The Pecking Order Theory and SMES Financing: Insight into the Mediterranean Area and a Study in the Moroccan Context

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Small and medium sized enterprises (SMES) are the necessary force of the socio-economic development in the Mediterranean. Their role as providers of employment and as key players of economic growth is essential. Indeed, the issues relating to the starting up, financing and operation of SMES provoke a crucial interest, growing internationally. However, the financing of SMES breaks in the momentum of economic growth. It is often said that SMES access to credit is difficult and a major constraint is related to credit institution's features in the Mediterranean, i. e. Morocco. Thus, the paper's subject is closely related to the identification of the hierarchical funding of SMES, introduced at the Casablanca stock exchange. To this end, we adopted a dynamic approach and we used a Data analysis of panel. They are particularly suited to analyze dynamic effects, because they allow a better understanding of the dynamic adjustment of the SME's financial structure. Key Words: Small and medium sized enterprises, Pecking Order Theory, Casablanca stock exchange

INTRODUCTION

Small and medium sized enterprises, (SMES), are the key driven force of the socio-economic development in the Mediterranean. They are actively involved in job creation and allow the draining of the economic growth. Indeed, this form of business organization is undoubtedly the most widespread in the world, with a share of up to 90% of the entire structure of entrepreneurial economies.

In the current modernization process of financing and banking structures in the Mediterranean, it is generally assumed that there is no lack of external financial assistance for promoting business and investment. Nevertheless it is a fact that available funds do not sufficiently reach SMES and micro enterprises of the southern Mediterranean partners despite their privileged role.

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It is clear that the financing of SMES breaks in the momentum of economic growth. It is often said that SMES access to credit is difficult and a major constraint is related to credit institutions. They are subject to caps on interest rates structure, which does not facilitate a consistent pricing of credit risk and may make lending to SMES. Accordingly, these enterprises often turn away from formal mechanisms and operate in the informal economy, riskily evading taxes and regulations.

Besides, acute asymmetries of information, lack of reliable track records, reliance on collaterals and lack of equity etc. continues to impede the access to finances and particularly to debt financing. To-day most companies are facing a clear downturn in demand of good and services on one hand and a shortage of credit on the other, due to the tightening of financing by credit institutions.

And, as all companies, SMES need financial resources for their functioning and survival. Generally, we distinguish between indirect financing, where agents rely on banks and financial institutions as intermediaries, and direct financing, operated in a financial market economy, namely Moroccan market.

Consequently, the interest of the paper's subject emerges. It is closely related to the identification of the hierarchical funding of SMES, introduced at the Casablanca stock exchange and to the exploratory tracks for a better funding in the medium and long term.

Furthermore, SMES financing is a current topic that gives food for thought for many researchers and fuels debates that are difficult to soothe. It addresses the issue of promotion of SMES as a factor of reducing poverty, especially through the creation of self-employment in developing countries, and deals equally with the issue of high taxes, which constitutes an obstacle to access the finances for SMES, favouring their orientation in many cases to the informal sector.

Our purpose is twofold; firstly we need to confirm the civic mission of SMES in particular through making investment more prof-

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itable to the public and private savings, and then achieve consistent profitability under their strategic focus of any business. The basic problem underlying this paper is the financing of SMES. It can be formulated as follows:

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What's the hierarchy of SMES' founding introduced at the Casablanca stock exchange and could the financing of SMES by the Moroccan financial market replace the funding thereof by the banking sector?

Following on the master's dissertation undertaken in 2009 under the supervision of Hmad Jari, this question is closely related to the PhD Thesis of Management Science-Finance that I undertook from 2010, under the supervision of Anissa Lehadiri Pathway at the University Mohammed V Agdal, Faculty of Legal, Economics and Socials Sciences, Rabat, Morocco. And the question raises a double interest, including:

- A theoretical interest, since it will enable to assess the approach of organisational finance. We also propose the pecking order approach as the most adapted to these enterprises.
- The second is the practical interest, since the answer to this problem will clarify the way of hierarchical funding by identifying the model followed by SMES at the Moroccan stock market

The two kinds of interest are related to the theoretical review and to the empirical review.

