Vienna 2019 Abstract Submission

Title
ARE CHAMPAGNE WINERIES FACING RISK OF DEBT DISTRESS
DUE TO INCREASING COSTS AND STAGNANT SALES?

I want to submit an abstract for:
Conference Presentation

Corresponding Author
Francis Declerck

E-Mail
declerck@essec.edu

Affiliation
ESSEC Business School - Paris

Co-Author/s

Name	E-Mail	Affiliation
Martin L. Cloutier	cloutier.martin@uqam.ca	Université du Québec à Montréal

Keywords
Champagne, wine, leverage, financial risk, strategy

Research Question
To test whether
1) some major Champagne wineries are at high risk of debt distress
2) such financial risk may be related to Champagne makers' marketing strategy wrt distribution

Methods
Hypotheses tested
1/ Solvency risk is tested using the theory of financial effect of leverage (Beck & de Marzo, 2017)
2/ Champagne makers' marketing strategies is related to financial solvency

Results
Some Champagne Houses are facing high financial leverage risks. They sell to off-trade channels in countries with declining sales.
But some do not face high risk. They selll on-trade world-wide

Abstract
"ARE CHAMPAGNE WINERIES FACING RISK OF DEBT DISTRESS
DUE TO INCREASING COSTS AND STAGNANT SALES?"

Key words: Champagne, wine, leverage, financial risk, strategy

JEL codes: G31, G32, Q14

ABSTRACT

a) Objectives
The paper focuses on the solvency of Champagne wineries and assesses whether their financial effect of leverage is positive or negative, as some workers' trade unions currently worry that some are risk of debt distress.

b) Problem statement
Most research works on the 10 largest Champagne wineries have focused on marketing and profitability, but not on financial risks.

In November 2017, trade unions of Champagne winery workers expressed they worry that major Champagne Houses be at high risk of debt distress, even though the association of Champagne Houses denied such worries ("L'Union", 26 November 2017, page XVI).

The CIVC (Champagne-Committee - Comité interprofessionnel du vin de Champagne) provides economic data about the Champagne business Over the last decade, Champagne sales in volumes have declined by 9.4% from 339 million bottles in 2007 to 306 million bottles in 2016. In value, they increased by 3.35% from 4.56 million euros in 2007 to 4.71 million euros in 2016. On average, the prices sold abroad are higher the prices of bottles sold in France.
However, the price of grapes has increased by 15.46% from 5.11€/kg in 2007 to 5.90€/kg in 2016.
So, Champagne grape price increased a lot more than the sales of Champagne in value. Since grape costs account for more than 70% of Champagne wine costs, the profitability of Champagne wineries is at stake.

Bankruptcy may be a reality. On June 5, 2005, the second largest Champagne maker, Marne & Champagne, failed to pay grapes to vine growers. The Caisse d'Epargne state-owned financial institution took over 60% of the equity capital and the whole Marne & Champagne group was sold in 2006. So, bankruptcy occurred during good economic conditions with increasing Champagne sales. But current economic is tougher in the Champagne business.

These facts and figures motivate the need for research in order to shed light and provide recommendations on financial strategy.

c) Research question and hypotheses
The research question is to test whether 1) some major Champagne wineries are at high risk of debt distress and 2) such financial risk may be related to Champagne makers' marketing strategy with regards to distribution channels.

Two hypotheses are tested:
1/ Some major Champagne wineries face solvency risk due to too high financial leverage.
2/ Champagne makers' risk of financial distress may be related to Champagne makers' strategies with regards to distribution channels.

d) Theoretical background
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, 1984; 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.

Studying wines from Australia, Chile, China, France and the US, Australia, Baldi, et al. (2010) assess that French and US wines may be a financial parachute in crisis time.

e) Methodology
The first hypothesis about solvency risk is tested using the theory of financial effect of leverage
Financial leverage magnifies the rate of return on equity (ROE) when the returns from the economic asset (ROA) more than offset the costs of borrowing (Berk & de Marzo, 2017). Losses are magnified when the opposite is true. A corporation that borrows too much money might face bankruptcy risk or default risk during a business downturn, while a less-levered corporation might survive.
Equation (1) ROE = (1 - tax) [ROA + (ROA - rd) (D/E)] where:
- ROE is rate of return on equity
- ROA is the rate of return on operating assets
- rd is the cost of debt capital, that is the interest rate faced by the company
- E represents the equity capital of the company
- tax is the corporate tax income rate
- D represents the financial debt capital of the company
- A represents the total operating assets of the company with A = E + D
- (D/E) is the debt to equity ratio, also called the gearing of the company.
When interest rate ”rd” is greater than the rate of return on operating assets (ROA), then the rate of return on equity (ROE) for shareholders strongly decreases as soon as the company increases its debt to equity ratio, increasing bankruptcy risks.

