

Analysis of financial opportunities

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Abstract: We will start with an analysis structure that defines the key areas in which long-term funding sources will be analyzed and attracted. We will then look at the techniques for calculating the impact on the company's financial performance caused by the introduction of new capital from each of the major sources. We will turn to the often used form of graphing, EBIT (break before interest and tax) break-even chart to demonstrate the dynamic impact of financial choices, which changes the company's situation. Once we touch the leases as a special source, we will list the key issues involved in the stock options.

Keywords: analysis structure, company's financial, dynamic impact

We will focus on analyzing the opportunities available in long-term funding, distinguished from the partial operational funds that are used fairly often by companies in line with the customs of an industry or service. The focus is on this because the nature and nature of long-term funding sources are complexly related to the types of investments made and is critical to the growth, stability or decline of operations. The management must finance its strategic project with a suitable mix of capital sources that will contribute to achieving the desired growth in shareholder value.

This article will deal with the main considerations in assessing key funding opportunities open to management. Although the choice between debt, preference and total capital is blurred by the vast array of modifications and specialized tools in each category, we will focus only on the main features of the three major securities. As long as the emphasis falls on quantitative analysis, you have to understand that many other meanings go into these choices. For example, the specific types of business and industry in which it operates will affect in the long run the capital structure chosen at different stages of the development of a company, as well as the preferences and experience of top management and that of the board of directors. These aspects, however, can not be adequately covered within this article.

We will start with an analysis structure that defines the key areas in which long-term funding sources will be analyzed and attracted. We will then look at the techniques for calculating the impact on the company's financial performance caused by the introduction of new capital from each of the major sources. We will turn to the often-used form of graphing, EBIT (break before interest and tax) break-even chart to demonstrate the dynamic impact of financial choices, which changes the company's situation. Once we touch the lease as a special source, we will list the key issues involved in stock options.

Analysis structure

Several key elements need to be considered and touched. when a company faces the rising additional long-term funds. We will examine in detail five of these elements: price, exposure, flexibility, synchronization and control. The analyst can use this structure as a conceptual list to ensure that the most important considerations are covered.

Cost of additional funds

One of the main criteria for choosing from additional sources of additional long-term capital is the price included for the acquisition and maintenance of the funds.

As a general rule we assume that the increased means through various forms of debt in part are cheaper under certain conditions because the interest paid by the borrowing company is tax deductible according to the laws. The real interest rate charged on the growing loan will, of course, depend on the credit rating of the company and the degree of change in the capital structure of the new debt. In other words, specific costs will be affected not only by the current market conditions for all long-term debt instruments but also by the company-specific risk assumed by investors and insurers. Other costs in increasing long-term debt are indirect, including

legal and insurance costs at the time of issue, as well as the nature and severity of any limitation imposed by creditors.

The reported costs of preferred shares are usually higher than the loan, partly because the paid preference dividends do not deduct the tax, and partly because the preferred shares occupy to some extent a weaker risk / profit hierarchy so that the holders of those shares expect and more reward. The comparative specific expense of the preferred shares is relatively easy to calculate. The level of dividend is clearly defined, legal and insurance costs arise at the time of issue and are reflected in the company's net income. However, a variety of specific reserves may cause indirect cost to the company.

Even if loans or preferred shares are used as a source of long-term funding, current shareholders may be affected indirectly because restrictive provisions and agreements are necessary to obtain a financial link, or because concessions are made to protect the rights of more senior privileged shareholders. Property ownership is an important issue in closely related corporations, especially in new risky endeavors. In certain situations, the founders of the company or the majority shareholders can exercise full effective control over the company. Issuance of new shares will be diluted both as control over the management of the company and the ability of key shareholders to enjoy a greater share of the appreciation of economic value upon successful performance. The dilution of revenue and the possible slowdown in share earnings growth caused by dilution of total equity ownership is not limited, of course, only to closely related companies. Rather, this is a common phenomenon.

Dilution of control and profit is a major factor in convertibility, the common feature we find in certain bonds and preferred shares. This provision allows conversion of security into ordinary shares under certain time and cost conditions. Indeed, these instruments are hybrid securities as they represent the delayed issue of ordinary shares at a price higher than the market value of the ordinary shares at the time the convertible bond or preferred share is issued.

Control becomes a major problem in convertible-funded operations because the possible conversion of bonds or preference shares will add new ordinary shares to the capital structure and thus lead to dilution. The effect is just like direct issuance of ordinary shares.

The choice

Any solution for alternative sources of long-term financing can not be based on value alone, although there are future stock flows and investment models with the pattern of successive funding rounds that will support them. Having future funds limited to one option because of current commitments is an additional problem. Changing financial market conditions for different types of securities can make this single option less attractive and even impossible when the funds are crucial.

Choosing the right time

The fourth element in choosing long-term funding is the time of the deal. Time is very important in terms of price and yield movements in the securities markets. The changing conditions in these markets reflect the specific costs that the firm will incur with each option in terms of interest rates or the amount of the preferred dividend transferred from the new debt or preferred shares and receive the proceeds from each of the alternatives. Therefore, the emission time will affect the spread of costs between several funding alternatives. From time to time, market conditions may in fact either exclude or clearly prefer specific choices.

For example, at low stock prices, bonds may be the most appropriate alternative, both in terms of costs and market demand. Since the proceeds of any of the issues depend on the success of the investment - whether public or private - of the securities, the conditions of the stock markets or bonds at the time may seriously influence the choice. Due to the uncertainty of the financial markets, maintaining a certain degree of flexibility in the capital structure is advisable.

Control

Finally, in terms of funding, the degree of company control exercised by shareholders is an important factor. As it is known, when new ordinary shares are issued to other people, the effect is a dilution of the profit from the shares and the ownership share of the existing shareholders.

Determining the price of ordinary shares turns out to be a relatively complex task. It involves building a theoretical framework in which to assess the risk / gain expectations of shareholders. Direct earnings have deficiencies as a measure of the specific cost of ordinary shares because they do not address the relative risk of the firm reflected in the value of ordinary shares. For this reason, we had to use a more complex structure that includes some substitutes and approximate sums to arrive at a practical result based on the theoretical model.

