Real estate finance

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Purpose

A firm can choose among many alternative capital structures and can receive funding to the business through either equity or debt. There are endless alternatives but this report focuses on different debt instruments, as debt is the primary source of funding for Akelius Fastigheter AB.

Introduction to Debt

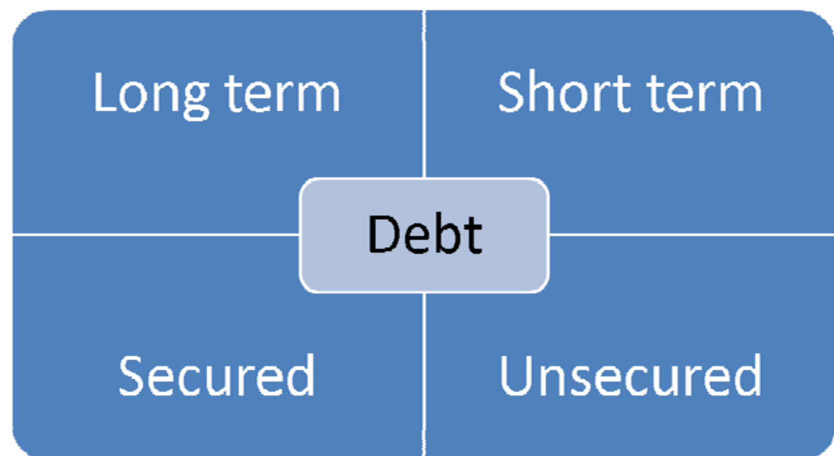
Debt securities are contractual obligations to repay corporate borrowing. *Equity securities* are shares of common stock and preferred stock that represent non contractual claims to the residual cash flow of the firm. [1]

The easiest way to answer why a company uses debt is, that there may not be enough equity to buy the property. On the other hand, the investor may have enough equity but may choose to borrow anyway and use the excess equity to buy other properties and expand the business. Another reason for borrowing is to take advantage of the tax deductibility of the interest. The final reason for using debt is to realise financial leverage. Financial leverage is defined as benefits that may result for an investor who borrows money at a rate of interest lower than the expected rate of return for the funds invested in a property[2].

Debt can be divided into short-term or long-term. Short-term debt is reported in the current liabilities section of the balance sheet i.e. the debt is due within one year. Long-term debt is reported in the long-term liabilities sector and this is loans lasting over one year. Picture 1 presents a framework for debt financing. It depicts debt as being either long-term or short-term and also shows how debt can be either unsecured or secured.

There are two types of collateral for debt i.e. security over a specified asset (e.g. a property) or security over the business as a whole.

[1] Corporate Finance, Ross et al., p. 18
[2] Real Estate Finance and Investments, Brueggeman, et al., p. 354



Picture 1: Debt financing framework

Credit analysis in brief

The banks and investors in bonds basically want to receive interest payments when they are due and to receive the original amount borrowed at maturity with the least risk possible. They will evaluate the firm's ability to pay the interest costs and also evaluate the state and value of the security collateral. It is therefore important for the finance manger to evaluate the creditworthiness of the company. The higher credit rating, the easier and more possibilities there are to raise funds through different financial products.