THEORETICAL REVIEW

The theoretical approach of this work addresses the organizational finances, recognizing the existence of acute asymmetries of information between agents. We analyzed the ability of this area to translate the research object, SMES. And we took a look at a theoretical orientation that could explain the structure of funds and their adaptation to SMES. To this end, the literature on the choice of

¹We should note in this context that SMES are considered as companies, the rationality and the operating procedures of which are different than large companies.

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capital structure is a specific financial environment with a rigorous construction and general principles.

According to Modigliani and Miller (1958), the choice of the capital structure or dividend policy is irrelevant for the shareholders of the company. The authors have proved that – in a theoretical framework – the capital structure and the dividend policy don't affect the value of the company. This assertion was revolutionary in a time when many efforts have been made for the optimal choice of capital structure and the dividend policy.

The two authors, Modigliani and Miller, have written two very important scientific articles. However, in this study we are particularly interested in the second article (Miller and Modigliani 1961). This article focuses on the dividend policy, growth and the valuation of shares. M&M showed that the total market value of all the assets issued by a firm does not dependent on the way cash is distributed to the shareholders (the dividend policy). They supposed that, even if the friction of real, dividend policies are induced better than others, the differences are not as large as previously thought.

Furthermore, in his article on the free cash flow, Jensen (1986) defined free cash flow as a cash flow in excess, required to fund all projects that have positive net present values discounted at the relevant cost of capital. He observed conflicts of interest between shareholders and managers over payout policies. These conflicts are especially severe when the organization generates substantial free cash flow. Then, the problem is how to motivate managers to disgorge the cash rather than investing it below the cost of capital or wasting it on organization inefficiencies (Jensen 1986).

A thesis following the theory advocated by Jensen (1986), is therefore recommending high dividend payments to limit the opportunistic behavior of managers and agency costs. In the further development of this theory, the theory of signals is illustrated. The theory recognizes some asymmetry of information and believes that insiders² are much better informed than the uninitiated – or by

² We refer here to insiders or insider trading. For the purpose of the study, any financial transaction, carried out by a person liable (by profession or its privileged re-



antonym outsiders – about the future of business because of their greater familiarity with plans and projects.

In this context, several models of signaling by dividends have been developed, including Bhattacharya's models (1979; 1980). The author presents two types of models that use signaling by dividend. The first involves a cost structure for signalization, while for the second, the signaling is inexpensive. In parallel, if the first model provides a balance, the second does not allow it. And this is the reason why for this study we retain only the first model.

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Miller (1977) illustrates how dividends are likely to inform investors about the quality of listed firms and demonstrates that it is possible to use the dividend policy in an effective signaling activity. Numerous empirical studies in different markets demonstrate the relevance of such an approach. Nevertheless, this result is modified by considering taxes of financial income investors; Miller and Rock (1985). Indeed, debt benefits are limited by the existence of bankruptcy costs. In any business it must, ultimately be decide between the advantages and the disadvantages of debt considering the choice of its financing structure.

Subsequently, the theory of Trade Off invalidates the thesis of neutrality, while linked to a neoclassical framework. The theory assumes that firms identify an optimal level of debt in assessing costs and benefits of an additional unit of debt (Kent Baker and Martin 2011). In other words, the firm is assumed to be in the presence of an optimal debt ratio and tries to achieve the target debt ratio or gradually tries to approach it.

According to the trade-off theory, the financial leadership selection consists mainly of the utility maximization of shareholders by increasing the market value of the company. In this context, conflicts of interest between the various parties involved in financing (managers, owners, creditors) don't exist and interests of agents are consistent and well respected by the leader.

lationship with the company) and having knowledge of information that can substantially change the title before the release of the information in the public, is called insider trading.

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However, the problems of SMES' access to resources are largely the result of a lack of informational transparency. This creates a difficulty for external agents to identify their financial situations. That is to say that specific informational distortion characterizes the relationship bank/SMES and leads to overexposure to the phenomenon of credit rationing. Definitely, the previously mentioned literature recognizes the existence of conflicts of interest between both parties.

It should be emphasized that a new approach of financing companies questions the idea of homogeneity structures regarding the diversity of companies and its impact on funding relationships (Rivaud-Danset and Salais 1992). This design of funding better reflects the reality of SMES, which are able to grow despite the difficult access to capital markets and rationing in credit markets. This approach is supported particularly by the Pecking Order Theory.