The approximate cost of ordinary equity based on the CAPM approach can be directly compared to specific debt charges and preferred shares, it can also be used to reach the weighted total cost of the company's capital structure. The increase of the basic own funds in the capital structure by issuance of new shares includes additional considerations. The net earnings per share of the additional shares requires additional and even

increasing dividends for payment and also changes the proportions of the capital structure.

Exposure to risk

Using volatility in earnings as a working definition of risk, we find that the risk of the company is affected by the specific spending pledges - such as interest on loans or dividends on preferred shares - that every funding source is connected. These engagements bring the leverage's financial effect into company revenue productivity or raise any financial leverage that already exists. The use of tools related to long-term financial costs will widen the revenue flow as a change in economic and operating conditions.

Being responsible for providing holders of ordinary shares increasing economic value, management must devote a lot of time and effort in determining the appropriate mix of debt capital and equity capital structure of their company. This balance includes the provision of a loan with relatively low costs increase the return to shareholders, but not too many loans that threaten the generation of value to shareholders during periods with low incomes.

The main risk, of course, is that the company may not be able to meet its debt repayment obligations. The portion of the debt in the capital structure as well as the portion of the preferred shares reflects the degree of risk of partial or total default. The analysis of risk exposure is based on the creation of a historical model of profitability variability and cash flows that are expected to be future. Account must be taken of the extent to which the company's strategy changes. Any change in the exposure of the business cycle displaces the competitive pressure and the potential inefficiency in operation.

Obviously, the company's specific risk (profitability variability) and the ability of the company to service its debt burden are closely related to the business or business specifics of the company. Moreover, they are affected by general economic conditions - in addition to the ability of management to generate satisfactory operational performance. Therefore, the degree of financial leverage would be advisable and reasonable to differ significantly across industries and services, and will also depend on the relative competitive position and maturity of the firm. A business that has just started business leads to a completely different exposure to the lender than a proven industry leader.

Flexibility

The third area to be taken into account is the flexibility defined as the scope of other future funding opportunities as soon as a specific alternative is chosen. When any increase in funding is completed, the choices between future alternatives should be more limited in the next round. For example, if long-term debt securities are selected as a source of funding, restrictive clauses, asset weights and other constraints that impose minimum financial ratios, the company may only use ordinary shares as a future source of capital for a known time.

Flexibility essentially involves planning for the future. Strategic planning and coinciding corporate financial policies need to be addressed. Potential acquisitions, expansion and diversification are all affected by the degree of flexibility of management in the choice of appropriate funding and the outflow of debt resulting from the debt service commitment. As far as possible, management should combine value planning, which is a very important factor and should be analyzed at an earlier stage in the decision-making process. Unfortunately, there are no precise and clear rules that make it clear and clear how to make the final decision, as the choice is not so dependent on the circumstances prevailing in the company and in the securities markets at the time. The best approach is to look carefully at the five elements we examined and explore the pros and cons of each of them in terms of their contribution to the solution. Needless to say, the effect of each source of funding on the company's future results is very important. In the next section we will explore the methods for calculating this effect.

Calculation techniques

To get a clearer picture, we will use the main accounts of a hypothetical company - ABC. The company is drawing on alternative ways to raise \$ 10 million to support the introduction of a new product. After analyzing the current performance of the corporation, we will consistently look at the impact of productivity caused by the introduction of long-term debt, preferred shares and total capital in equal installments of \$ 10 million each.

Table 1.

ABC Accounting Balance (\$ million)			
Assets		Liabilities and net worth	
Current assets	15\$	Current liabilities	7\$
Fixed assets (net)	29\$	Common stock	10\$
Other assets	1\$	Retainet earnings	28\$
Total assets	45\$	Total liabilities and net worth	45\$

ABC abbreviated balance is shown in Table 1. At present, the company has 1 million ordinary shares issued with a face value of \$ 10 per share. From the company's operating report, we learned that ABC has earned \$ 9 million before taxes on sales worth \$ 115 million over the past year. Income taxes are paid at \$ 3.06 million and the effective rate is 34%.

Current performance

We will start by evaluating ABC current performance by calculating the net EPS per share of ordinary shares. We will use this format to calculate EPS and related measures. This type of step-by-step approach analyzes the impact on the income of each type of long-term capital. First of all, we declare profit before interest and taxes (EBIT). From this table you have to deduct different fees for the various long-term financing instruments. The first of these is accrued interest on a long-term loan. Short-term interest rates can usually be disregarded (unless there are significant amounts) because we assume that because of the temporary nature of short-term liabilities arising from current operations, the related interest charges have been correctly deducted from earnings prior to EBIT calculation.

Table 2.

ABC earnings per share - calculation (\$, thousands, excluding share amount)

Earnings before interest and taxes (EBIT)	9,000
Less: Interest charges on long-term debt	-0-
Earnings before income taxes	9,000
Less: Federal income taxes at 34%	3,060
Earnings after income taxes	5,940
Less: Privileged dividends	-0-
Earnings available for common stock	5,940

Estimates of earnings per share are shown in Table 2. Provisions are made for both long-term interest and preferred dividends. No amounts have yet been shown for them, as our hypothetical firm at this point has neither long-term debt nor preferred shares. The result of the earnings calculation is available for ordinary shares at \$ 5.94 per share. Of this amount, \$ 2.5 is deducted as it represents a cash dividend voted by the board of directors. We assume that this dividend payout (between 40% and 50% of earnings) is maintained for many years. We also assume that revenue steadily increases by about 4% on average over the last decade.

Shares are widespread and are being traded and the market price is currently around \$ 38 to \$ 47, which means it is traded for about seven to eight times revenue. The latest security analyst report estimates $b = 0.9$ and the risk-free rate of return is estimated at 6.5% and the average expected return is S & P 500 and is expected to be 14.0%.

Table 3.

Long-term liabilities in the capital structure

Common shares outstanding (number)	1 million
Earnings per share (EPS)	5.94
Less: Common dividend per share	2.50
Retained earnings per share	3.44
Retained earnings in total	3,440

When the liability arises in that structure, the financial position and productivity of ABC profits are significantly affected. In order to raise the \$ 10 million needed to finance the new product, management has found that one of the alternatives is to issue bonds. The bonds are not backed by any specific assets of the company; instead they are issued to cover the company's total credit rating. These bonds, at current market conditions, bear an interest rate of 11.5%, which becomes due 20 years from the date of issue, resulting in a provision for a repayment fund of \$ 400,000 per year starting in the fifth year. The remaining balance at the end of 20 years will be refunded as a payment of \$ 4 million. The company expects to collect the full \$ 10 million of bond issues after all the insurance costs and as a result will receive the face value. Once the new product has been successfully funded, the company assumes that revenue will grow by at least \$ 2.0 million before tax. A small risk of obsolescence of products or major competitive attacks is expected by the management for the next 5 to 10 years because the company has developed a unique process protected by careful patent coverage.