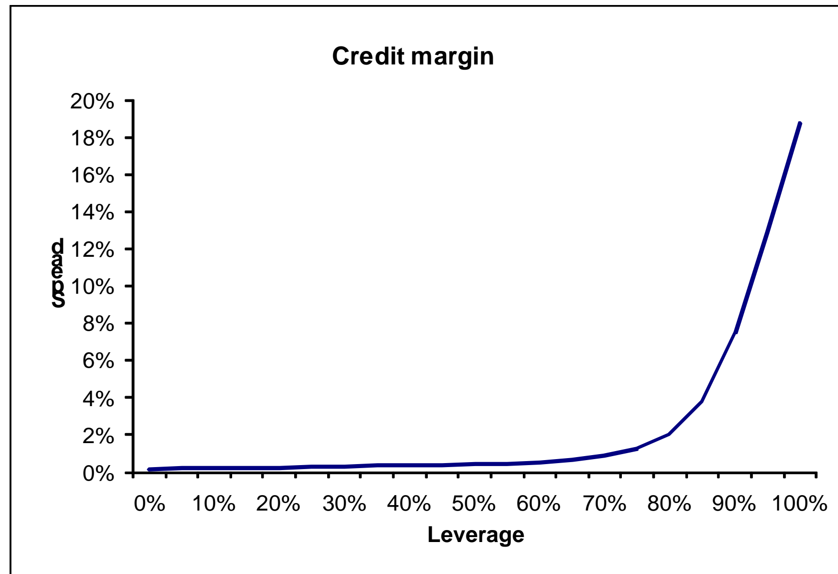
Picture 2: Analysis of debt financing

Picture 2 presents a framework of the analysis when raising capital. As a finance manager you need to know the *capital need* of the firm and then be able to choose the type of debt/funding that makes best sense for the business. If the firm only has a temporary need for funds, you should choose a short term funding. Once you know the capital need of your company you need to evaluate and understand the risk of the business.

Start the *risk analysis* by assessing both the likelihood of default and loss given default. The probability of default is the likelihood that a loan will not be repaid and will fall into default. This failure can occur when the borrower has insufficient earnings, or because the market value of the property falls below

the outstanding mortgage balance, or both.[3] When assessing the probability of default take into account the profitability of the firm and the risk for poorer results in the future. You must analyse the firm's possibility to deal with losses and a slower economy in general. Firms with good liquidity and a low debt ratio have a higher chance to receive a higher credit rating and thereby a lower credit margin.

Picture 3 shows how the spreads for a real estate company changes depending on the leverage ratio.



Picture 3: Relationship between the spread and leverage ratio

A creditor does not only have to figure out the potential borrower's probability of default, the next step is to understand how large the losses will be given default. The loss given default (LGD) is the credit loss incurred if a borrower defaults

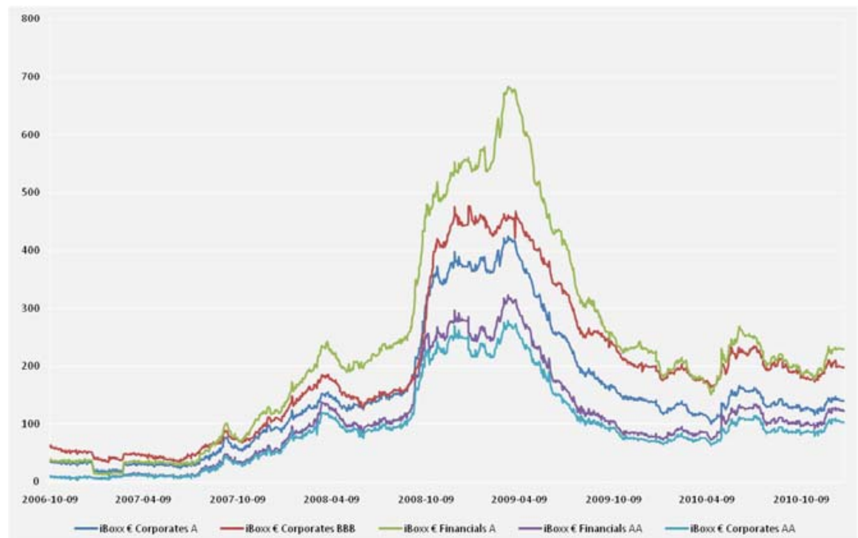
If the probability of default is small, no deeper analysis needs to be made regarding the loss given default. If the probability of default is high, the bank will demand a secured loan and the firm must most likely pledge assets to the bank in order to receive a loan. The pledged assets reduce the loss given default and thus also the credit margin. Real estate companies are less risky given default, as the mortgage can be sold. Another way to limit the risk is to set financial covenants on the loan agreement. A covenant is a set of conditions that may be placed by a lender on a borrower in a loan agreement. By including covenants such as the LTV ratio, the bank reduces its risk and limits the company's possibility to increase the risk at a later stage.