Focalization on the Pecking Order Theory (POT)

Information asymmetries between a company (namely SME) and its financial partners are responsible for the existence of a pecking order in the financing and the theory related to it. Indeed, the theory of Pecking Order addresses an immediate need for funding in a context of asymmetric information. It is based on the existence of a pecking order and provides a rational explanation for choice in corporate finance.

For a company, this order consists in order to focus on internal sources of financing before resorting to external investors. Thus, the company follows a hierarchy of financing, dictated by the need for external funds. In general, 'financing by internal funds should be promoted on the financing by external funds, according to the following hierarchy: cash flow/debt/issue of shares' (Myers and Majluf 1984).

At this level, it is necessary to clarify the hierarchy of funding, driven by the need of external funding that follows any business according to the theory of the Pecking Order. This hierarchy is expressed as a function of the objective, pursued by the officer of the company.

In this regard, the Pecking Order theory advocates the leader to decide whether to act according to his risk dislike. He may decide to maximize the shareholder's wealth, or to act in his own interest. In both cases, the leader acts to maximize the benefit of certain members of the company. According to Myers and Majluf (1984) the leader establishes one of the following hierarchies:

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- In case the manager acts in the interest of existing shareholders, and given the strong asymmetry of information and reporting problems associated with the issuance of equity, the preference will go to internal company funds, then on the external funds and then the debt to equity, with a preference for the least risky debt as possible. Myers and Majluf (1984) establish a decreasing financial hierarchy: flow, low risk debt, risky debt and capital increase ultimately.
- In the case where the objective of the manager is to maximize his utility, Myers (1984) defines organizational surplus that consists of various attributes (higher wages, consumption of goods and services on a personal basis, gratuities, etc.) Given the binding with respect to the organizational surplus and the monitoring activity related to debt, the manager will establish the following hierarchy: flow, capital increase and debt. Myers (1984) points out that this kind of behavior may be limited by the more or less strict vigilance of shareholders.

To sum up, if the authors distinguish between the two financing hierarchies related to two allowed behaviors of leaders, they agree on the same modeling and define the model founder of the pecking order theory, called model of Myers and Majluf (1984).

EMPIRICAL REVIEW

The studies on data, combining time series and cross sections, are of great interest. This structure of panel data allows us to study the dynamics of individual behavior and take into account unobserved heterogeneity of individuals. And the present empirical study is based precisely on data, set according to the methods of the panel data econometrics.

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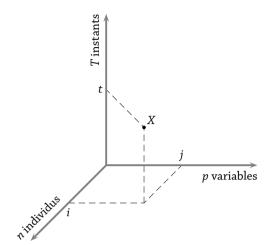


FIGURE 1 Mapping Panel Data (adapted from Cassin 1999, 150)

A panel of data refers to 'data that characterize *n* individuals for *p* variables and *t* different times. An observation is identified by three indices: an index identifies the individual, a second the variable and a third the instant' (Cassin 1999). The purpose can be presented in figure 1. It should be noted that several analysis techniques of panel data are used, notably Principal Component Analysis (PCA). This technique is simple to use while providing many results. For this study, the technique is used to describe the evolution of SME's capital structure from 2005 to 2012.

The econometric panel allows controlling the heterogeneity of observations in their individual dimensions, whether by the inclusion of a specific assumed effect (fixed effects) or by the inclusion of a specific unobservable effect (random effects). The fixed effects model is estimated by least squares with dummy variables for each company.

The fixed effects estimation, using deviations from individual means, eliminates persistent differences between firms, and thus favors the intra businesses. The method presents equally the advantage of being able to identify and measure effects that are not directly observable in cross-sectional or in time series. However, the fixed effects model allows introducing variables for each company and is therefore costly in terms of degrees of freedom.

The handling panels require the use of powerful software, and we chose STATA as software of development, specializing in scientific computing and statistical analysis. This multiplatform software has many features, including data manager, linear algebra, statistics and data analysis, graphical output and system modules. It is also characterized by its timeliness, the rapid development of scripting language, an intuitive and compact syntax and numerous graphic possibilities.