We can now track the impact of the long-term loan on the company's performance, respecting both the change in earnings and dividends and the specific value of the newly created debt. We will analyze two opposite situations, (1) the immediate impact of \$ 10 million of debt without compensation from the new product, and (2) the improved conditions expected after the investment has begun to function and the new product has begun generating revenue probably after one year).

Table 4.

ABC earnings per share - calculation with new bond issue (\$, thousands, excluding share amount)

	Before the new product	With new product
Earnings before interest and taxes (EBIT)	9000	11000
Less: Interest charges on long-term debt	1150	1150
Earnings before income taxes	7850	9850
Less: Federal income taxes at 34%	2669	3349
Earnings after income taxes	5181	6501
Less: Privileged dividends	-0-	-0-
Earnings available for common stock	5181	6501
Common shares outstanding (number)	1 million	1 million
Earnings per share (EPS)	5.18	6.50
Less: Common dividend per share	2.50	2.50
Retained earnings per share	2.68	4.00
Retained earnings in total	2681	4001
Original EPS (Table 2)	5.94	5.94
Change in EPS	-0.76	+0.56
Percent change in EPS	-12.8%	+9.4%

The result of two calculations is shown in Table 3. The immediate effect of the addition of the debt is the decrease in revenue available for ordinary shares. This is due to a set interest rate of 11.5% to \$ 10 million on bonds or \$ 1150,000 before taxes. Profit after interest and taxes falls to \$ 759,000 compared to the initial conditions in Table 2. This decrease represents post-tax interest costs for the bonds or \$ 1 150,000 times (1 - 0.34). As a result, earnings per share are reduced to \$ 5.18, falling by 76 cents, or a 12.8% dilution from the previous level. This change is purely due to the increased interest costs, which, based on one share of the same 76 cents, is the post-tax rate of \$ 759,000 divided into 1 million shares.

Assuming that the effective tax rate is 34% in our case, the ABC debt should be 7.59%. Specific annual debt expenditures were found by referring the reported annual costs to the actual receipts received. If this revenue differs from the nominal value of the debt instrument, the specific annual debt price will of course be higher or lower than the specified rate. In the case of ABC, we have assumed that net cash flows are practically nominal and therefore the specific value of a new loan for ABC is also 7.59%, a table that will be compared to the specific value of the other alternatives for raising capital. As for the second column of Table 3, we find that the alleged successful introduction of the new product will compensate ABC for the impact on earnings on interest payments on bonds. In other words, the investment project has earned more than the specific value of the loan drawn to fund it. Revenue increased to \$ 6,501,000 after tax, net increase of \$ 561,000 compared to initial \$ 5,940,000 in Table 2. As a result, net profit per share increased by 56 cents over the initial \$ 5.94, an increase of almost 10%.

The total value for post-tax borrowers is 759,000, and the new investment is expected to raise earnings from ordinary shares. Additional revenue of \$ 1,320,000 (\$ 2,000,000 pre-tax revenue, less tax at 34%) significantly exceeds service costs of \$ 759,000. Consequently, the investment - if ABC assumptions of revenue prove realistic - it means that it has made it possible to increase the economic value. In the end, the financial leverage introduced with the debt alternative is positive. Still, a few questions can be asked. For example, suppose the investment has earned only \$ 759,000 after taxes, just to cover debt costs and maintain the position of shareholders, just as before in terms of net earnings per share. Would the investment be justified? Does this mean that the investment is made without cost to the shareholders?

At first glance, we can believe in this, but a number of issues need to be addressed here. First of all, there is no mention of the liabilities to the depreciation fund that will last for five years in this way, and that they represent cash costs of \$ 400,000 per year. Such principal payments are not deducted from taxes and must be

paid out of post-tax cash flows generated by the company. In this way, debt servicing (coverage of the burden) will require 40 cents per share, which exceeds the cost of the interest rate of 76 cents per share, making a total of \$ 1.16 per share. \$ 400,000 will no longer be available for dividends or other corporate purposes because it is already a commitment to repay the principal. Assuming that the return on the investment is exactly equal to the debt interest expense, how would the company repay the principal?

There is an obvious delusion in this line of thought. This is due to the use of accounting revenue to represent the benefits of the project and to compare it with the after tax cost of the borrowed capital used to finance it. This is not a proper economic comparison. Only a time-adjusted cash flow analysis can determine the economic costs / benefits of the exchange. We could say that the project is just about getting the specific value of the debt-related capital only if the net present value of the project was exactly zero when we reduced the additional annual cash flow to 7.59%.

This result would then represent an internal rate of return of 7.59%, the level of economic performance that would hardly be acceptable for management. But even under this condition, project cash flows (as opposed to accounting profit in the activity report) should be higher than \$ 759,000, since only the interest on the bonds should be paid out of tax revenue. This must be because, within the present value of the investment analysis, the additional cash flows associated with the project must be sufficient not only to ensure a certain return but also to depreciate the investment itself.

Let's now go back to the purpose of the framework we use here. The purpose of the analysis is not to judge, the attractiveness of the investment - we assume that this has already been adequately done by the management. Instead, we are only interested in what alternative form of financing is best for the company under the circumstances. In this context, the impact of each of the alternatives on the company's profit is only one aspect of the decision on new financing.

In the case of a loan that is an alternative, under normal conditions, at the lowest price, the effect of financial leverage is expected in favor of the shareholder. When a project is selected, it has to meet a Standard Return based on approximately the cost of capital - a return that far exceeds the cost of borrowed capital.

The introduction of debt immediately trivializes the profit of the share, but this is followed by a jump in earnings per share, as described, the project's accounting revenue exceeds the interest rate reflected in the company's income statement. The company must be able to make future payments on the amortization fund in terms of monetary planning because, starting in the fifth year, 40 cents per share of the company's cash flows will be disbursed on an annual basis to repay the principal.

