**Management Principles and Human Resources**

**Ratio Analysis Exercise**

*25 October 2017*

**The Fioracci Company**

The Company Fioracci has its main business on fashion clothes and shoes. Please provide the profitability analysis considering the following information. Please provide also additional comments on the value of Indexes.

1. The company invests in intangible assets (with the acquisition of the new brand Ghiucci Kids) and in tangible assets, by building a new headquarter.
2. It starts a new strategic alliance with a very popular fashion company (the Stensil Company). Following the strategic alliance, the Fioracci also buys shares of that company. The Company Fioracci, also buys shares of the Stensil company.
3. It takes part in a “Purchase Consortium” to rationalize the purchase of raw materials. The participation in the Consortium also favor a better inventories’ management.
4. It decides to invest the excess liquidity at the end of the 2009 is financial activities.
5. The easing and rationalization policy lead to benefits also from an income perspective.
6. In 2009 the old headquarter is sold, but in condition of economic convenience.
7. From the point of view on financial debt ratio, the Fioracci decides to start a policy to substitute short-time funds with long-term funds, in order to cover the long-term investment and to contain financial borrowing costs.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **BALANCE SHEET** |  |  |  |  |  |
| **ASSETS** |  |  | **EQUITY and LIABILITIES** |  |  |
| euro/000 | 31/12/2010 | 31/12/2009 |  | 31/12/2010 | 31/12/2009 |
| Intangible assets | 18.000 | 10.000 | Share capital | 10.000 | 10.000 |
| Tangible assets | 10.300 | 6.000 | Reserves | 18.000 | 12.000 |
| Holdings | 9.000 | 4.000 | Net income | 20.300 | 9.800 |
| Inventories | 15.800 | 17.400 | Long term loan | 23.700 | 15.100 |
| Receivables | 40.600 | 36.700 | Finds to personnel | 1.600 | 1.200 |
| Current financial activities | 10.000 | 6.000 | Current financial liabilities | 9.100 | 19.200 |
| Cash and cash equivalent | 200 | 7.300 | Account payable | 21.200 | 20.100 |
| **Total** | **103.900** | **87.400** |  | **103.900** | **87.400** |
|  |  |  |  |  |  |
| **INCOME STATEMENT** |  |  |  |  |  |
|  | 2010 | 2009 |  |  |  |
| *Value of production* |  |  |  |  |  |
| Net sales | 90.000 | 75.000 |  |  |  |
| **Tot. Value of production** | **90.000** | **75.000** |  |  |  |
| *Costs of production* |  |  |  |  |  |
| Consumption of raw materials | 30.000 | 35.000 |  |  |  |
| Services | 29.000 | 27.000 |  |  |  |
| Personnel | 12.000 | 8.000 |  |  |  |
| Depreciation | 8.000 | 4.000 |  |  |  |
| **Tot. Costs od production** | **79.000** | **74.000** |  |  |  |
| **Net Operating profit (EBIT)** | **11.000** | **1.000** |  |  |  |
| *Financial income and borrowing costs* |  |  |  |  |  |
| Financial Income | 20.000 | 10.000 |  |  |  |
| Borrowing costs | 2.000 | 5.000 |  |  |  |
| **Tot. Financial income and borrowing costs** | **18.000** | **5.000** |  |  |  |
| **Gross profit** | **29.000** | **6.000** |  |  |  |
| Taxes | 8700 | 4200 |  |  |  |
| **Net profit** | **20.300** | **1.800** |  |  |  |
| **Revenues from discontinued operations** | - | 8.000 |  |  |  |
| **Annual Net results** | **20.300** | **9.800** |  |  |  |

**SOLUTION**

**1st Level – Return On Equity (R.O.E.)**

ROE = Annual Net Result/ Equity

Equity = Share capital + Reserves + Net Income

Equity 2009= 31.800

Equity 2010= 48.300

ROE 2009 = 9.800/31.800= 30,82%

ROE 2010 = 20.300/48.300 = 42,02%

11% of improvement. We need to understand the reasons of this improvement, by moving at the second level

**2nd Level – Leverage Analysis**

ROE= {ROI + D/E \* (ROI – r)}\*s

ROI= EBIT/Tot. Assets

ROI 2009= 1.000/87.400= 1,14%

ROI 2010= 11.000/103.900= 10,59%

However, by reading point 4, we could expect to have financial revenues, therefore we need to calculate ROI\*

ROI\* = EBIT + Financial Income/Tot. Assets

ROI\* 2009= (1.000 + 10.000)/ 87.400= 12,58%

ROI\* 2010= (11.000 + 20.000)/ 103.900= 30%

By comparing ROI and ROI\* we see different value, therefore we have to calculate r

r= Borrowing costs/D

D= Tot. liabilities- Equity

D 2009= 87.400 – 31.800= 55.600

D 2010= 103.900 – 48.300= 55.600

Borrowing costs 2009= 5.000

Borrowing costs 2010= 2.000

r 2009= 5.000/ 55.600= 9%

r 2010= 2.000/55.600= 3,59%

By reading the point n.7, the different value of r is explained by the decision to substitute the short-time funds with the long-term one, to cover long- term investment and to contain financial borrowing costs.

We now try to understand the leverage analysis by looking at (ROI – r).

(ROI – r) 2009= 1,14% - 9%= - 7,86%

(ROI – r) 2010= 10,59% - 3,59%= 7%.

By considering only the operating management, the leverage ratio is negative in 2009, but, we know that the Fioracci realizes financial income. Indeed, by reading the point 4 we know that the Fioracci invests in financial activities at the end of the 2009. We therefore have to calculate ROI\* - r

(ROI\* - r) 2009= 12,58 – 9%= 3,58%

(ROI\* - r) 2010= 30% - 3,59%= 26, 41%

We now calculate the capital structure, by focusing on D/E.

D/E = Tot. liabilities/ Equity

D/E 2009= 55.600/ 31.800= 1,75

D/E 2010= 55.600/48.300= 1,15

The debt ratio decreases as the result of the company’s decision to reduce short-term debt (point 7).

Try now to understand the effect of the extraordinaty management, by looking at s.

s= Annual Net Results / Gross Profit

s2009 = 9.800/6.000= 1, 63

s 2010= 20.300/ 29.000= 0,7

The extraordinary management and the fiscal management positively affect ROE in 2009 and negatively in 2010.

To understand the reason why s changes, we need to look at d and t

d= Annual Net result/Net Profit

d 2009= 9.800/ 1.800= 5,44

d 2010= 20.300/ 20.300= 1

Management for discontinued operations is positive in 2009, in relation to the fact that the old building is sold in 2009 (point 6). They have no effect in 2010.

t= Net profit/ Gros profit

t 2009= 1.800/6.000= 0,3

t 2010= 20.300/ 29.000= 0,7

Taxes have a negative effect on ROE (as it is normal).

**3rd Level – Return On Sales and Assets Rotation**

ROS= EBIT/ Value of Production

ROS 2009= 1.000/ 75.000= 1,33%

ROS 2010= 11.000/ 90.000= 12,22%

AR= Value of Production/ Tot. Assets

AR 2009= 75.000/ 87.400= 0,858

AR 2010= 90.000/ 103.900= 0,86

In this case, the operating management is particularly important to explain the value of the ROE. The leverage ratio is positive between the two years, although in 2009 only thanks to the financial income. The debt ratio is decreasing. Finally, once the old building is sold, the extraordinary management has no relevant impact.