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METHODOLOGICAL NOTE

The present point proposes to emphasize the study period with its specifications and characteristics and to present the population of the study with a brief descriptive analysis of the data. It presents the main assumptions, on which the study is based, equally.

The Study Period: Its Specifications and Characteristics

As a part of this study, we chose a period of 8 years. Thus the study's period was from 2004 to 2012. This period revealed a particular interest, as it coincided with the period of post financial crisis. A crisis that did not spare the national economy and at this level, we will take a look at the economic situation of this period.

The international economic context in the end of the last decade and the beginning of the current decade is very restrictive. In this context of the loss of confidence, and the rise of market pressure on states and banks, the activity in developed countries has been packed. The activity suffered from the negative impact of the loss of interactions between the solvency of banks and the increase of their debt-recapitalization process.

The latest International Monetary Fund forecasts show that the global economy will continue its recovery that began in 2010 with a growth of 3.8% in 2011 against 5.2% a year earlier. However, the global recovery is threatened by the growing tensions at work, particularly in the Euro-Mediterranean area in relation to the sovereign debt crisis (budget deficits, debt), the budgetary austerity measures that constrain more and more countries (Cassin 1999, 150).

In this environment, trade and international capital flows have

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decreased. The current account imbalances in the balance of payments have increased overall. At the national level, the budget deficit exceeded 6% of GDP in 2011 and 2012. The current account deficit of the balance of payments, which averaged around 5% of GDP in 2010 and previous years, exceeded 6% of GDP in 2011.

The Population of Study and the Data

To be able to provide a focused effort, the study focuses on SME financing by the stock market and the sector of microfinance in Morocco. We are interested in corporate issuers, because they have financial disclosure requirements, in particular the obligation to publish press releases and financial statements.

The data we use come from a database that we built from the accounting information, balance sheets, account of products and loads and biannual social accounts of 77 companies, issued in the period 2004–2012. Occasionally, we used the certificate of auditors on the intermediate situation of social accounts.

Our main data sources are the Ethical Council of Securities of Morocco, the Casablanca Stock Exchange, the General Confederation of Enterprises of Morocco and the National Agency for the Promotion of Small and Medium Enterprises. Equally we used reports of financial intermediaries, accountants, audit firms, and the credit departments of banks.

Regarding the constitution of the database, we first checked criteria on the SME definition. To this end, we established the list of the annual turnover of the companies. Then we calculated the means and saw whether it corresponds with the definition of the study or not. It should be remembered that the definition used is that of the Commission SME/CGEM.

Data Descriptive Analysis

Table 1 shows the descriptive statistics of the series. They are mainly related to skewness and to kurtosis of turnover series. That is to say that the series adopted the following descriptive features.

Table 1 notes first that the coefficient of kurtosis is negative. That is to say, well below 3 in the absolute value (coefficient of kurtosis for

TABLE 1 General Descriptive Statistics

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Year	Minimum	Maximum	Mean	Std. dev.
	Statistics	Statistics	Statistics	Statistics
2005	6914638.25	204739794	65837959.85	63480841.48
2006	10026262.40	218389373	71319005.67	70922947.72
2007	6526015.67	303941216	89562527.01	90086448.59
2008	8043799.94	224781135	87606904.38	78425762.90
2009	11016992.40	200579531	87718129.09	76393789.40
2010	14758142.00	214488278	96562253.01	71044836.69
2011	16297643.00	221144981	96488031.18	76647367.60
2012	8982149.00	270417903	91573927.77	85194255.95

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Year	Skewness Kurtosis		osis	
	Statistics	Std. error	Statistics	Std. error
2005	1.799	1.550	-1.292	1.063
2006	1.827	1.550	-1.597	1.063
2007	1.035	1.550	1.401	1.063
2008	1.387	1.550	-1.412	1.063
2009	1.318	1.550	-1.647	1.063
2010	1.371	1.550	-1.385	1.063
2011	1.374	1.550	-1.649	1.063
2012	1.862	1.550	-1.715	1.063

NOTES Valid n = 17 (listwise).

the normal distribution). This decline kurtosis shows a high probability of no extreme points.