In principle, it is useful to look at the consequences of these facts under different conditions, ie. the risk of revenue fluctuations, both in the core business and in the contribution of the single profits of the new product, which is considered to be successful at all times. But we will consider these changes later.

Preferred Shares and Capital Structure

ABC may also meet its long-term financial needs with the alternative issue of \$ 10 million preferred shares, at a price of \$ 100 per share, which holds a constant dividend rate of 12.5%. For simplicity, we will assume again that the net revenue of the company will be equal to the nominal price of \$ 100, after the legal and insurance costs incurred. Table 4 analyzes the conditions before and after the introduction of the new product design.

Table 5.

ABC earnings per share calculation with a new issue of preferred shares (\$, thousands, excluding share amount)

	Before the new product	With new product
Earnings before interest and taxes (EBIT)	9000	11000
Less: Interest charges on long-term debt	-0-	-0-
Earnings before income taxes	9000	11000
Less: Federal income taxes at 34%	3060	3740
Earnings after income taxes	5940	7260
Less: Privileged dividends	1250	1250
Earnings available for common stock	4690	6010
Common shares outstanding (number)	1 million	1 million
Earnings per share (EPS)	4.69	6.01
Less: Common dividend per share	2.50	2.50
Retained earnings per share	2.19	3.51
Retained earnings in total	2190	3510
Original EPS (Table 2)	5.94	5.94
Change in EPS	-1.25	+0.07
Percent change in EPS	-21.0%	+1.2%

This time, there is a stronger initial drop in profits from available ordinary shares, due to the impact of preferred dividends of \$ 1.25 million a year. Not only fixed costs (as well as the specific cost, given that net returns are at par value) of the preferred shares are higher than a full percentage of the 11.5% of the declared bonds, but also the dividend payments preference shares are not deducted from taxes under current law. In fact, we are dealing with an alternative that costs, under comparable conditions, 12.5% after tax, compared to bonds that are 7.59% after taxes.

Therefore, the immediate dilution of preferential emission earnings is \$ 1.25 per share or 21% compared to the original state. Over time, as revenue from the new product has been achieved, it is possible to see a possible increase in net profit per share of only 7 cents, a slight improvement of 1.2%. The \$ 1.25 million annual post-tax debt obligation leaves little room for any net profit in the income statement generated by the investment - which we know is estimated to be \$ 2.0 million before tax and \$ 1320,000 after tax .

In this situation, under the assumed conditions, we allow for a very limited financial leverage. Only slightly more than 1% growth in earnings per share has been achieved since the beginning of the year, as fixed financial costs after tax have almost doubled compared to the bond alternative. Earnings per share will be unchanged if the product is realized at a minimum profit that represents the preferential dividend price before tax:

$$\frac{\$ 1\,250\,000}{(1 - .34)} = \$ 1\,894\,000$$

At this point, the increased revenue from the new product will only compensate for the increased financing costs - a break-even situation. Bearing in mind that the requirement for a significant profit of nearly \$ 1.9 million is two-thirds more than \$ 1,100,000 before interest-rate taxes on the bond alternative.

Ordinary shares and capital structure

When ABC considers the new issue of ordinary shares as the third option to raise the \$ 10 million needed, the impact on their earnings is even worse. Suppose ABC will issue 275,000 new shares at a net price of \$ 36.36 after legal and insurance costs. Such a reduction of the current market price, which is \$ 40, must ensure successful emissions trading. The number of shares traded in this way will increase by 27.5% for the current 1 million shares.

Table 6.

ABC earnings per share with new common stock issue (\$, thousands, except per share figures)

	Before	After
Earnings before interest and taxes (EBIT)	9000	11000
Less: Interest charges on long-term debt	-0-	-0-
Earnings before income taxes	9000	11000
Less: Federal income taxes at 34%	3060	3740
Earnings after income taxes	5940	7260
Less: Privileged dividends	-0-	-0-
Earnings available for common stock	5940	7260
Common shares outstanding (number) in millions	1.275	1.275
Earnings per share (EPS)	4.69	5.69
Less: Common dividend per share	2.50	2.50
Retained earnings per share	2.19	3.19
Retained earnings in total	2752	4072
Original EPS (Figur 2)	5.94	5.94
Change in EPS	-1.28	-0.25
Percent change in EPS	-21.5%	-4.2%

Table 5 shows the impact on revenue in the same way it shows it for the other two alternatives.

We see that immediate dilution is \$ 1.28 per share, which is a drop of 21.5%, which in turn has the strongest impact from the three analyzed alternatives. Ordinary shares in terms of this comparison are the most expensive form of capital - even if only because they lead to immediate dilution of the current shareholders' profits. In addition, there will be an annual cash outflow of at least \$ 687,500 of post-tax revenue generated by

215,000 new shares if the current \$ 2.50 annual dividend associated with ordinary shares is maintained.

In addition, we can predict that this money drain can grow at a rate of growth of 4% per year. This assumption will be made if directors continue with their policy of declaring regular cash dividends with a constant rate of disbursement from future earnings, which in turn continued to grow.

So far, pretax revenue is required to cover the dividend of \$ 2.50 per share

$$\begin{aligned} \$2.50 \times 275\,000 \text{ shares} &= \$687\,500 \text{ (after taxes)} \\ \frac{\$687\,500}{(1 - .34)} &= \$1\,042\,000 \text{ (before taxes)} \end{aligned}$$

We can directly compare these earnings requirements of about \$ 1.0 million with the \$ 1,350 billion bond requirements and the \$ 1,894 million preferred stock requirements. Both in terms of earnings and money planning, these amounts are very significant.

The effect of immediate income dilution is only part of the remuneration. There will also be a secondary effect of continuing dilution because, unlike the other two types of capital, newly created ordinary shares represent a current requirement for corporate profits to be on a par with those of existing shares. In this way, with our experience so far, the growth rates of earnings per share will slow down and in the future most of the shares will be outstanding - unless the income derived from the investment is at a better level of the potential growth of the existing profit rate. Turning to the second column of table 5 it is clear that, despite the extra revenue from the new product, net dividend dilution of 25 cents (4.2%) will actually continue. The contribution of the new product to the reported earnings is not sufficient to meet the demands of the new shareholders and maintain the level of the old value of the share. The impact on the incomes of an alternative to ordinary shares is greater than the revenue generated by borrowed capital.