Further, suppose that due to hard economic conditions, there is a decrease in the rate of return on operating assets (new ROA’), then the difference (ROA’ - rd) becomes (ROA’ - rd) which is lower, possibly negative. So, ROE’ is the new rate of return on equity and is worth:

Equation (2) ROE’ = (1 - tax) [ROA’ + (ROA’ - rd) (D/E)]
So using equation (1) and (2), it is possible to measure the sensitivity of the rate of return on equity for shareholders to variations in ROA, as shown in equations (3) and (4).

Equation (3) ROE - ROE’ = (1 - tax)) (ROA - ROA’) [1 + (D/E)]

Equation (4) ROE - ROE’ = (1 - tax) [ROA –ROA’] + (1 - tax) [(ROA - ROA’) (D/E)]

So, the sensitivity of the rate of return on equity for shareholders to variations in ROA can be divided into two components:
- an operational risk [ROA –ROA’] which is the risk of lower rate of return on operating assets than expected when making the investment. Here the risk is on a change in ROA;
a financial risk [(ROA - ROA’) (D/E)] which strongly augments the operational risk.

In conclusion, companies are afraid of decrease in the operating rate of return on assets and any increase in interest rate, when selecting investments. High interest rates may often lead to a negative difference between the rate of return on operating assets and the interest rate (ROA - rd) that may threaten the survival of a company.

The second hypothesis is testing in relating Champagne makers' marketing strategies to financial solvency
The marketing strategy of Champagne Houses is identified in using Porter's diamond model (1985) and SWOT analysis. A typology is set according to co-ops' marketing strategy:
- selling bottles as much as possible to the off-trade market (supermarkets),
- selling bottles as much as possible to the on-trade markets (restaurants, hotels, bars, night-clubs),
- selling bottles mainly in the domestic market, France,
- selling bottles mainly abroad.

f) Data
Population studied: the top-ten Champagne wineries, with available financial data, are analyzed: MHCS (LVMH subsidiary focused on Champagne with the brands Moët & Chandon, Dom Pérignon, Krug, Veuve Clicquot Ponsardin, Ruinart, Mercier), Deutz, Billecart-Salmon, Bollinger, Duval-Leroy, Lanson BCC, Laurent-Perrier, Louis-Roederer, Mumm, Pol Roger, and Vranken-Pommery.

Financial data from 1996 to 2015 come from Orbis data bank.

f) Results
Some of the top-ten Champagne Houses are facing high financial leverage risks. They mainly sell to off-trade channels like supermarkets in countries with declining Champagne sales.
However, some of the top-ten Champagne Houses do not face high debt risks. They mainly sell to on-trade channels world-wide. Furthermore, they may increase the procurement price of Champagne risks to kick competitors out of market.

h) References
Baldi, L., D. Vandome and M. Peri. (2010), Is wine a financial parachute?, Proceedings in Food System Dynamics, University of Bonn, Germany, pp. 492-287. Available at http://centmapress.ilb.uni-bonn.de/ojs/index.php/proceedings/index

Berk Jonathan & Peter DeMarzo. (2017), Corporate Finance, 4th edition, Pearson.

Burton, J., and J.P. Jacobsen. (2001), The rate of return on wine investment, Economic Inquiry, 39: 337-350.

CIVC (Champagne-Committee - Comité interprofessionnel du vin de Champagne). (2018), Economic data from 1978 to 2016. Annual bulletins and personal contact with the economic department.

Donaldson, G. (1961), "Corporate Debt Capacity: A Study of Corporate Debt policy and the Determinants of Corporate Debt Capacity", working paper, Harvard Business School, Division of Research, Harvard University.

Fischer, E. O., Heinkel R. and Zechner J. (1989), "Dynamic capital structure choice: theory and tests", Journal of Finance, Vol. 44, pp. 19-40.

Jensen, M. and Meckling, W. (1976), "Theory of the firm: managerial behaviour, agency costs and capital structure", Journal of Financial Economics, Vol. 3, pp. 305-360.

Leland, H.E. (1994), "Corporate Debt Value, Bond Covenants and Optimal Capital Structure", Journal of Finance, Vol. 49, pp. 1213-1252.

Leland, H. E. (1998), "Agency costs, risk management and capital structure", Journal of Finance, Vol. 53, pp. 1213-1243.

Modigliani, F. and Miller, M. H. (1958), "The cost of capital, corporate finance, and the theory of investment", The

American Economic Review, Vol. 48, No. 2, pp. 261-297.

Myers, S.C. (1984), “The capital structure puzzle”, Journal of Finance, Vol. 39, No. 3, pp. 575-592.

Myers, S.C. and Majluf, N.S. (1984), “Corporate financing and investment decisions when firms have information that investors do not have”, Journal of Financial Economics, Vol. 13, pp. 187-221.

