities	061	11,478,328	11,700,050	12,297,342	12,895,565	13,685,532
A	Equity and capital funds	062	8,046,523	8,556,919	9,041,962	9,805,149	10,133,225
A.I.	share capital	063	5,737,325	5,666,821	5,624,632	5,816,149	5,905,117
A.II.	capital funds	066	732,743	746,318	688,718	684,884	654,543
A.III.	profit funds	071	1,175,352	1,280,249	1,299,728	2,709,589	3,291,966
A.IV.	profit from previous year	075		284,774	825,137		
A.V.	profit from current year	078	401,103	578,757	603,747	594,527	281,599
В	Liabilities	079	3,382,330	3,096,010	3,196,524	3,018,907	3,448,099
B.I.	provisions	080	2,819,990	2,633,815	2,593,711	2,496,168	2,652,430
B.II.	long-term liabilities	084					
B.III.	short-term liabilities	091	562,340	462,195	602,813	522,739	795,669
B.IV.	bank loans and overdrafts	101					
B.IV.1.	from that: long-term bank loans	102					
C	Other liabilities	105	49,475	47,121	58,856	71,509	104,208

Table 4 shows general overview of evaluated financial statement ratios according to relations 1–22, including average values and trends for the reference time period. Modified ratios (after allowance of forest land area value) are shown in Table 5.

Average value of Return on Assets, according to relation (1), amounts to 0.007 for the reference time period (with range from 0.004 in 2002 to 0.009 in 2000 and 2001), variant 0.040. Return on Assets ratio has a decreasing trend in the investigated time period (see Fig. 4).

Return on Assets ratio is an important measure of company's ability to generate earnings from its available resources. The growth state shows higher effectiveness of gaining yields from invested capital. It simultaneously expresses the amount of crowns accrued per one crown of invested capital.

Basic operating force, relation (2), reaches average level 0.008, variant 0.045. It expresses the amount of crowns from operating profit per one crown of aggregate capital (one crown of Liabilities). Fig. 5 shows changes in the researched period.

Return on Equity (*ROE*), according to relation (3), amounts to 0.008, and variant 0.055. The ratio informs about profitability of capital invested by owners – about interest yield of Equity and capital funds. Simultaneously, its increase means a drop of foreign sources interest. *ROE* should be higher than *ROA*. *ROE* has decreasing values in the time period of both researched variants.

Return on revenues – profit margin, relation (4), itemises average value 0.038 and expresses the amount of profit earned from one crown of revenues. Profit margin shows a decreasing trend in time for the investigated LČR, state enterprise.

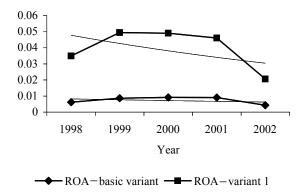


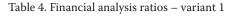
Fig. 4. Return on Assets - ROA

Costs rate, according to relation (5), shows average value 0.962. Generally, the ratio expresses how many crowns of total costs were invested per one crown of total revenues.

Effectiveness, in compliance with relation (6), demonstrates average (reciprocal) value 1.040.

The level and changes in Costs rate and Effectiveness are illustrated in Fig. 6.

Creditor's risk ratio, in accordance with relation (7), shows average value 0.049, variant 0.261 while it holds that a higher value of ratio demonstrates higher indebtedness and also higher financial risk. This is the reason why we should always consider the ratio in connection with profitability which the company attains from total invested capital and in the context of the structure of liabilities. Creditor's risk ratio has a stable, balanced trend in the period of time.