Secondly, the coefficient of skewness is nonzero (the theoretical value of the skewness coefficient for a normal distribution), it is positive. This shows the presence of symmetry, which may be an indicator of linearity, as it is estimated that the linear Gaussian models are necessarily symmetrical. Indeed, the positive skewness coefficient indicates that the distribution is skewed: the returns are more responsive to a negative shock than to a positive shock. Accordingly, and as shown by the test of normality of the population, the turnover does not follow a normal distribution, which is a general characteristic of financial series.

Thus, we see that the turnover varies between 2005 and 2012

in a bar with a minimum of 6.526.015 in 2007 and a maximum of 221,144,981 in 2011.

Working Assumptions

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Currently, the analysis of expectations of funding is essential in the analysis of the determinants of capital structure. To our knowledge, this field of investigation has been little tested for the Moroccan case. Hence the need to extend the knowledge of this subject, which has been developed mainly in reference to the United States in developed countries and then extended to developing countries (Booth et al. 2001).

In our assessment we seek to validate the essential contributions to the Moroccan case. The objective is to understand the impact studies and new directions of the financial structure of SMES, introduced at the Casablanca stock exchange. For this, it is essential to determine the assumptions mainly considered as having an impact on the financial expectations. The assumptions can be stated as follows:

- H1 The existence of a hierarchical structure of financing: any company or national SME is considered as a set of fundamental objectives, based on modes of financing. These goals vary according to the characteristics and nature of the business.
- H2 The predominance of bank financing; many SMES have a preference for bank financing in the national business environment. This method of funding will impact the posterior expectations that SMES express through the capital structure. Thus the expectations will be affected by the experience of people with similar private services.
- H3 Public offerings are limited by the culture of SMES; expectations of the stock financing will be limited given the judgments from other investors and/or the almost total lack of financial literacy among SMES.
- H4 The existence of arbitration between modes of financing: the judgments required or advanced and the existence of financing choices have a direct impact on the productivity of the company.

However, the behavior of SMES' expectations and its impact is considered as a crucial element in several studies in the management of capital structures. It seems to be especially important for the national authorities, because in the absence of detailed information or alternatives information, image gains in importance.

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A DYNAMIC ANALYSIS OF THE HIERARCHICAL MODEL OF FUNDING

To analyze the hierarchical model of funding, we adopted a dynamic approach to measure the transmission delay and the pulse of the financial contribution of explanatory variables lagged. The empirical specification of the dynamic panel data model can be written as follows:

$$\begin{split} \mathtt{TPA}_{it} &= \alpha_i + \beta_1 \mathtt{TPA}_{it-1} + \beta_2 \mathtt{CAF}_{it-1} + \beta_3 \mathtt{CAF}_{it} + \beta_4 \mathtt{DLT}_{it-1} \\ &+ \beta_5 \mathtt{DLT}_{it} + \beta_6 \mathtt{DCT}_{it-1} + \beta_7 \mathtt{DCT}_{it} + \beta_8 \mathtt{FB}_{it-1} \\ &+ \beta_9 \mathtt{FB}_{it} + \beta_{10} \mathtt{TMP}_{it-1} + \beta_{11} \mathtt{TMP}_{it}, \end{split} \tag{1}$$

where TPA are total liabilities, DLT is long-term debt, DCT is short-term debt, CAF is cash flow, FB is stock financing, and TMP is weighted average rate.

Public financing (the trend variable), will capture the effect of public policy on the credit supply. The balance sheet variables will allow us to understand their influence on the supply of credit. Cross variables are introduced into the model to capture the combined effect of policy variables and balance sheet variables.

i represents the i SME and t is the 1st semester 2000/2nd semester 2008. α_i stands for the individual effects that capture the specific effects of SMES. To identify the nature of the heterogeneity of these individual effects, we used the Hausman test and the results are presented in the following part.

Specification Test of Individual Effects: Hausman Test The test result indicates the heterogeneity of the individual effects ($\chi^2 = 14.013920$; p = 0.0509). This result allows us to conclude that the null hypothesis of no correlation between the individual effects

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TABLE 2 Estimation Results of the Dynamic Model

Total liabilities	0.5300***	[0.0000]	(-1)
Long-term debt	1.5294***	0.0001	(-1)
Cash flow	0.4141***	0.0017	(o)
Short-term debt	0.0120***	0.0065	(o)
Stock financing	-1.7303 ^{***}	0.0000	(-1)
Weighted average rate	-1.3370***	0.0037	(o)

Method of estimation: Generalized Method of Moments

Instruments: DT (-2 to -4), DL (-2 to -4); capitalization (-1 to -3); TA (-1 to -1) $\mathbb{R}^2 = 0.8242$

NOTES *** Indicate significance levels of rejecting the null hypothesis at 1%.

is rejected. This implies that the individual fixed effect model is the best estimate for the specification of the present dynamic model.