Porter M.E. (1985), Competitive Advantage: Creating and Sustaining Superior Performance, The Free Press.

Orbis data bank. (2017), financial data 2006-2015.

Titman, S. (1984), “The effect of capital structure on the firm’s liquidation decision”, Journal of Financial Economics, Vol. 13, pp. 137-152.

File Upload (PDF only)

- Champagne_Submission_AAWE-Vienna-2019.pdf

Privacy

- ARE CHAMPAGNE WINERIES FACING RISK OF DEBT DISTRESS DUE TO INCREASING COSTS AND STAGNANT SALES?
- By using this form you agree with the storage and handling of your data by this website.

"ARE CHAMPAGNE WINERIES FACING RISK OF DEBT DISTRESS DUE TO INCREASING COSTS AND STAGNANT SALES?"

Key words: Champagne, wine, leverage, financial risk, strategy

JEL codes: G31, G32, Q14

ABSTRACT

a) Objectives

The paper focuses on the solvency of Champagne wineries and assesses whether their financial effect of leverage is positive or negative, as some workers' trade unions currently worry that some are risk of debt distress.

b) Problem statement

Most research works on the 10 largest Champagne wineries have focused on marketing and profitability, but not on financial risks.

In November 2017, trade unions of Champagne winery workers expressed they worry that major Champagne Houses be at high risk of debt distress, even though the association of Champagne Houses denied such worries ("L'Union", 26 November 2017, page XVI).

The CIVC (Champagne-Committee - Comité interprofessionnel du vin de Champagne) provides economic data about the Champagne business Over the last decade, Champagne sales in volumes have declined by 9.4% from 339 million bottles in 2007 to 306 million bottles in 2016. In value, they increased by 3.35% from 4.56 million euros in 2007 to 4.71 million euros in 2016. On average, the prices sold abroad are higher the prices of bottles sold in France.
However, the price of grapes has increased by 15.46% from 5.11€/kg in 2007 to 5.90€/kg in 2016.
So, Champagne grape price increased a lot more than the sales of Champagne in value. Since grape costs account for more than 70% of Champagne wine costs, the profitability of Champagne wineries is at stake.

Bankruptcy may be a reality. On June 5, 2005, the second largest Champagne maker, Marne & Champagne, failed to pay grapes to vine growers. The Caisse d'Epargne state-owned financial institution took over 60% of the equity capital and the whole Marne & Champagne group was sold in 2006. So, bankruptcy occurred during good economic conditions with increasing Champagne sales. But current economic is tougher in the Champagne business.

These facts and figures motivate the need for research in order to shed light and provide recommendations on financial strategy.

c) Research question and hypotheses

The research question is to test whether 1) some major Champagne wineries are at high risk of debt distress and 2) such financial risk may be related to Champagne makers' marketing strategy with regards to distribution channels.

Two hypotheses are tested:
1/ Some major Champagne wineries face solvency risk due to too high financial leverage.
2/ Champagne makers' risk of financial distress may be related to Champagne makers' strategies with regards to distribution channels.

d) Theoretical background

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, 1984; 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.

Studying wines from Australia, Chile, China, France and the US, Australia, Baldi, et al. (2010) assess that French and US wines may be a financial parachute in crisis time.

e) Methodology

The first hypothesis about solvency risk is tested using the theory of financial effect of leverage

Financial leverage magnifies the rate of return on equity (ROE) when the returns from the economic asset (ROA) more than offset the costs of borrowing (Berk & de Marzo, 2017). Losses are magnified when the opposite is true. A corporation that borrows too much money might face bankruptcy risk or default risk during a business downturn, while a less-levered corporation might survive.

Equation (1) $ROE = (1 - t_{ax}) [ROA + (ROA - r_d) (D/E)]$ where:

- ROE is rate of return on equity
- ROA is the rate of return on operating assets
- r_d is the cost of debt capital, that is the interest rate faced by the company
- E represents the equity capital of the company
- t_{ax} is the corporate tax income rate
- D represents the financial debt capital of the company
- A represents the total operating assets of the company with A = E + D
- (D/E) is the debt to equity ratio, also called the gearing of the company.

When interest rate ”rd” is greater than the rate of return on operating assets (ROA), then the rate of return on equity (ROE) for shareholders strongly decreases as soon as the company increases its debt to equity ratio, increasing bankruptcy risks.

Further, suppose that due to hard economic conditions, there is a decrease in the rate of return on operating assets (new ROA’), then the difference (ROA’ - rd) becomes (ROA’ - rd) which is lower, possibly negative. So, ROE’ is the new rate of return on equity and is worth:

Equation (2) $ROE' = (1 - t_{ax}) [ROA' + (ROA' - rd) (D/E)]$

So using equation (1) and (2), it is possible to measure the sensitivity of the rate of return on equity for shareholders to variations in ROA, as shown in equations (3) and (4).