Ratio -		Year					A
		1998	1999	2000	2001	2002	- Average
1. Pr	ofitability analysis						
1.1	Return on assets	0.035	0.049	0.049	0.046	0.021	0.040
1.2	Basic operating force	0.043	0.048	0.059	0.057	0.016	0.045
1.3	Return on equity	0.050	0.068	0.067	0.061	0.028	0.055
2. So	lvency analysis						
2.1	Creditor's risk	0.295	0.265	0.260	0.234	0.252	0.261
2.2	Long-term indebtedness	0.000	0.000	0.000	0.000	0.000	0.000
2.3	Common indebtedness	0.049	0.040	0.049	0.041	0.058	0.047
2.4	Financial independence	0.701	0.731	0.735	0.760	0.740	0.734
4. Ac	tivity analysis						
4.3	Total asset turnover	0.807	1.212	1.382	1.143	0.668	1.042
4.4	Equity capital turnover	1.152	1.657	1.879	1.503	0.902	1.419
4.5	Foreign funds turnover	2.740	4.579	5.316	4.882	2.652	4.034
4.6	Fixed assets turnover	1.195	1.762	2.086	1.801	1.089	1.587

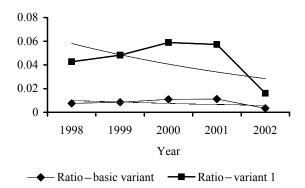


Fig. 5. Basic operating force

As in the reference time period LČR did not use any long-term liabilities, long-term indebtedness ratio in compliance with relation (8) is not evaluated.

Current ratio, according to relation (9), itemises average value 0.009, variant 0.047. In the period of time, the current ratio has a rising trend in both variants.

Financial independence ratio, in accordance with relation (10), shows average value 0.950, variant 0.734. The ratio when measured in the time period goes down in the basic variant and has a growing trend in variant 1.

Current ratio, according to relation (11), demonstrates average value 7.298. When the ratio is higher, it is generally valid that probability of financial solvency is also higher. Valach et al. (1999) stated that the recommended value for current ratio is approximately 2, it means that current assets should be twice higher than short-term liabilities.

Prompt ratio, in accordance with relation (12), itemizes average value 7.034. After deduction of inventories, the ability of the company to repay its short-term debts is more realistic because the value from 1 to 1,2 is considered as an optimal value of the ratio. Valach et al. (1999) reported the value higher than 1 as a criterion. In connection with the high value of the ratio for LČR company the question of using (revaluation) of free financial assets (sources) should be taken into account.

Current ratio as well as Prompt ratio have a slightly increasing trend for LČR.

Receivable turnover period ratio, according to relation (13), amounts to 80 days for the researched enterprise. The ratio has a slightly growing trend in the period of time.

Average rate of short-term receivables and short-term liabilities, according to relation (14), amounts to around 2, and/or the amount of short-term receivables is twice higher than the amount of short-term liabilities. This ratio dropped in favour of liabilities in the time period.

Working capital, in accordance with relation (15), is at the average level of 3.65 milliard CZK. Short-term financial assets play a crucial role. This ratio shows a considerably increasing trend.

Inventory turnover period ratio, according to relation (16), oscillates about 10.5 days. Turnover period ratio for LČR is dominantly influenced by the character of operating performance (work in progress of own manufacturing inventories). On the whole, the ratio has a growing trend in evaluated time period.

Generally, the ratio expresses the turnover period in days and the company should find an optimal level according to concrete business activity. The ratio is also a proper indicator of liquidity because it shows the number of days in which inventories change into cash or receivables.

Current liability turnover period ratio, in accordance with relation (17), amounts to around 41 days.

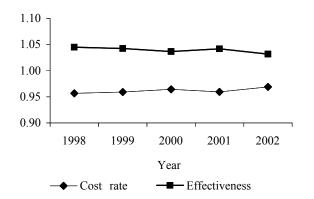


Fig. 6. Cost rate and Effectiveness

The ratio has a growing trend in the time period with significant weight in 2002.

On the whole, this ratio assesses the average time period between buying and payment of inputs. Asset money from liabilities that are not paid represents temporary utilisable free sources. As already mentioned, ratios should be evaluated in the context of ratios (13) and (14). In practice the assessment of seasonal impacts is inevitable as they logically have a significant influence in the forestry.

Total Assets turnover, according to (18), shows average value 0.195, variant 1.042. In the period of time the ratio has a balanced trend for the basic variant, and a decreasing trend for variant 1.