So far, we have looked at the impact of ordinary shares on income financing. In order to find roughly the approximate sum of the specific value of the alternative, we can establish as a minimum condition the maintenance of the level of the old earnings per share. The current EPS, which is \$ 5.94 (Table 2) and \$ 36.36 in revenue, results in a price of about 16%.

$$\frac{\$5.94}{\$36.36} = 16.34\% \text{ (after taxes)}$$

We know that the revenue approach to measuring the price of ordinary shares is, for many reasons, quite limited, even if it is assumed in the formula for the expected revenue growth. If we use the dividend approach to find the specific price of an ordinary share, we must match the current dividend per share to the net result and add the future dividend growth. We know that the company has an approximately constant revenue growth of 4% a year and we assume that with a constant payout rate, the ordinary dividend will continue to grow at the same rate. The result is about 11%:

$$\frac{\$2.50}{36.36} + 4.0 = 10.9\%$$

We will use the data from a while ago to test the specific cost of capital from ABC's ordinary shares with the CAPM approach.

The value of the ordinary shares, K_e , is approximately 13.25% when placed in a CAPM formula without risky return, R_f is 6.5%, β is 0.9%, the expected average return R_m represented by the S & P 500 is approximately 14%:

$$K_e = R_f + \beta(R_m - R_f) = 6.5 + 0.9(14.0 - 6.5) = 13.25\%$$

This result is one of the most reliable for judging the specific price of ordinary shares. It can be compared with the specific value of the bonds (7.56%) and the specific value of the preferred shares (12.5%).

Obviously, the alternative to ordinary shares is the most expensive source of funding, and just as we have already found that the dilution effect is very serious. In addition, the cash flow requirements for paying the current dividend of \$ 2.50 per share, plus any possible future increases in the total dividend, should be planned. Because it is difficult to maintain all these quantitative aspects visible in our debates, let's now turn to graphical representation of the various incomes and dilutions to compare the relative state of the three alternatives.

Ebit break-even chart

We have affected several times the changes in companies' profits and the different influence of the three major financial alternatives under changing conditions. The static form of analysis we have used so far does not allow us to readily explore the range of opportunities such as profit change or to visualize the sensitivity of alternative sources of funding related to these changes. It would be difficult to calculate earnings per share and other data for a large part of the different profit levels. Instead, we can use the linear relationships that exist between the quantified factors analyzed.

The graphical approach break-even "analysis can be used to compare alternative sources of funding. This

part will show you how such a model that corresponds to fluctuations in EBIT (earnings before interest and taxes) and to have resulted in levels of EPS (earnings per share), can be used to illustrate the most important for us and quantitative aspects relative attractiveness of possible options. As we will see, "break-even" model allows us to easily expose a variety of analytical tests.

To begin with, we have summarized the ABC data in Table 6. Variations of this data can be plotted in a simple "break-even" graphic that shows EPS of the vertical axis and EBIT of the horizontal axis. This EBIT graph allows us to draw straight lines for all EPS alternatives under the influence of changing conditions and to find BEP ("break even") between them. every straight line with the horizontal axis, which is exactly the point where EPS is 0. These points can easily be found by performing EPS calculations on the back starting with the assumption that $EPS = 0$ and finding the corresponding EBIT under this condition. Calculation is shown in Table 7 for Initial th position for each of the three alternatives. Calculations of Tables 6 and 7 give us enough points through which to draw a linear function of the EPS and EBIT for a variety of alternatives (Table 8).

We can quickly note that the conclusion about the impact of profits from the alternatives we drew at the two EBIT levels already analyzed, \$ 9 million and \$ 11 million, retains the relatively wide variety of profits shown; any shown alternative causes a significant reduction in EPS relative to the original conditions.

Table 7.

ABC Summary of new product EPS analysis (\$ thousand, except for figures per share)

	Oridginal	Debt	Preferred	Common
EBIT	\$9,000	\$11,000	\$11,000	\$11,000
Less: interest	-0-	1,150	-0-	-0-
Earnings before taxes	9,000	9,850	11,000	11,000
Less: Taxes at 34%	3,060	4349	3,740	3,740
Earnings after taxes	5,940	6,1501	7,260	7,260
Less: Preferred dividends	-0-	-0-	1,250	-0-
Earnings available for common stock	\$5,940	\$6,501	\$6,010	\$7,260
Common shares outstanding (number)	1 million	1 million	1 million	1.275 million
EPS	\$5.94	\$6.50	\$6.01	\$5.69
Less: Common dividends	2.50	2.50	2.50	2.50
Retained earnings	\$3.44	\$4.00	\$3.51	\$3.19
Retained earnings in total	\$3,440	\$4,001	\$3,510	\$4,072
Oridginal EPS change		-12.8%	-21.0%	-21.5%
Final EPS change		+9.4%	+1.2%	-4.2%
Specific cost		7.59%	12.5%	13.25%

Table 8.

ABC Calculations at $EPS = 0$ (\$ thousands, except for figures per share)

	Oridginal	Debt	Preferred	Common
EPS	-0-	-0-	-0-	-0-
Common share	1 million	1 million	1 million	1.275 million
Earning to common	-0-	-0-	-0-	-0-
Preferred dividends	-0-	-0-	\$1,250	-0-
Earnings after taxes	-0-	-0-	1,250	-0-
Taxes at 34%	-0-	-0-	644	-0-
Earnings before taxes	-0-	-0-	1,894	-0-
Interest	-0-	\$1,150	-0-	-0-
EBIT or $EPS=0$	-0-	\$1,150	\$1,894	-0-

With the usual alternatives available, the slope of EPS is different. In fact, the rights of ordinary shares intersect debt and preferential shares. Then the two lines are parallel to each other, but also with EPS in the original condition (it is on the left of them). The smaller slope of ordinary shares rights is easily explained. Introducing new shares in ordinary shares results in a proportional dilution of earnings per share at all levels of EBIT. The consequence is that additional shares cause a slower increase in earnings per share with growth in EBIT.