Equation (3) $ROE - ROE' = (1 - t_{ax})) (ROA - ROA') [1 + (D/E)]$

Equation (4) $ROE - ROE' = (1 - t_{ax}) [ROA - ROA'] + (1 - t_{ax}) [(ROA - ROA') (D/E)]$

So, the sensitivity of the rate of return on equity for shareholders to variations in ROA can be divided into two components:

- an operational risk [ROA –ROA'] which is the risk of lower rate of return on operating assets than expected when making the investment. Here the risk is on a change in ROA;

a financial risk [(ROA - ROA') (D/E)] which strongly augments the operational risk.

In conclusion, companies are afraid of decrease in the operating rate of return on assets and any increase in interest rate, when selecting investments. High interest rates may often lead to a negative difference between the rate of return on operating assets and the interest rate (ROA - rd) that may threaten the survival of a company.

The second hypothesis is testing in relating Champagne makers' marketing strategies to financial solvency

The marketing strategy of Champagne Houses is identified in using Porter's diamond model (1985) and SWOT analysis. A typology is set according to co-ops' marketing strategy:

- selling bottles as much as possible to the off-trade market (supermarkets),
- selling bottles as much as possible to the on-trade markets (restaurants, hotels, bars, night-clubs),
- selling bottles mainly in the domestic market, France,
- selling bottles mainly abroad.

f) Data

Population studied: the top-ten Champagne wineries, with available financial data, are analyzed: MHCS (LVMH subsidiary focused on Champagne with the brands Moët & Chandon, Dom Pérignon, Krug, Veuve Clicquot Ponsardin, Ruinart, Mercier), Deutz, Billecart-Salmon, Bollinger, Duval-Leroy, Lanson BCC, Laurent-Perrier, Louis-Roederer, Mumm, Pol Roger, and Vranken-Pommery.

Financial data from 1996 to 2015 come from *Orbis* data bank.

f) Results

Some of the top-ten Champagne Houses are facing high financial leverage risks. They mainly sell to off-trade channels like supermarkets in countries with declining Champagne sales.

However, some of the top-ten Champagne Houses do not face high debt risks. They mainly sell to on-trade channels world-wide. Furthermore, they may increase the procurement price of Champagne risks to kick competitors out of market.

h) References

Baldi, L., D. Vandome and M. Peri. (2010), Is wine a financial parachute?, *Proceedings in Food System Dynamics*, University of Bonn, Germany, pp. 492-287. Available at http://centmapress.ilb.uni-bonn.de/ojs/index.php/proceedings/index

Berk Jonathan & Peter DeMarzo. (2017), *Corporate Finance*, 4th edition, Pearson.

Burton, J., and J.P. Jacobsen. (2001), The rate of return on wine investment, *Economic Inquiry*, 39: 337-350.

CIVC (Champagne-Committee - Comité interprofessionnel du vin de Champagne). (2018), Economic data from 1978 to 2016. Annual bulletins and personal contact with the economic department.

Donaldson, G. (1961), "Corporate Debt Capacity: A Study of Corporate Debt policy and the Determinants of Corporate Debt Capacity", working paper, Harvard Business School, Division of Research, Harvard University.

Fischer, E. O., Heinkel R. and Zechner J. (1989), "Dynamic capital structure choice: theory and tests", *Journal of Finance*, Vol. 44, pp. 19-40.

Jensen, M. and Meckling, W. (1976), "Theory of the firm: managerial behaviour, agency costs and capital structure", *Journal of Financial Economics*, Vol. 3, pp. 305-360.

Leland, H.E. (1994), "Corporate Debt Value, Bond Covenants and Optimal Capital Structure", *Journal of Finance*, Vol. 49, pp. 1213-1252.

Leland, H. E. (1998), "Agency costs, risk management and capital structure", *Journal of Finance*, Vol. 53, pp. 1213-1243.

Modigliani, F. and Miller, M. H. (1958), "The cost of capital, corporate finance, and the theory of investment", *The American Economic Review*, Vol. 48, No. 2, pp. 261-297.

Myers, S.C. (1984), "The capital structure puzzle", *Journal of Finance*, Vol. 39, No. 3, pp. 575-592.

Myers, S.C. and Majluf, N.S. (1984), "Corporate financing and investment decisions when firms have information that investors do not have", *Journal of Financial Economics*, Vol. 13, pp. 187-221.

Porter M.E. (1985), *Competitive Advantage: Creating and Sustaining Superior Performance*, The Free Press.

Orbis data bank. (2017), financial data 2006-2015.

Titman, S. (1984), "The effect of capital structure on the firm's liquidation decision", *Journal of Financial Economics*, Vol. 13, pp. 137-152.