Equity capital turnover, according to relation (19), has average value 0.205, variant 1.419. The ratio has a balanced trend for the basic variant, variant 1 has a falling trend.

Foreign funds turnover, in accordance with relation (20), shows average value 4.034.

Fixed Assets turnover, according to relation (21), itemizes average value 0.209, variant 1.587. The basic variant has a slightly increasing trend in the time period while variant 1 has a slightly decreasing trend. Besides that the ratio is influenced subjectively by the used depreciative policy; objectively by reality because fixed assets are evaluated in historical prices.

Current Assets turnover, in accordance with relation (22), shows average value 3.118. The ratio has a decreasing trend in the period of time.

To draw conclusions from the interpreted results it is necessary to mention that the goal of the paper was not profound analysis of quantified values and their trends. Besides the limited extent of the paper for the reasons that interannual relations of state and flowing quantities are mainly commented in Annual Report of LČR, state enterprise.

#### CONCLUSION

The real economy of the forestry forms factual subjects, performing economic (entrepreneurial) activities in forestry. The establishment of the Forests of the Czech Republic, state enterprise, was one of the important steps of economic reform and transformation of the forestry in the Czech Republic after 1990.

The purpose of the paper was economic analysis of this company for the time period 1998–2002, using the elementary method of financial analysis. The objectives of the paper were quantification of selected indicators – ratios, contribution to forestry branch economy analysis and evaluation of the position of companies in forestry.

As the source, only publicly available data were used for financial analysis. Research focus of the analysis and its results is information capability of ratios, mutual relations and contexts and way of their interpretation and judgment. It is necessary to emphasise that the final values of the ratios have a discrete nature, and their trends have more important weights. From the position of expressed trends, it is imperative to attach weight of individual years (until 2000 in our case, this year influenced most time series in a crucial way). It is necessary to bear in mind that individual ratios do not represent strict measures of the monitored enterprise characterisation but they have determinate stochastic character.

From the results of the analysis some conclusions emerged with necessity of taking into account the specifics of forestry and specifics of Forests of the Czech Republic, state enterprise itself; the fundamental aspect is to provide predominant economic activities on the basis of contracts, by entrepreneurial subjects in forestry. Obviously, economic activity and financial situation of LČR are under the logical market impact of these entrepreneurial subjects.

Generally from the paper there follows a requirement for similar analysis of other subjects in the forestry sector and for industry averages in the forestry in the Czech Republic, notably then mentioned entrepreneurial subjects, apart from other things also for the judgment of aggregate profitability of forest as an economic category. It can help to verify cost and revenue models when evaluation of forest or forest rent is done. Not the least implication of these analyses is a possibility of comparison with comparable foreign subjects and other sectors of national economy, either in the context of contemporary questions of forestry-wood sector, agricultural sector or in the context of programme actions in the framework of EU.

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Výroční zprávy Lesů České republiky, s. p., za roky 1999–2002.

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### Elementární finanční analýza podniku Lesy České republiky, s. p.

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ABSTRAKT: Základním rysem ekonomické reformy lesního hospodářství České republiky po roce 1990 bylo oddělení hospodaření ve státních lesích od výrobní činnosti. Hospodařením tohoto typu byl státem pověřen podnik Lesy České

republiky, s. p., přičemž ekonomické činnosti podniku jsou zajišťovány v rozhodující míře dodavatelsky od tzv. podnikatelských subjektů v lesním hospodářství. Předmětem práce je ekonomická analýza podniku Lesy České republiky, s. p., za období let 1998–2002. Jejím cílem byla konstrukce a testování metodiky elementární finanční analýzy a nástin vyjádření komplexní finanční situace a vývoje vybraného subjektu jako příspěvek k odvětvové ekonomické analýze, běžné např. v zemědělství a dřevozpracujícím průmyslu.