[3] Real Estate Finance and Investments, Brueggeman,et al., p. 214

Example
Real Estate Inc has a moderate probability for default and needs to borrow money for one year. If the company chooses to borrow money without collateral the margin will be two percent. If the company can pledge some of its residential assets as security for the loan the bank's loss given a default will be reduced to almost zero. With security the bank is prepared to lend out money at a margin of 0.5 percent.

Once the probability of default and the loss given default has been estimated, the related credit spread and *valuation of different funding sources* is the final step.
The firm's credit rating has a strong influence on cost of debt and the higher the credit rating, the more possibilities there are to raise debt. For example, if the company does not have a high credit rating, the opportunity to enter the capital market is limited as the company would pay a very high liquidity premium.

Picture 4 shows the spread for European bonds given a certain rating.



Picture 4: Credit spread on European corpiorate bonds given different ratings bonds[4]

Based on the analysis the decision is made to either enter the capital market or to receive bank funding. This decision about which bank to choose is made based on the margins, what kind of property the banks want to finance, market conditions etc. The finance manger needs to consider the credit rating and funding cost from the banks. Savings banks receive the major portion of their funding through deposits from private

[4] Danske Markets Investment Research

individuals. They have a good liquidity and are therefore normally cheaper on short term debt. Mortgage banks can issue long-tem mortgage bonds on the market and are therefore very competitive for long term funding.

Different funding sources

The initial part of this report has provided an overview of the analysis made when raising debt. This second part will focus on different products that can be used when raising funds for the company.

Bank loans

For banks to have funds to lend, they must attract investors in a competitive interest rate environment. They compete against other banks and also against companies that offer other investment vehicles. A Bank's success relies primarily on its ability to generate return in excess of its funding costs. There are different varieties of bank loan and they all differ in one way or the other.

Before a loan is granted by the bank, a credit committee analyzes both the property and the company and then makes a risk assessment. The risk assessment is based on information provided about the company and an appraisal of the property. This analysis is made in the context of a lending policy or guidelines that a particular institution specifies.[5]

The bank typically evaluates the "five Cs"[6]

1. Capital. What is the capital being provided to the Business? Is the bank putting more money in the business than the owner (a sure sign of too much risk for the bank)? Are the debt ratios of the firm in line with similar firms in the industry?
2. Character. Has the firm been able to pay other debts and interests on time? Can the business be trusted to what is says?
3. Collateral. What kind of collateral is place and what is the value of the property?

[5] Real Estate Finance and Investments, Brueggeman,et al., p. 214
[6] Small Firm Finance, an entrepreneurial analysis, Osteryoung et al., p. 259

4. Capacity. Does the firm have the capacity to repay the loan? What does the income statement and pro forma budget state?
5. Conditions. What is the state of the overall economy and the conditions of the branch that the firm is active in. Is the industry growing? Is there too much competition.

Revolving credit facility

Bank loans can be made under a commitment i.e. the firm establishes a line of credit that allows it to borrow up to an established limit from the bank. One common line of credit is the revolving credit line with a fixed maturity. The maturity is normally between one to five years. The revolving credit line allows the firm to borrow, repay and re-borrow as its requirement for cash varies.

With a credit line, it is possible to borrow money for only a day, or a week or even months; and therefore, the credit facility is a necessary tool for the finance manager to perform efficient cash management and only withdraw money when necessary.[7]

A finance manager should try to make sure that the company has unused credit facilities with banks in order to meet short term liquidity movements and be able to react when good investment opportunities occur.

The cost of borrowing under a credit line is not only the interest plus the fixed margin; there is also a commitment fee. The commitment fee is a cost on the unused loan amount.

Mortgage loan

Mortgage loans are one of the most common ways to finance real estate.

A mortgage is a debt instrument that is secured by the collateral of real estate property. When investors need to obtain financing they pledge their ownership of real estate as a condition for obtaining loans. The borrower is obliged to pay back the borrowed amount (called principal) and interest to the lender at due date. The elements essential to the existence of a mortgage are an *obligation* to pay or perform and a *pledge* of property as security for that obligation[8].