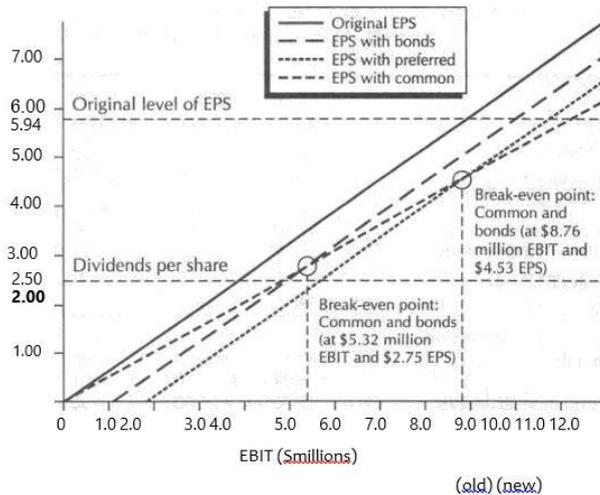


Figure 1. ABC Range of EBIT and EPS Chart

By contrast, the parallel shift of the debt and preferred shares to the right of the original rights is caused by the introduction of fixed interest or dividend charges, while the number of ordinary shares remains constant at the levels of EBIT surveyed.

The importance of intersections must now become obvious. These are BEP where, for certain levels of EBIT, EPS for ordinary alternative shares and one of the other two alternatives are the same. Note that the BEP of ordinary shares with the bonds is at \$ 5.32 million EBIT, while the BEP of ordinary shares with the privileged is at \$ 8.8 million EBIT.

Under \$ 5.0 million EBIT, therefore, ordinary alternative shares cause the least EBIT dilution, while more than \$ 9 million EBIT causes the worst dilution in EPS. We recall that ABC's current EBIT is \$ 9.0 million and is expected to be at least \$ 11 million after the new product has contributed fully to its planned profits. Both BEPs thus lie below the probable future EBIT, making ordinary alternative shares the most expensive in terms of dilution of profits.

Considering that the relative profitability of the three alternatives is different in the variety of EBIT presented, it is not possible to evaluate the three alternatives without defining a "normal" EBIT range for the company's expected performance. If future EBIT provide for fairly good movement within both BEP, ordinary shares appear more attractive than preferred shares in terms of EPS dilution but worse than debt. If EBIT is expected to grow and move relatively to the right of the second BEP, as is almost certainly the case with ABC, the new ordinary shares are not only more attractive in terms of EPS dilution but they will remain so.

Considering all of these basic considerations, of course, there are assumptions about the conditions under which the three forms of private capital would be emitted. If we can expect a significant change in all of these conditions (for example, the bid price of ordinary shares or bonds), a completely new chart needs to be mapped out, or we should at least reflect any possible cost disruption or proportion of alternatives such as change in EBIT levels.

The crossing between the EPS, which represent EBIT crossing points for alternative ordinary shares with the two other options, can easily be calculated. For this purpose, we formulate simple equations for the conditions in which all pairs of lines intersect. EPS are set equal for both alternatives, and the equations are determined for the specific EBIT level for which this condition is valid. To illustrate, let's first establish the following definitions:

- E = EBIT level for each BEP with ordinary alternative shares
- i = Annual bond interest in dollars (before taxes)
- t = Tax rate applicable to the company
- d = Annual preferred dividends in dollars
- s = Number of outstanding common shares

The equation for each of the EPS can be easily found by replacing the known things in the summary:

$$EPS = \frac{(E - i)(i - t) - d}{s}$$

Now we can find the break-even EBIT levels for bonds and ordinary shares in terms of EPS. For this purpose we will fill in the data in both expressions and we will receive:

$$\begin{array}{cc} \text{Bonds} & \text{Common} \\ \frac{(E - \$1,150,000) \cdot 0.66 - 0}{1,000,000} & = \frac{(E - 0) \cdot 0.66 - 0}{1,275,000} \end{array}$$

When we decide for E, we will get the following result:

$$\begin{aligned} 0.66E - \$759,000 &= \frac{0.66E}{1.275} \\ 0.842E - \$967,725 &= 0.66E \\ E &= \$5,317,200 \end{aligned}$$

This break-even level of \$ 5.32 million can be easily checked graphically in Table 8.

When the same approach applies to preferred and ordinary alternative shares, the following result arises:

$$\begin{array}{cc} \text{Preferred} & \text{Common} \\ \frac{(E - 0) \cdot 0.66 - \$1,250,000}{1,000,000} & = \frac{(E - 0) \cdot 0.66 - 0}{1,275,000} \\ 0.66E - \$1,250,000 & = \frac{0.66E}{1.275} \\ 0.842E - \$1,593,750 & = 0.66E \\ E & = \$8,756,900 \end{array}$$

The chart can again be used to confirm a break-even of \$ 8.76 million.

We can also use the graph to show the impact of any ordinary dividend on the three alternatives. Horizontal rights at \$ 2.50 in the chart represent the current annual total dividend. Where those rights cross the alternative EPS lines, we can read a minimum EBIT corresponding to that dividend. Similarly, the chart may reflect the amortization fund requirements or other regular repayment provisions. In fact, such annual provisions involve some of the future profits for that purpose.

We can improve the effect under these conditions by transferring the calculations one step ahead. So we will reach the so-called. UEPS (*uncommitted earnings per share*) for each option after the provisions for all repayments. We can simply deduct the cost per share of such repayments (which require dollar tax) from the corresponding EPS of the alternatives so affected, and redraw the ones on the chart. The result will be a parallel shift to the right of the affected rights from the previous position.

For example, the amortization fund's \$ 400,000 depreciation requirements per year for bond selection would be 40 cents per share, and the new bond rights would move to the right of that amount over its entire range. Similarly, the crossing at point 0 of EPS, currently \$ 1,150,000 EBIT, would move to the right to zero UEPS at \$ 1,756,060. This shift reflects the depreciation fund's requirements for \$ 400,000 per year, which turns out to be somewhat pre-taxed by \$ 400,000 + (1-0.34) or \$ 606,060. As it becomes clear in this case, the UEPS dividend rights would move very close to the EPS rights for preferred shares in Table 8. So far, the usefulness of this framework for dynamic analysis of the various financial alternatives has to be obvious. The reader is invited to think carefully about the consequences of the variety of tests that can be applied. For example, we can determine a minimum of EBIT below any alternative that would cover the current total dividend of \$ 2.5 per share while we accept a variety of different payout ratios of 50% or 40%. This means that with 50% pay, EPS should be \$ 5.00. Horizontal rights would be drawn at the \$ 5.00 EPS level, and would represent minimum EBIT for the \$ 2.50 dividend. The analyst should assess the possibility of lowering EBIT to this level and assess whether this would jeopardize the current dividend payment.

