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Does Financial Flexibility Matter for Firm's Finance Policy? Evidence from Swedish High -Tech Firms: Case Study of Ericsson

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Abstract

This paper explores why high-tech firms with high credit quality are more likely to have external finance, and if the securing funding is related to financial flexibility. Many earlier studies have shown that it is valuable for firms to choose financial policies that keep financial flexibility to respond to negative shocks in the form of unexpected periods of insufficient resources. However, the complexity and unpredictability in high-tech business make the flexibility in finance more valuable to face an increasingly unpredictable environment and to grow into a hugely profitable. Degree of financial flexibility has estimated in three different models based on leverage to investigate whether the flexibility degree affects the company's ability and to find out the driving factor in financial flexibility indicators. By using financial data from annual reports of the Swedish multinational networking and telecommunications company "Ericson" during the period 2007 to 2016, the results provide evidence that the high-tech company has a high access to capital markets due to its low leverage and keeping an equity ratio over 45% which supporting the hypothesis that financial flexibility matter and has influence on the firm's ability to get access and restructure its financing.

Keywords: Cash Shortfalls, Debt Capacity, Credit Ratings, Financial Policy, Leverage

Introduction

Financial flexibility has received considerable attention in academic research in recent years. Most senior managers consider financial flexibility as one of the significant factors that influence a company's capital-structure decision (Graham & Harvey, 2001). Byoun (2011) defines financial flexibility as the extent to which a company can mobilize its financial resources in response to uncertain future events. Financial flexibility can explain why companies do not have a capital structure and debt that traditionally could expect from a leverage effect. Most companies strive to maintain financial flexibility to take on additional loans in the future and to improve corporate investment ability (Rapp, Schmid, & Urban, 2014). Clark (2010) further claims that many studies on capital structure - failed to explain financing decisions in practice because they do not take the value of financial flexibility into account. He finds that when the marginal value of financial flexibility is high, the

companies have the capital structure that enables further loan financing. Firms should achieve financial flexibility to keep valuable options to handle future contingencies to provide safe and reliable stores of value. However, financial flexibility can be more important at firms in the high-tech business where they face an increasingly unpredictable environment, to grow and scale into a hugely profitable (Byoun, 2011).

Theoretical Background and Literature Review

According to reviews (Brounen, De Jong, & Koedijk, 2006; Graham & Harvey, 2001), chief financial officers (CFOs) sees financial flexibility as the most significant element on firms' financial strategy decisions. Financial flexibility is capacity to approach and rearrange financing of a firm at a low cost. Therefore, firms with financial flexibility can prevent financial suffering in the face of undesirable shocks, and to willingly fund investment when beneficial opportunities occurred (Gamba & Triantis, 2008).

Since there is no exact measurement for financial flexibility and there are some disagreements about its importance in financial policies, the analysis of the importance of financial flexibility are infrequently conducted (Denis, 2011). Almeida, Campello, and Weisbach (2011) provide an explanation of this dilemma by highlighting the existence of upcoming financing conflicts that will impact firms' upcoming project marginal benefits and costs. They offer a model that suggest financing limitations cause firms to take securer investment with less risk, shorter repayment periods and offer high liquidity.

Following them, Yung, Li, and Jian (2015) compare firm characteristics which clarify that financially flexible firms are more beneficial, have a greater rate of sales growth, capital expenditures, cash holdings and less leverage ratio. They considered cash holdings and leverage as flexibility measures. Their result evidenced that financial flexibility has a positive impact on firm-value. Moreover, the analysis of Arslan-Ayaydin, Florackis, and Ozkan (2014) express that those firms that are financially flexible have superior ability to adopt investment opportunities, require less internal funds and have greater performance during financial crisis. Applying unemployed debt capacity as the measurement of financial flexibility, de Jong, Verbeek, and Verwijmeren (2012) confirmed that financially flexible firms have better upcoming investments in comparison with those with less flexibility.