Klíčová slova: lesnictví; státní lesy; státní podnik; finanční analýza

Předmětem práce je finanční analýza podniku Lesy České republiky, s. p. (LČR) za období 1998 až 2002 (referenční období). Zdrojem údajů pro tuto analýzu jsou zejména účetní výkazy a výroční zprávy – u LČR byly použity veřejně přístupné údaje z výročních zpráv, dostupné také na internetu.

Cílem práce byla konstrukce a testování metodiky elementární finanční analýzy jako příspěvek k odvětvové ekonomické analýze, běžné např. v zemědělství (FADN) či v dřevozpracujícím průmyslu. Vzhledem k rozhodujícímu vlivu lesních pozemků byly vyhodnoceny dvě varianty – základní varianta a varianta 1 (bez hodnoty lesních pozemků).

V prvním kroku byla u vybraných stavových veličin aktiv i pasiv, obdobně pak u tokových veličin – nákladů a výnosů – vyhodnocena vertikální analýza.

Průměrná hodnota aktiv se v referenčním období u LČR pohybuje okolo 65,8 mld. Kč. Z celkové hodnoty aktiv činí 93,4 % stálá aktiva, hmotný dlouhodobý majetek je zastoupen 92,8 %, oběžná aktiva jsou zastoupena 6,4 %, z toho finanční majetek činí 4,4 % a krátkodobé pohledávky 1,8 %.

Ze struktury pasiv vyplývá 95% zastoupení vlastního kapitálu, z toho základní kapitál 8,7 %, kapitálové fondy 82,2 %, fondy ze zisku 3 %. Podíl cizích zdrojů činí 4,9 %, z toho 4,01 % jsou rezervy, krátkodobé závazky činí 0,89 %.

Z pohledu tokových veličin byl za referenční období dosažen celkový hospodářský výsledek (po zdanění) ve výši 2,46 mld. Kč, což představuje 0,75% výnosnost aktiv. Z pohledu tvorby se na něm zejména podílel provozní hospodářský výsledek ve výši 2,74 mld. Kč, hospodářský výsledek z finančních operací činil 1,05 mld. Kč.

Z celkových nákladů za sledované období výkonová spotřeba a náklady na prodané zboží činila 28,2 %, osobní náklady 6,9 %, odpisy 3,1 %, tvorba rezerv 20,2 % a finanční náklady 36,1 %.

Z celkových výnosů jsou nejvýznamněji zastoupeny tržby za prodej vlastních výrobků a služeb ve výši 40,2 %, zúčtování rezerv 19,6 %, finanční výnosy 36,3 %.

Po odpočtu hodnoty lesních pozemků se variantní průměrná hodnota aktiv pohybuje okolo 12,4 mld.

Kč. Z celkové hodnoty aktiv pak tvoří stálá aktiva 65,3 % (dlouhodobý hmotný majetek 61,8 %, finanční investice 2,7 %), oběžná aktiva jsou zastoupena 34,2 %, z toho zásoby 1,2 %, finanční majetek 23,2 % a krátkodobé pohledávky 9,3 %. Variantní výnosnost aktiv za referenční období činí 3,96 %.

Po vyjmutí hodnoty lesních pozemků z kapitálových fondů ze struktury pasiv vyplývá 73,5% zastoupení vlastního kapitálu, z toho základní kapitál 46,3 %, kapitálové fondy 5,7 %, fondy ze zisku 15,7 %. Cizí zdroje jsou zastoupeny z 26 %, z toho rezervy činí 21,2 % krátkodobé závazky 4,7 %.

Těžištěm práce byla aplikace finanční analýzy. Vystupují zde ukazatele, kvantifikované převážně jako finanční poměrové ukazatele, kdy ukazatel je vyjádřen formou vztahu, do něhož jsou doplňovány příslušné účetní informace. Ukazatele byly zpracovány a vyhodnoceny pomocí tabulkového procesoru, výsledky byly sestaveny do tabulek a vyjádřeny graficky včetně vyhodnocení i některého znázornění exponenciálních trendů.