Certainly, other tests can also be applied, depending on the company's specific circumstances. This structure can also be used to monetize each of these results by converting corresponding EBIT into an equivalent cash flow from operations. This additional step would require determining the effect of the cash shield on depreciation. Spreadsheet analytics can be used to make the required multiple calculations.

Again, it should be stressed that each specific EBIT schedule is only valid for fixed assumptions about earnings and fixed interest and certain preferential dividends. If there is any reason to believe that any of these key assumptions may change, the positions of the EPS EPS on the graph will need to be adjusted.

Obviously, any change in the relative price in the varied alternatives will also have its effect. If the

distance between the two alternatives increases, for example, the differences in the impact of the profit will expand and the distance between the parallel lines will increase. It simply reflects that the imposition of high fixed bonds suppresses EPS.

The increase in the amount of issued capital also has an effect because the slant of rights is determined by the sum of the existing leverage existing capital structure. In other words, if there is already some debt and privileged shares in the capital structure, the core EPS would increase and decrease much more sharply with changes in EBIT. Any rises in fixed funding prices would simply increase this leverage. At the same time, the EPS sloping of the total share of ordinary shares is determined by the relative number of issued shares, which in turn are related to the rate of dilution of profit as in the example shown.

Financial planning templates and spreadsheets can be used to enhance the basic analysis that is demonstrated here. What is important and must be remembered is that the analysis essentially quantifies the relative impact of alternatives on reported earnings. This effect is just one of the many factors that need to be considered when choosing funding. As we have already mentioned, the conceptual and practical context for a possible solution is far more comprehensive than this graphical expression of the proposed break-even conditions. Strategic plan for the future, risk expectations, market factors, specific criteria and current conditions of the company - all involved in the final decision.

Specific forms of funding

Our previous discussion focused on the basic choice between debt, preferred shares and ordinary shares, ignoring the many variations that are often encountered in these instruments as well as other specialized forms of financing. We will now briefly cover a few more specialized areas of the financial choices, namely convertible bonds and preferred shares, human contributions, court orders and leases.

Convertible Securities

As we started earlier, convertible into ordinary shares is a feature that is sometimes added to bond issues or preferred shares for merchantability and sync. The essence of convertibility is the issuance of the company's ability to sell ordinary shares at prices higher than those of bonds or preference shares issued at that time. This is due to the fact that the conversion price for the ordinary shares it represents is at certain expected future levels, based on the company's experience and expectations.

The conversion price is under conversion, determined for issued bonds and preferred shares. For example, new \$ 100 convertible privileged may have a convertible 3, ie each share of the privileged is convertible into three shares of ordinary shares. This represents a conversion price of \$ 33.33 per ordinary share, while the company's shares can currently trade in the range of \$ 25.00- \$ 27.00. The difference between current prices and the conversion price is called premium conversion. The same approach can apply to bonds that are usually denominated in thousands of dollars.

Given the expectation that ordinary shares of the company will exceed the conversion price, bonds or preference shares will be traded at values that represent ordinary interest or dividend yields and the value of a sale itself. The initially stated yield will prevail, but when ordinary stock prices start to outweigh the conversion price, the price of the bonds or preferred shares will be an amplifier to reflect the current market value or the underlying ordinary shares. This is the moment when conversion becomes extremely attractive to the investor. If stock prices remain below the conversion price, the cost of conversion will always be the lowest value for bonds and preferred, whereas the actual price will depend on the yield that is secured at a certain interest rate or a privileged dividend.

In view of the potential attraction of the convertible to the investor, the issuing company typically pays somewhat lower interest or privileged dividends through these instruments. In order to limit the period over which these securities are outstanding, the company may typically accelerate conversion after the market price of ordinary shares reaches the conversion price by exercising a provision (the company's right to accelerate all or part of the issue) -convertible emissions. This is usually based on a predetermined price close to the conversion price.

Convertibility adds a number of considerations to the main election, because successful convertible issues ultimately result in a rise in ordinary shares, a delayed impact on control, earnings per share, and the amount of future ordinary dividends to be taken into account in the analysis. The graph we have already used can be applied by showing this situation in two steps: (1) convertible bonds or privileged bonds or privileged, and (2) additional ordinary shares of the final conversion. While significant convertible issues remain unpaid, companies are required to calculate full net earnings per share.

Offering rights

The so-called offering of rights is a form of financing ordinary shares by minimizing the dilution of the

proportional holdings of existing shareholders. They are also called a privileged subscription, since offering each existing shareholder the right to buy a certain number of ordinary shares from the company at a special price for a certain period of time after which the rights expire. The number of issued rights is usually equal to the number of outstanding shares in the stock. The specific number of rights is needed to buy each share of the new stock. Rights are issued as special certificates and are often traded on stock exchanges or at counters in banks.

Let's illustrate. If the XYZ company has 1,000,000 outstanding ordinary shares and wants to sell 250,000 new shares, 1,000,000 rights will be issued to existing shareholders with the clause that four rights are required to buy a new share of the stock at the subscription price. If the subscription price is \$ 30, while the current market price is \$ 40, the shareholder has to relinquish four rights and \$ 30 to the company for another share, currently worth \$ 40.

For the company, attracting such a course of action in addition to diminishing the dilution potential of control is a direct appeal for the funds to a group of investors who are already familiar with the company's prospects and history. If shareholders are willing, they will exercise their rights by directly buying from the company their fixed number of shares in the rights at a special subscription price. If shareholders are not interested, the rights may be sold as such because they will reflect the differential value between the shares offered and their market price.

The consequences of this alternative for the analysis are quite similar to those in the public offering that we have accepted for the case earlier. The subscription price may differ somewhat from the price that insurers provide in the public offering, but otherwise the analysis will be parallel to the alternative ordinary shares we have already explore.