Moreover, Gamba and Triantis (2008) applied dynamic model and proved that firm's financing and investment decisions rely on the firm's current situation. They showed that the financial flexibility is smaller for mature companies with lesser growth prospects; on the other hand, for fresher ones the premium is higher. Consequently, financial flexibility has the significance impact on capital structure decisions. In the same line, Rapp et al. (2014) state that there are two channels through that make financial flexibility valuable for firms. Those values come from the capability of financial flexibility to solve underinvestment issues and guide to

prevent the financial distress charges. By evaluating the value of financial flexibility, they discovered the important role of financial flexibility for capital structure, payout and liquidity decisions.

Also, it should be considered that the impact of financial flexibility on firm value are diverse depending on present growth state of the companies. Faulkender and Wang (2006) uncovered that the marginal of liquidity is greater for firms with less liquidity, better investment opportunities and greater external financing restrictions.

Byoun (2011) improved and tested the financial flexibility hypothesis in different life stage. This hypothesis said that financial flexibility is required significantly by small emerging firms with criteria: low or negative retained earnings/operating cash-flows, greater cash holdings, no credit rating and no dividend payment. Accordingly, the development stage of financial flexibility will matter more equity and maintain lesser leverage ratios. Generally, their outcome propose that sizable firms seem to offer better fit in striking order theory since they opt to apply internal funds to reserve financial flexibility, while small one will distribute equity and upsurge cash holdings to deal with lack of financial flexibility issue.

In another study, Drobetz, Halling, and Schröder (2015) clarified that levels of determinants of target cash, observed and target cash, the value of cash and adjustment speeds alter across life-cycle of firms. These findings recommend that those in different stages of life cycle have distinctive motives in their cash-policies. Also, it showed that firms in "introduction", "shake-out" and "decline" stages are more pushed by the trade-off objects. Additionally, they investigate the valuation of cash-holdings and uncovered that an extra money in cash extremely valuable for "introduction" and "growth" firms.

Besides, Juliana and Suk (2017) examined the dissimilarities in the value of financial flexibility and capital-structure decision through life cycle stages for US publicly listed firms during 1982-2011. Its outcome proved that the rate of financial flexibility show changing impact towards leverage. Throughout growth and mature phases, the impact of the financial flexibility is meaningfully lessening the leverage, whereas in other phases does not exhibit the same impact.

Following that, considering all firms with credit ratings during 2008-2017, Liu and Shivdasani (2018) discover lower-rated firms preserve considerably greater levels of flexibility, despite having higher debt than higher-rated ones. This study showed that financial flexibility is positively linked with potential leverage modifications. Also, it stated that firms with good-looking investment chances are more probable to arrange their flexibility to escalate leverage. Moreover, flexibility indicated more difference in capital structure choice than current firm-specific factors of capital structure.

Finally, Pendar, Tayar, and Karimeh (2019) investigated the impact of financial flexibility on capital structure decisions on selected firms listed in Tehran Stock Exchange for the period 2006-2018. The finding clarified that

the cash-value of the former years had no significant association with the present year's financial leverage. As the final value of financial flexibility is great, the effect of diverse variables, for instance, depreciation, fixed assets, profits, depreciation costs, etc., on leverage is of little significance, with a minor modification in leverage. Firms with a great ultimate value of financial flexibility are eager to preserve their existing debt capabilities, but it is meaningfully probable that they consider short-term deviations from their leverage-ratios.

As the above studies shows, there is lack of systematic confirmation on how financial flexibility impact capital-structure decisions. This rareness of proof is possibly not unexpected given that financial flexibility is fundamentally challenging to measure.

Actually, the main issue is that some firms do their decisions, irrespective of their forthcoming profitable prospects and debt capacity (Campbell, 1987). The crucial question is whether directors are concentrating on flexibility in their upcoming decisions, and how financial flexibility affect the capital structure decisions? Therefore, the current study inspects the effect of flexibility on capital structure decision-making.