In a mortgage loan, where the property is placed as collateral for the loan, the bank also analyzes if the property generates sufficient cash flow to repay the principal and to pay interest. If there is a default, the bank will sell the property and the

[7] Principles of Corporate Finance, Brealey et al., p. 866
[8] Real Estate Finance and Investments, Brueggeman,et al., p.17

proceeds from the sale will be used to repay the loan. That is why the banks make an evaluation of the property and also try to ensure that the property will not lose value.

Banks normally have their own property analysts with expertise in the market. They will perform a market study that includes analysis of the economic base and prospective growth for the city, in which the property lies. The location of the property is a key factor. This is because the bank needs to sell the property if the borrower defaults.
Additional to this market study, a property valuation is carried out. The valuation can either be done by the bank itself or via a third party.
Often, the banks' market valuations and the firm's own internal valuation differ. The reason may be that the bank usually changes some assumptions that are viewed as too aggressive in comparison with their view of the market. In the case of major differences there is a negotiation with the bank where a property value for lending purpose is agreed upon.

Securities

Mortgages are usually more valuable than other types of securities. The value of a mortgage depends on the market value of the underlying property. Because of this, the bank usually requires that the property is properly maintained and insured.[9] As the market value increases, the LTV decreases and you can borrow more money. Banks need to make sure that the collateral is safe and that the borrower does not sell the property that has been placed as a security for the mortgage loan.

Financial covenants

In order to borrow from banks the firm needs to satisfy a number of financial covenants such as maintaining a specific level of cash flow and profitability. The financial covenants are part of the loan agreement.

One of the financial covenants that the banks evaluate before approving a mortgage is the loan to value ratio (LTV). The LTV establishes the borrower's equity and it is the loan amount divided by the market value of the property. The LTV ratio is normally included as a covenant in the loan agreement.

$$\text{LTV ratio} = \frac{\text{Loan amount}}{\text{Market value of the property}}$$

[9] Corporate Finance, Ross et al.,p. 567

Normally, the bank accepts a maximum LTV of 80 percent. Should a borrower default on a loan with an LTV of 80 percent the property serving as a security for the loan would have to decline in value by 20 percent from the date of closing before the outstanding loan balance owed to the borrower would be put at risk.

The second risk assessment ratio used by lenders to limit default risk is the *Debt Service Coverage Ratio* (DSCR). The DSCR is the ratio of the property's net operating income (NOI) divided by the debt services.

$$\text{DSCR} = \frac{\text{Net Operating Income}}{\text{Total Debt Service}}$$

The NOI is defined as the rental income reduced by cash operating expenses. The ratio measures the extent that the NOI from the property is expected to exceed mortgage payments. The lender would like a sufficient safety net so that if the NOI becomes less than anticipated e.g. from unexpected vacancy or decline in the rent, the borrower will still be able to make the mortgage payments. A ratio greater than 1 means that the cash flow from the property is sufficient to cover the mortgage payments. The higher the ratio, the more likely it is that the borrower will be able to meet debt servicing from the property's cash flow.[10]

The banks normally input a DSCR covenant of 1.20 in the loan agreement. In this way, the operating income could decline by as much as 20 percent before the mortgage payments is in danger.

In the event that any of these covenants are not met by the borrower, the lender will usually notify the borrower that he or she is in default, and unless the breach against the covenant is corrected, the lender can withdraw the loan and force the borrower to sell the property.[11]

Protective covenant

A protective covenant limits certain actions of the borrowing firm. Protective covenants can be classified into two types, negative covenants and positive covenants. Negative covenants

[10] Real Estate Finance and Investments, Brueggeman et al., p. 359
[11] Real Estate Finance and Investments, Brueggeman, et al., p. 361

limit or prohibit actions that the company may take. Typical examples of negative covenants are:[12]

- The firm cannot pledge any of its assets to other lenders.
- The firm cannot merge with another firm.
- The firm cannot sell its major pledged assets without approval by the lender.
- The firm cannot issue additional long-term debt.

A positive covenant specifies an action that the company agrees to take or a condition the company must abide by. Here are some examples:[13]

- The company agrees to maintain its DSCR at a minimum level.
- The company agrees to maintain LTV at a minimum level.
- The company must provide periodic financial statement to the lender.
- The company must provide a business plan to the lender.