Model Estimation and Results

Panel data are particularly suited to analyze the dynamic effects, because they allow a better understanding of the dynamic adjustment of the financial structure. This dynamic comes, on one hand, from a gap between the dependent variable and the regressors and on the other hand from the presence of specific effects that characterize the heterogeneity among SMES.

However, the estimation of such a model presents significant challenges. This complication arises from the delayed correlation with the error term variables, although u_{it} is not auto-correlated. The general approach, developed at different times, allows to address these problems of correlation, based on the instrumental variables estimates. It is the Generalized Moments estimation Method.

In order to estimate the model, we used the MMG method, a method that allows both, to solve the problems of heteroscedasticity and autocorrelation of residuals. The estimation results are shown in table 2.

The Test of Over-Identification

The test of over-identifying restrictions is commonly represented by the value of the objective function of the GMM. It is a test for which



the null hypothesis assumes that the constraints on the choice of instrumental variables are correctly identified. If this hypothesis is not rejected, the model is overidentified. This means that the information from the selected instrumental variables appears to explain the variable to estimate.

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It could be noted that the *J*-test statistic is calculated from the value of the objective function, obtained for the value of the GMM estimator. The result (*J*-test = 21.4273; p = 0.6863) confirms the validity of the instruments, used for the estimation of the dynamic model.

Conclusions of the Study

The dynamic approach used to describe the structure of SMES allows an assessment of the adjustment costs that exist on the Casablanca stock exchange. The population decreased from 17 to 15 observations while the dynamic specification requires the exclusion of two years.

The model is estimated by the differences, and one or more lagged variables are used as explanatory variables. To monitor the impact of market dynamics on the debt dynamics, a delayed profitability variable was introduced. The primary motivation of this introduction lies in a test of the pecking order model. Indeed, several dynamic models incorporate a hierarchical behavior in short-term financing related to adjustment costs in their optimal debt models.

First it could be noted that the results of the dynamic estimation are not surprising, especially when compared to the results of some empirical studies, such as the dynamics of credit and monetary policy transmission in South Africa and in Chile. The estimation of the dynamic model confirms that the supply of credit is explained by the bank size, the bank capitalization, and finally by the joint effects of weighted average rate and the bank balance sheet variables.

In addition, the estimation of the dynamic model shows equally that the supply of credit is positively related to total liabilities. Empirically, this result confirms the theoretical teaching on the nature of the relationship that may exist between the two variables. Indeed, in cyclical downturn, SMES may need to tighten their credit condi-

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tions by increasing their rates or by restricting the amount of appropriations.

An important result deals with balance sheet variables. The positive effect of cash flow on the supply of credit means that a strengthening of cash flow to meet a minimum ratio between capital and risk-weighted assets fund acts positively on the financial structure.

It is appropriate to clarify that different specifications of the dynamic model were tested using different assumptions about the endogeneity of explanatory variables. Only the results for the model that assumes that all variables are endogenous are deferred. It is not surprising that this model is suitable, because all explanatory variables use accounting information and are determined simultaneously.

Another important conclusion can be drawn from our model. The high and significant coefficient at the level of 5% of the lagged variable confirms the existence of adjustment costs on the Casablanca stock exchange. According to different measures used, the adjustment costs vary in an important trend. A comparative analysis of these coefficients with those obtained in other studies must be cautious, but can be instructive. Adjustment costs on the Casablanca stock exchange appear to be very important compared to the Spanish market (0.21) (Pindado 2001), higher than the United States market (0.41) German (0.47) and English (0.45) (Ozkan 2001) and comparable to those of the French market (0.72).