Problem discussion and research issue

The decision to use debt and restructure finance can be problematic to firms because they are committed to a financial obligation that may not be met if there are changes to either the economic environment or the fortunes of the firm. Capital structure and liquidity funds support to create financial flexibility in companies, Donaldson (1994) found that a given financial structure is not static. However, the capital structure is strategically passive, i.e. capital structure is not the target but is an instrument for the company's strategy. Given that the company's overall goals are surviving and generating profits to its owners, capital structure is a means to contribute of creating profitability and firm value. Basically, companies appreciate having access to liquidity and raising capital in order to act. The new debt and equity issuance as well restructuring of financing increase the need of financial flexibility to cope with negative events financial challenges, especially for companies that face instability and high uncertainty besides of changes with unprecedented levels in their business environment.

Research Hypotheses

H1: The degree of financial flexibility based on total interest-bearing liabilities to book value of total assets has positive impact on firm's financial decision.

H2: Financial flexibility based on leverage measured as a ratio of total debt to stockholders' equity (TD/E) has significant impact on variation of firm's financial structure.

H3: Leverage based on the natural log of one plus interest coverage as an indicator of financial flexibility is statistically significant and positively related to firms' capital structure.

Empirical Analysis

This study investigates the influence of financial flexibility on company's financing-structure decisions by using case study approach. Ericsson, is a leading international company in communications technology which provides and competes in a rapidly changing world. The high technology company strives to ensure and enhance its financial flexibility in terms of leverage and cash holdings, that has been successfully issued tow bonds for a principal amount of EUR 500 m with maturing in 2021 and 2024.

In consistency with DeAngelo and DeAngelo (2007) that the firm's desire to maintain financial flexibility is the main key that drives its financial policies, Daniel, Denis and Naveen (2012) argue that debt obligations in the financial structure are considered as a constraint on the firm's ability to maintain its financial flexibility.

The statistical analysis provides evidence that financial flexibility appears to be critical in firms' financial decisions when it is a valuable. avoid *financial* distress in the face of negative shocks Hence, a better test of the relative importance of financial flexibility is to examine how other determinants of leverage change as the value of financial

flexibility increases. The next section develops the research hypotheses and empirically examines how the firm's financial structure influenced by its financial flexibility.

The Leverage Ratio

Leverage is estimated using the ratio of total interest-bearing liabilities to book value of total assets, the ratio of total debt to stockholders' equity and the natural log of one plus interest coverage (EBITA/interest expense) for a time period which makes the distribution more symmetric (Faulkender & Petersen, 2005). The leverage is identified as a tool to maintain financial flexibility. In robustness testing, we used all proxies of leverage.

Table 1. Descriptive analysis of leverage

Leverage measures		Mean	Median	St. Dev	Δ Change in indicator
Leverage_1	The ratio of total interest-bearing liabilities to book value of total assets (TIBL/TA)	0,104	0,108	0,0036	0,119
Leverage_2	The ratio of total debt to stockholders' equity (TD/E)	0,515	0,518	0,006	0,551
Leverage_3	The natural log of one plus interest coverage (Log IC)	1,459	1,185	0,337	4,463

Table 1 reports descriptive statistics on the company's financial leverage and the percentage of change that occurred within ten years (2007-2016). Apparent effect on volatility when leverage₁ change as a result of a change in outstanding total interest-bearing liabilities has a mean of 0,104. The second leverage which is based on the ratio of total debt to equity, the common measure to capture indebtedness, indicates higher debt level in the company and has a mean 51,5%. while the third leverage shows the highest level by 1,459.

Liquidity Measuring

An analysis of a company's short-term assets using the cash flow to measure the ability of company to pay off its short-term financial obligations. the following formulas are applied:

$$\text{Liquidity(cash asset ratio)} = \text{Cash \& cash equivalent} / \text{Average total assets}$$

$$\Delta \text{ in liquidity} = \frac{(\text{Cash assets ratio } t - \text{Cash assets ratio } t - 1)}{\text{Cash assets ratio } t - 1}$$

DeAngelo and DeAngelo (2007) claim that the firm can develop financial flexibility by cash accumulation, but sometimes it may increase agency costs. Although high leverage can reduce agency costs, it may decrease future financial flexibility.