Covenants are almost always part of the credit agreement. It can be hard to negotiate away the covenants, but in most cases borrower and lender can agree upon covenants that suites both parties.

Public debt market

Corporate debt instruments are issues of debt that are publicly sold by the firm and traded on the financial markets.
The financial markets are composed of the *money market* and the *capital markets*. Money markets are the market for debt securities that will pay off in the short term (usually less than one year).
Capital markets are the markets for long-term debt (with a maturity over one year) and equity shares.
The financial markets can also be classified in *primary market* and *secondary* market. The primary market is used when securities are initially sold. After the debt or equity is initially sold, they are traded in the secondary market e.g. the stock market.[14]

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[12] Corporate Finance, Ross et al., p. 567
[13] Corporate Finance, Ross et al., p. 567
[14] Corporate Finance, Ross et al., p. 18

Corporate debt instruments can be classified as follows: 1) Corporate bonds, 2) Medium Term Notes, 3) Commercial paper. In the following section, these instruments are discussed.

When entering the public debt market it is important to market the name of your company. A stable and good credit rating is absolutely necessary for receiving a good price. It is very important to disclose information about the company and to have an open relationship to the investors. Good reporting is a necessity.

Commercial paper

Commercial paper is a money market instrument i.e. it is a short-term unsecured promissory note that is issued in the public market and that represent the obligation of the issuing company[15].

In order to issue a commercial paper the company needs to achieve a high credit grade. Moody's, Standard and Poor's, and Fitch publish quality ratings for commercial papers. For example, Moody's provides three ratings, from P-1 (that is Prime 1, the highest grade paper) to P-3. Most investors are reluctant to buy low rated papers and therefore the risk premium is higher. Because most investors are reluctant to buy low graded commercial papers, companies cannot rely on the commercial paper market to always provide them with short term capital.[16] Commercial paper should only be an alternative to the existing financing.

The price of the paper is based on the credit rating of the company and since commercial paper is not secured by collateral, only companies with a good credit rating can issue their commercial paper at a reasonable price.
However, as a measure to reduce this risk, issuers generally support their commercial paper by arranging a back up credit facility with a bank, which guarantees that they can find the money to repay the paper. For top tier issuers the credit line is generally 75 % of the amount of the paper. For lower grade issuers it is 100 %. The company may not be able to draw on this line of credit if it does not satisfy bank covenants. Therefore, lower rated companies may back their paper with an irrevocable credit line.[17]
The bank will charge the issuer a commitment fee for proving the credit line, this commitment fee increase the effective cost of issuing commercial papers.

[15] Bond Markets, Analysis, and Strategies, Fabozzi, p. 177
[16] Principle of Corporate Finance, Brealey et al., p. 871
[17] Principle of Corporate Finance, Brealey et al., p. 871

Medium term notes

A medium term note (MTN) is an unsecured corporate debt instrument with duration up to a certain number of years. The debt can mature in less than one year or the loan can be as long as 30 years. The maturity of the debt is stated in the prospect of the program. The notes are continuously offered to investors by an agent of the issuer.

There are two factors affecting the decision of issuing MTNs instead of long term corporate debt. The most important one is the cost of funds after considering the registration and distribution costs. The second is the flexibility in structuring the offering considering terms and documentation.

A corporation that wants to issue a MTN program will file a registration and receive an approval from the Swedish Financial Supervisory Authority (Finansinspektionen). The registration will include a list of investment banking firms, usually two to four, that the corporation has appointed as an agent to distribute the MTNs.

The issuer posts rates over a range of maturities, for example 9 months to 1 year, 1 year to 18 months, 18 months to 2 years, and annually thereafter. Usually an issuer will post rates as a spread over base rate e.g. Stibor 3M. The agent will then make the offering rate schedule available to their investor base interested in MTNs. An investor who is interested in the offer will contact the agent. In turn, the agent contacts the issuer to confirm the terms of the transaction. Because the maturity range in the offered rate schedule does not specify a specific maturity date, the investor can choose the final maturity subject to approval from the issuer.
The rate offering schedule can be changed at any time by the issuer either in response to changing market conditions or because the issuer has raised the desired amount of funds at a give maturity.[18]

