

# CHAMPAGNE WINERIES IN CRISIS TIME: RISK OF FINANCIAL LEVERAGE

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**KEY WORDS:** Champagne, wine, winery, financial risk, leverage

## 1. PROBLEM STATEMENT

During the last severe Champagne crisis in 1992-1993, several houses had to be sold in order to avoid bankruptcy. In 2009, Champagne wineries faced a 28% decline in exports (FEVS, 2010). Exports usually represent 40% of sales. Marketing investments and strategies differ among corporations and co-operatives. Most exports are done by corporations, while co-operatives are more focused on the French market.

Since it takes about 3 years to turn grapes into Champagne, supply adjusts to demand with time lag leading to risks of financing heavy stocks and risks of decrease in bottle price during period of economic crisis.

Are Champagne wineries – corporations and co-operatives – in danger, particularly due to financial leverage? Do they have to modify the financial structure?

## 2. OBJECTIVE

The objective is to assess the risk of financial leverage for Champagne houses. Corporations will be distinguished from co-operatives:

## 3. ELEMENTS OF THEORETICAL FOUNDATIONS

Research work is based on financial theory (optimal financial structure: effect of leverage and default risk) and principles of management in cooperatives (the maximization of the price of grapes brought by co-op members and not the maximization of co-op profit). Further, some characteristics of the Champagne activity may explain management issues.

### 3.1. Foundations in financial theory: leverage ratio and optimal capital structure

The most important financial decision is choosing the level of financial leverage, that is, the debt to equity ratio. Assuming the absence of income tax, financial market imperfections (like transaction costs) and bankruptcy costs, Modigliani and Miller (1958) show (1) that the cost of capital for a firm does not depend on its capital structure in terms of debt or equity and (2) that the value of a firm is therefore unaffected by its financial leverage. So, the impact of financial structure on the value of a firm is irrelevant.

However income tax and bankruptcy costs exist. Financial leverage affects firm value in two ways: (1) interest expenses are deductible from income tax, generating tax savings; and (2) financial leverage increases bankruptcy costs because of the risks of default on interest payments and/or debt capital repayment. Corporations will increase their financial debt as long as bankruptcy costs remain low (Modigliani and Miller, 1958).

Since 1958, the literature on capital structure has expanded with many theoretical and empirical contributions mainly focused on three major theories to explain corporate leverage and its evolution.

1) The traditional static trade-off theory (TOT) states that firms choose an optimal capital structure in comparing the tax benefits of debt, the costs of bankruptcy and the costs of agency of debt and equity (Modigliani and Miller, 1963; Stiglitz, 1972; Jensen and Meckling, 1976; Myers, 1977; Titman, 1984).

2) The pecking order theory (POT) (Donaldson, 1961; Myers and Majluf, 1984; Myers, 1984) shows that due to information asymmetries between insiders and outsiders, companies prefer to be financed first by internal resources, then by debt and finally by stockholders' equity. The debt to equity ratio depends on the degree of information asymmetry, on the capacity for self-financing and on the other constraints related to sources of financing. So, the level of leverage reflects past profitability and investment opportunities of firms.

3) The dynamic trade-off theory (DTOT) tries to be a compromise between TOT and POT (Fischer *et al.*, 1989; Leland, 1994, 1998). Due to information asymmetries, market imperfections and transaction costs, many companies allow their leverage ratios to drift away from their targets for a time. However, when the distance becomes large enough, managers take steps to move their companies back toward a target leverage ratio.

The POT may explain short-run deviation from the target and the TOT is relevant in the long run. In this approach, leverage must converge toward a target leverage ratio. In the long-term, it cannot fit the POT which states managers make no effort to reverse changes in leverage.

So, for shareholders, financial debt leads to an increase in the rate of return on equity (ROE) when the rate of return on operating assets (ROA) is greater than the interest rate required by lenders (see the appendix for detailed explanations). Financial leverage offers greater potential returns for the investor than would be available otherwise. However, debt involves risk, which is borne by shareholders. The loan principal and all accrued interest must be repaid, even if the operating income from the investment is lower than expected and the cash flows generated are insufficient to meet debt capital repayment and interest expenses. Uncertainty about lower future income increases bankruptcy costs. Thus, financial leverage lowers income tax payments but increases bankruptcy costs and therefore shareholders' ROE requirements. A higher debt to equity ratio leads to a higher required ROE, because of the higher risk involved for equity-holders in a company with debt (Modigliani and Miller, 1963). The optimal capital structure depends on the debt interest rate, the income tax rate and the cost of equity in order to maximize corporate value.

### **3.2. Governance and principles of management: corporations versus co-operatives**

Corporations maximize profit for their equity shareholders. Profit is the variable to adjust results.

Co-operatives maximize of the price of agricultural products (here grapes) brought by co-op members. They do not the maximization of coo-op profit. The return on equity capital is fixed according to the rate of returns of government bonds. So the price paid for co-op members' products is the variable to adjust results (Pérez, 2003 ;Coelho and Rastoin, 2004).

### **3.3. Specificity of the Champagne industry**

The Champagne industry has specific legal, technological and storage constraints.

By EU law, Champagne must be processed from grapes coming from 319 villages within the protected designation of origin (PDO) area located to the east of Paris, France. This is a major constraint for the Champagne wineries, must also be produced wine within the area according to specific rules.

The time necessary to produce Champagne is a crucial constraint: the process takes about 3 years, from the grape harvest to the sale of the bottle. Consequently, large stocks of bottles aging in cellars must be financed.

From 150 million bottles in 1978, vine growers and wine makers were able to expand and double sales up to the historic record of 339 million bottles in 2007. The crisis was light in 2008 with sales of 323 million bottles, but sales went down by 9.1% in 2009 with sales amounting to 293 million bottles. But the sales of best crus went down by more than 30%. (CIVC, 2010). Declerck (1995) showed that Champagne makers were able to improve the management of production-consumption Champagne cycles and past crises. How champagne wineries will tackle the current crisis with respect to their financial debt level?

## **4. PROCEDURES: METHODOLOGY AND DATA**

### **4.1. Methodology**

Co-ops do not maximize shareholders' profit, but the value of products (here Champagne grapes) collected from co-op members. As a consequence, strategic and financial comparisons among co-ops will be carried out on one side and among corporations on another side.

Champagne makers have different economic and financial characteristics that can be observed through:

1. measures of financial structure:

- financial leverage as the financial debt capital to equity capital ratio
- financial charges

2. economic and financial measures of performance:

- growth of sales
- labor costs to sales
- EBITDA (Earnings before interest, taxation, depreciation and amortization) margin
- operating margin, also called EBIT (earnings before interest and taxation) margin
- operating return on assets (ROA) which is operating income divide by operating assets
- return on equity (ROE)

3. risk of financial leverage:

- focus will be put on leverage risk in comparing operating return on assets and net financial debt interest rate faced by wineries

### **4.2. Data**

Secondary data are used to measure the economic and financial criteria of Champagne wine makers come from Bureau van Dijk "Orbis" financial data bank.

## **5. RESULTS AND CONCLUSIONS**

Results about leverage risks in the Champagne industry will be related to governance mechanisms and marketing strategies of corporations and co-operatives.

Conclusions will be inferred and addressed to Champagne industry managers in terms of financial strategies and performance.

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