Since it is well known that costs of bank transactions are low, it remains possible that SMES suffer high transaction costs in the event of recourse to the equity market, mainly when they are introduced. In the SME population those that reduced their debts more than the median in this segment, do not suffer from economic adjustment costs higher than those observed for the total population. The transaction costs of the external capital remain high.

And a remarkable feature of the dynamic model relates to the lagged profitability that has a positive and significant sign on the threshold of 5% for the total measure of debt. This measure is significant for the long-term debt and these results confirm the importance of the pecking order behavior on the population in short term.



However, variables of market dynamics often suffer from a lack of significance when alternative measures of debt are retained. The existence of a slow adjustment process, which reduces coefficients, is an explanation for the loss of significance. Wald tests are significant, suggesting that macroeconomic factors affecting the financing of SMES on the Casablanca stock exchange.

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CONCLUSION AND OUTLOOK

This study was conducted to analyze the determinants of the capital structure of a sample of SMES, introduced at the Moroccan market in the light of various financial theories. Estimates, based on a dynamic model confirm that elements of the theory of hierarchical financing (Pecking Order Theory) are empirically present.

The results, explained above, confirm the existence of an adjustment process, but they proved out to be slow. This requires a further prospective analysis of the optimal financial structure of SMES introduced to the Casablanca stock exchange and we propose to assess the possibility of using venture capital as a method of alternative financing for SMES. The idea is to push the reasoning and to present venture capital as the most suitable for SMES carrying innovation projects and acts as a dual catalyst for innovation.

In this regard, it would be convenient to study the relationship between the financial structure and the nature of the assets in terms of financial innovation. It is mainly argued that the more a company has a policy of financial innovation, the more it is likely to use venture capital and to place part of its capital on the financial market. Innovation is understood not only in technology, but also at the managerial level.

REFERENCES

Bhattacharya, S. 1979. 'Imperfect Information, Dividend Policy and the Bird in the Hand Fallacy.' *Bell Journal of Economics* 10 (1): 259–70.

——. 1980. 'Non Dissipative Signaling Structures and Dividend Policy.' Quarterly Journal of Economics 95 (1): 1–24.

Booth, L., V. Aivazian, A. Demirguc-Kunt, and V. Maksimovic. 2001. 'Capital Structures in Developing Countries.' *Journal of Finance* 56 (1): 87–130.

- Cassin, P. 1999. Analyse des données et des panels de données. Bruxelles: De Boeck Universités.
- Jensen, M. C. 1986. 'Agency Costs of Free Cash Flow, Corporate Finance and Takeovers.' *American Economic Review* 76 (2): 323–29.
- Kent Baker, H., and G. S. Martin. 2011. *Capital Structure and Corporate Financing Decision: Theory, Evidence and Practice*. Hoboken, NJ: Wiley.
- Miller, M. H. 1977. 'Debt and Taxes.' *The Journal of Finance* 32 (2): 261–75.
- Miller, M. H., and F. Modigliani. 1961. 'Dividend Policy, Growth, and the Valuation of Shares.' *The Journal of Business* 34 (4): 411–33.
- Miller, M. H., and K. Rock. 1985. 'Dividend Policy under Asymmetric Information.' *Journal of Finance* 40 (4): 1031–51.
- Modigliani, F., and M. H. Miller. 1958. 'The Cost of Capital, Corporation Finance and the Theory of Investment.' *The American Economic Review* 48 (3): 261–97.
- Myers, S. C. 1984. 'The Capital Structure Puzzle.' *Journal of Finance* 39:575–92.
- Myers, S. C., and N. S. Majluf. 1984. 'Corporate Financing and Investment Decisions when Firms Have Information That Investors Do Not Have.' *Journal of Financial Economics* 13:187–221.
- Ozkan, A. 2001. 'Determinants of Capital Structure and Adjustment to Long Run Target: Evidence from UK Company Panel Data.' *Journal of Business Finance and Accounting* 28 (2): 157–98.
- Pindado, J. 2001. 'Determinants of Capital Structure: New Evidence from Spanish Panel Data.' *Journal of Corporate Finance* 7:77-99.
- Rivaud-Danset, D., and R. Salais. 1992. 'Les Conventions de Financement des Entreprises: Premières Approches Théoriques et Empirique.' *Revue Française d'Economie* 7 (4): 81–120.



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