Průměrná rentabilita celkového kapitálu za referenční období činí 0,007 (s rozpětím od 0,004 v roce 2002 po 0,009 v letech 2000 a 2001), variantně pak 0,040. V hodnoceném období má rentabilita celkového kapitálu klesající trend. Ukazatel základní produkční síly dosahuje průměrně úrovně 0,008, variantně 0,045. Ukazatel rentability vlastního kapitálu činí 0,008, variantně 0,055. Rentabilita výnosů – zisková marže vykazuje průměrnou hodnotu 0,038.

Nákladovost vykazuje průměrnou hodnotu 0,962, efektivnost vykazuje průměrnou (reciprokou) hodnotu 1,040.

Ukazatel věřitelského rizika vykazuje průměrnou hodnotu 0,049, variantně 0,261. V časové řadě má vyrovnaný trend. Běžná zadluženost se průměrně pohybuje okolo hodnoty 0,009, variantně 0,047. V časové řadě má v obou variantách rostoucí trend. Ukazatel finanční nezávislosti vykazuje odpovídající průměrnou hodnotu 0,950, variantně pak 0,734. V časové řadě má u základní varianty klesající, u varianty 1 naopak rostoucí trend. Ukazatel běžné likvidity vykazuje průměrnou hodnotu 7,298. Poho-

tová likvidita vykazuje průměrnou hodnotu 7,034. V časové řadě mají u LČR oba ukazatele mírně rostoucí trend.

Průměrná doba obratu pohledávek dosahuje u LČR 80 dnů. V časové řadě má mírně rostoucí trend. Průměrná relace krátkodobých pohledávek a závazků se pohybuje okolo 2, resp. úhrn krátkodobých pohledávek dvojnásobně převyšuje úhrn krátkodobých závazků. V časové řadě má klesající trend ve prospěch závazků.

Průměrná doba obratu krátkodobých závazků se pohybuje okolo 41 dnů. V časové řadě má ukazatel narůstající trend (s rozhodující vahou roku 2002).

Průměrná doba obratu zásob se pohybuje okolo 10,5 dne. Celkově má v hodnocené časové řadě vzrůstající trend. U LČR je však tento ukazatel rozhodně ovlivněn charakterem hospodářské činnosti.

Obrat celkového kapitálu průměrně vykazuje hodnotu 0,195, variantně pak 1,042. V časové řadě má u základní varianty vyrovnaný, u varianty 1 klesající trend. Obrat vlastního kapitálu průměrně vykazuje hodnotu 0,205, variantně pak 1,419. V časové řadě má u základní varianty vyrovnaný, u varian-

ty 1 klesající trend. Obrat cizího kapitálu průměrně vykazuje hodnotu 4,034.

Obrat stálých aktiv průměrně vykazuje hodnotu 0,209, variantně pak 1,587. V časové řadě má u základní varianty mírně rostoucí, u varianty 1 mírně klesající trend. Obrat oběžných aktiv průměrně vykazuje hodnotu 3,118. V časové řadě má klesající trend.

Pracovní kapitál se u LČR pohybuje na průměrné úrovni 3,65 mld. Kč. Rozhodující vliv zde má krátkodobý finanční majetek. Tento ukazatel vykazuje výrazně se zvyšující trend.

Z výsledků analýzy vyplynuly některé závěry s nutností promítnutí specifik lesního hospodářství a specifik samotného podniku LČR, z nichž k nejzásadnějším patří zajišťování rozhodujících ekonomických činností dodavatelsky, tedy podnikatelskými subjekty. Z toho logicky vyplývá, že ekonomická činnost a i finanční situace LČR je pod tímto tržním vlivem.

Závěrem je k interpretovaným výsledkům nutné podotknout, že cílem práce nebyly hlubší analýzy kvantifikovaných hodnot a jejich trendů. Vedle omezeného rozsahu příspěvku také proto, že důvody meziročních relací stavových i tokových veličin jsou ve výročních zprávách LČR převážně komentovány.

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