Measuring of Financial Flexibility

Financial flexibility is generally defined as the ability of a firm to access to external capital markets and or restructure its financing at low costs (Gamba & Triantis, 2008). Clark (2010) finds that firms with high financial flexibility have a capital structure that enables to get additional loan financing. While most studies on financial flexibility used a single measure of financial flexibility, we use three alternative measurement depends on leverage.

Table 2. Descriptive analysis of financial flexibility

Financial flexibility measurements		Mean	Median	St. Dev	Δ Change in indicator
FF_1	$\Delta FF1 = \Delta Liquidity - \Delta Leverage_1$	0.1685	0.031	0.851	-1.695
FF_2	$\Delta FF2 = \Delta Liquidity - \Delta Leverage_2$	0.031	0.022	0.108	-1.344
FF_3	$\Delta FF3 = \Delta Liquidity - \Delta Leverage_3$	0.010	0.010	0.105	0.971

If the company follows a cash accumulation strategy to avoid financial shortfalls and to obtain investment opportunities for a longer time rather than keeping debt capacity, the firm's financial flexibility will not be reflected in the measure.

Control Variables

The control variables that have been investigated are cash flows, size and growth.

- **Cash Flows Analysis**

$$\text{Cash flow} = (\text{Net income} + \text{Depreciation}) / \text{Total Assets}$$

The Company defines its managed capital as the total Company equity. For the Company, a robust financial position with a strong equity ratio, investment grade rating, low leverage and ample liquidity is deemed important. This provides financial flexibility and independence to operate and manage variations in working capital needs as well as to capitalize on business opportunities.

- **Size of Firm**

We used the natural logarithm of total assets (Size) as a control variable. Fama & French (1989) and Alnassar & Chin (2017) mentioned that the size of firm is considered as a proxy for risk and thus indirectly effect on the company's funding and on the extent of external financing. Size is measured as the natural log of total asset.

- **Growth of Sales**

Growth may affect firms' access to finance (Mehrotra, Mikkelson, & Partch, 2003). It is measured as percentage change in sales compared with the previous year.

Estimation Results from Regression Model

- **Independent Variable TD/E**

Table 3a reports firm fixed effect regressions with firm debt (total debt to equity) as the dependent variable. Cash flow ratio is net income plus depreciation divided by total assets, size is the log of firm assets. Leverage is the ratio of total interest-bearing liabilities to book value of total assets and financial flexibility is deviations from predicted target leverage. The coefficient for the flexibility variable is positive and significant, indicating that the firm's capital structure is significantly affected by high financial flexibility and relatively low level of total interest-bearing liabilities. Table 3b presents the results for the estimated model and includes both independent variable and variables to control, cash flows, growth of sales and firm size which have an effect on firm's capital structure, about 94% of the changes in capital structure due to changes in the control variables and financial flexibility. According to the table 3c, shows that both the company's capital structure and its financial flexibility which based on the natural log of one plus interest coverage are statistically significant and have the expected signs.

Table (3a) Regression Result on the impact of Financial Flexibility on Capitall structure

Model 1 (leverage_1= TIBL/TA)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
1	.555 ^a	.308	.221	.0571486	0.046
2	.917 ^b	.840	.713	.0347151	

a. Predictors: (Constant), leverage1

b. Predictors: (Constant), leverage1, CF, Sales growth, size

Table (3b) Regression Result on the impact of Financial Flexibility on Capital structure

Model 2 (leverage₂= TD/E)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	sig
1	.619 ^a	.383	.306	.0539450	0.026
2	.971 ^b	.944	.899	.0206088	

a. Predictors: (Constant), leverage2

b. Predictors: (Constant), leverage2, CF, Sales growth, size

Table (3c) Regression Result on the impact of Financial Flexibility on Capital structure

Model 3 (leverage₃= The natural log of one plus interest coverage (Log IC))