Court orders

Court orders are a form of corporate security that authorizes the holder to buy a certain number of ordinary shares at a fixed exercise price for a certain period of time. Some court orders do not even have a shelf life. They are issued as an additional incentive for investors to buy a new public bond or bond or private placement of loans and bonds. Sometimes court orders are even issued as part of the offering of ordinary shares. The proportion of issued court orders to new offers varies depending on the price exercised and the degree of willingness to move the new debt issue into the hands of investors. Court orders are attached to these new securities as part of the offering, but in most cases they can be detached from the holders and sold separately if necessary. Numerous court orders are traded at any time in the securities markets.

As a result, the court order gives the option holder to buy an ordinary share if it has an advantage to do so (for example, if the exercise price is below the market price). Just as in the case of rights, with a court order, the funds go directly to the company. Since court orders, in contrast to rights, have been valid for a relatively long period of time, there is no potential to dilute the profits of past court orders. Companies with a significant number of outstanding court orders must calculate net earnings per share, just as in the case of outstanding convertible issues.

The consequences of analyzing a new proposed debt with attached court orders are primarily to recognize the potential of financial inflows from new shares such as court orders being exercised and the dilution of profits from those shares. Our graphical analysis needs to be modified to illustrate the combination of these effects.

Leasing

We have already mentioned the lease several times. This is a specific form of financing that gives the company access to a whole range of assets, from buildings to cars without the need to directly acquire them. The Lessee pays a periodic negotiated fee that covers the costs of landlord's ownership, financing, and tax costs by providing economic returns. The lessee can use the assets for a certain period of time, assuming there is no risk of ownership or technical aging, and can fix or replace the assets. The lessor, on the other hand, is supposed to have the old assets. The latter provision is especially attractive in the case of computers or technical equipment. The charterer will only bear periodic tax deduction of costs.

Long-term lease agreements, especially for buildings, can be extended for many years, thus becoming part of the company's financial structure. This accounting practice requires the disclosure of the lease obligations in the company's published financial statements if such leases are a material liability. While leases are usually not included as liabilities in the balance sheet (they are called behind balance sheet items), the notes below the balance sheet must disclose the amount of the periodic payments and forecast the capitalized value of those lease commitments.

Such disclosure recognizes the fact that the lease obligations represent a financial burden to be maintained, as is any other form of financing. Any company that hires a significant portion of its assets is less flexible in its financial choices. The effect is the same as that of the long outstanding long-term debt. Fixed lease fees add leverage to the company's operations, which is quite similar to leverage resulting from other sources.

There are many implications when choosing a lease against the property. We will not deal with the

techniques of analysis and the consequences of the cash flow of the types of leases because they are too specialized and complex to look at. However, we must emphasize that there is a cost-effective lease, because the lessor has to be compensated for what it provides, financed, serviced, and replacing the assets. By definition, the lease fees must be high enough to make the lease attractive to the lessor. At the same time, the landlord is often able to use economies of scale that can have a beneficial effect on the cost of leasing, as in the case of the main equipment of leasing companies, for example.

Benchmarking needs to make the final choice between leasing and ownership, and should take into account indicators such as the tenant's cost, technological advantages, service, the flexibility of not ownership, and the impact of the company's financial position. As in all financial analyzes, the choice is based on quantitative data and the judgment of the management. In some industries, leasing is part of the normal way of doing business. For example, wholesale and storage are mainly leased, not purchased, while the transport industry, leasing of rolling stock, trucks and airplanes are predominant. In other areas, the choice of leasing is widely open and depends on what financial alternatives are considered favorable at this time.

Key questions

Here is a summary of the key issues raised directly or indirectly in this article. These are listed to help the reader use the analysis techniques discussed in the context of financial theory and business practice:

0. The choice among the different types of long-term financing is indissolubly linked to the business strategy of the company. The choice must match the risk / reward inherent in strategy and funding.

1. The cost of the different types of capital is only one element on which the new financing decision is based. While debt is generally the lowest alternative cost and ordinary shares are the highest, the need to build and maintain an appropriate balance in the capital structure often replaces the final price.

2. Non-price elements (such as risk, flexibility, synchronization, control of shareholders) and management preferences should be pursued in connection with changing market conditions and the company's future policy.

3. Sometimes new funding may represent a significant share in the existing capital structure. The way these funds have grown can cause a shift away from the desired ideal corporate capital structure. Because a block of one form of long-term capital was chosen at one point, the management may be limited in the next round of funding. To compensate for the lack of balance, it may be necessary to use a compromise mix of funds.

4. Specific provisions on new issues of a securities are broadly based on the situation. Investment bankers, insurers and management cooperate to agree on the design and cost of financial instruments, reflecting market conditions, credit rating of the company and reputation, risk assessment, company strategic plans and current financial practices.

5. When changing the company's capital structure, the cost of capital is also changed. However, the temporary shifts received from supplemented blocks of new capital should not have an effect on returns based on the cost of capital unless there is a deliberate and constant change in the company's policies.

6. New ordinary shares have a long-term effect on dilution of ownership and earnings per share. This is true whether the new shares are directly issued or are triggered by the conversion of other securities or through the exercise of court orders. The decision whether to issue new shares should be closely related to the expected results of a strategic plan. This also involves drawing the benefits of introducing new permanent equity into the capital structure.

7. Leasing as a form of financing is based on a series of compromises that need to be pursued in relation to the company's capital structure and business direction.

Summary

This article looked at the decision-making framework and some techniques used to analyze the different types of long-term funds. We focused on the three main alternatives open to management (long-term debt, preferred shares and ordinary shares).

We understood that the choice of financial alternatives is a complex of analysis and judgment. Several areas of reflection were highlighted. We looked at the cost to the company, the relative risk and the issues of flexibility, synchronization and control over different sources of funding. We understand that many aspects of the choice of types of capital include more than quantitative data.

We also focused on the impact of every financial alternative on the company's reported profit, and then we perfected the break-even chart linking EPS and EBIT, which allows us to visually test the impact of the profits of alternatives over the entire dynamic range of potential profit levels. This simple model offers the potential use of wider financial models or spreadsheets to simulate more accurately the impact of the alternative financial package or the changing conditions. Lastly, we briefly reviewed the key aspects of some more specialized forms of financing (convertible securities, rights, court orders and leasing) and suggested some

analytical considerations that apply to these modified conditions.

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