The advantage of an MTN program is the flexibility as it gives the issuer a flexibility to choose between fixed-or floating rate debt and what currency the note should be denominated in.
As described above a company tells its dealers the amount of money that it needs to raise, the range of maturities that the company can offer and the maximum interest rate that the company is prepared to pay. It is then up to the dealers to find the buyers. There exist a dialogue between the company and the dealers. If the dealers are not able to find enough investors, the

[18] Bond Markets, Analysis, and Strategies, Fabozzi, p. 174-176

interest rate may be increased. If there is a high demand for the issue, the company may decrease the interest rate offered.[19]

Private placement for corporate bonds

In order to avoid the registration and distributional costs with a MTN program, the lender can find a private placement. Private placed debt is a sale of a bond directly to a limited number of investors. The investors are usually insurance companies and mutual funds. It is similar to a MTN program but the maturity is usually longer.

The interest rate on private placements is usually higher than those on the equivalent public issue. This is because there exists no secondary market where the investor can easily sell the bond. The higher interest rate also reflects the trade off between a higher interest rate and more flexible arrangements in the event of default, as well as lower transaction costs associated with private placements.[20]

Some important differences between long-term private placement financing and public issues are:[21]

1) A direct long-term private placement avoids the cost of registration with the Swedish Financial Supervisory Authority and Exchange commission
2) Direct placement is likely to have more restrictive covenants
3) It is easier to re-negotiate the terms on a private placement in the event of default. It is harder to renegotiate a public issue because hundreds of bondholders are usually involved.
4) Life insurance companies and pension funds dominate the private-placement segment of the bond market.
5) The cost of distribution bonds are lower in the private market

Monitoring the debt portfolio

Once a property portfolio is financed the finance manager follows up the development of the market values of the properties and the capital needs of the company in order to

[19] Principal of Corporate Finance, Brealey et. al, p. 872
[20] Corporate Finance, Ross et al, p. 581
[21] Corporate Finance, Ross et al, p. 581

adjust the mortgages and loans, so that the capital cost and liquidity is optimised. This is carried out regularly when new market values are available. If the firm is in the need of new loans, the mortgage situation is revised in order to see if the LTV in existing portfolios can be increased.

The objectives of the finance department are also to secure a positive cash-flow and to minimise risks. This means minimizing the refinancing-, interest rate,- and liquidity risk. To achieve these goals, restructuring of loans, derivatives and securities has to be carried out continuously.

To reduce the refinancing risk, i.e. the risk that the firm at any occasion may not be able to refinance existing loans on reasonable terms, the company should work with several different banks and also have different maturities on the debt. In order to keep a long term capital hedge, the debt portfolio should continuously be monitored and loans and credit lines should be prolonged before they go to short.

To reduce interest rate risk and variations in cash flow, a company can work with long term interest hedges. The interest rate hedge can be managed through fixed interest rate loans and interest rate swaps

In order to secure the liquidity the finance manager should close long-term credit agreements with different banks and in order to meet short term liquidity changes a revolving credit line should be used.

Reporting

The net operating income of the properties is analysed and reported to the banks normally on a quarterly basis. This also includes the reporting of covenant testing of the LTV and DSCR to the banks according to the loan agreement.

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Appendix 1: Overview of different public debt instruments

Commercial paper	MTN program	Private placement
Connection to Euroclear At least three dealers Time horizon: 1-2 months	Create a prospect for the program Receive approval from the supervisory authority Disclose information about the company At least three dealers Good credit rating	Standardised documentation Normally not listed on the stock exchange limited number of investors Usually short maturities
COST Agent provision 80,000 SEK Marketing costs Registration cost for the stock exchange Yearly fees IPA fee 40,000 SEK Variable IPA fee 400 SEK /transaction Fixed fee, 40,000 SEK /dealer Variable provision, normally 2bp Cost of Back up facility with Bank	**COST** Agent provision 80,001 SEK Marketing Registration cost for the stock exchange Prospect 75,000 SEK Listing on the OMX stock market, SEK 10,00 (+8000 per loan/maximum 20,000) Prospect to the supervisory authority, SEK 26,500	**COST**