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
1	.262 ^a	.069	-.048	.0662977	0.464
2	.926 ^b	.857	.743	.0328039	

a. Predictors: (Constant), leverage3

b. Predictors: (Constant), leverage3, CF, Sales growth, size

- **Dependent Variable TD/TA**

Table 4a reports the effect of financial flexibility on corporate capital structure. The dependent variable for the 2007-2016 period in each of the regressions is total debt to total assets. The independent variable is financial

flexibility which calculates in three different models based on leverage. According to the R-squared Value (29.5%) fall when the dependent variable is TD/TA, whereas the correlation coefficient between two variables financial flexibility and the ratio of total debt to total assets remained almost the same (54.4%) when the dependent variable is TD/E, and they are still statistically significant. This is while changes in leverage and control variables of cash flows, growth of sales and log of total assets have direct significant relationships with firm's capital structure. According to the table 4b, since the R-squared of flexibility value, (35.3%) of the variation of firm's capital structure can be explained by financial flexibility and its significance level is less than 0.05, we conclude that there is a significant relationship between the value of flexibility and the dependent variable.

Table 4c presents the results of estimating static regressions between financial flexibility and capital structure, leverage is the lagged value of the natural log of one plus interest coverage (Log IC). The impact of financial flexibility on the total debt to total assets ratio is low at 6% and significance level is more than 0.05, it can be concluded that there is a significant relationship between the firm's capital structure and the value of flexibility. While the control variables of cash flows, growth of sales and size all have a positive significant relationship with the dependent variable.

Table (4a) Regression Result on the impact of Financial Flexibility on Capital structure

Model 1 (leverage_1= TIBL/TA)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
1	.544a	.295	.207	.0155366	0.022
2	.926b	.857	.742	.0088639	

a. Predictors: (Constant), leverage1

b. Predictors: (Constant), leverage1, CF, Sales growth, Size

Table (4b) Regression Result on the impact of Financial Flexibility on Capital structure

Model 2 (leverage_2= TD/E)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
1	.596a	.355	.275	.0148616	0.049

2	.973b	.947	.905	.0053804	
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a. Predictors: (Constant), leverage2

b. Predictors: (Constant), leverage2, CF, Sales growth, Size

Table (4c) Regression Result on the impact of Financial Flexibility on Capital structure

Model 3 (leverage_3= The natural log of one plus interest coverage (Log IC))

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig
1	.245a	.060	-.057	.0179434	0.180
2	.934b	.873	.771	.0083560	

a. Predictors: (Constant), leverage3

b. Predictors: (Constant), leverage3 CF, Sales growth, Size

Conclusions

Through a case study, the impact of financial flexibility on firm’s capital structure has been investigated during 2007-2016. Financial flexibility value is measured by using three different measurements based on leverage. Ericsson tries to keep a good level of financial flexibility by maintaining low leverage and an equity ratio over 45% during the years that have been studied. In order to enhance its economic performance, create stability and reduce risk, the company sets as a requirement for itself that it should always have own funding of at least 40 percent. The is tested by using three different components of flexibility – The ratio of total interest-bearing liabilities to book value of total assets, the ratio of total debt to stockholders' equity and the natural log of one plus interest coverage.

The results indicate that there is a positive statistically significant correlation between the total debt and financial flexibility, which means that the company has a high access to capital markets. The results also show that the leverage has high effect on the company's capital-structure decision when we take into consideration the control variables, which means that other factors also have a role in obtaining funds from financial markets for companies with high technology. Moreover, maintaining relatively high level of financial flexibility may lead to an increased dependence on debt and equity issuance to capture the potential investment opportunities.

Many earlier literatures have explored financial flexibility from different perspectives within specific areas. Our study, however, is different since it has examined financial flexibility in high-tech firms with different indicators

for leverage and thereby different levels of flexibility that affect financial decision-making. While we find that the high-tech company "Ericsson" strives to maintain appropriate levels of leverage and financial flexibility that lead to access successfully the capital market to meet its financial needs, In contrast, Kokoreva, Anastasia, and Povk (2017) studied high-tech firms' in the US as zero-leverage firms which are much less probable to use debt capital to finance their business. A comparison between zero-leverage companies and levered companies in high-tech industry would be interested to further studies.

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