

# Chapter 31

## VALUE AND CORPORATE FINANCE

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*No, Sire, it's a revolution!*

### Section 31.1

#### THE PURPOSE OF FINANCE IS TO CREATE VALUE

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##### 1/ INVESTMENT AND VALUE

The accounting rules we looked at in Chapter 4 showed us that an investment is a use of funds, but not a reduction in the value of assets. We will now go one step further and adopt the viewpoint of the financial manager for whom a profitable investment is one that increases the value of capital employed.

We shall see that a key element in the theory of markets in equilibrium is the market value of capital employed. This theory underscores the direct link between the return on a company's investments and that required by investors buying the financial securities issued by the company.

The true measure of an investment policy is the effect it has on the value of capital employed. This concept is sometimes called "enterprise value", a term we would prefer to avoid because it can easily be confused with the value of equity (capital employed less net debt). The two are far from the same!

Hence the importance of every investment decision, as it can lead to three different outcomes:

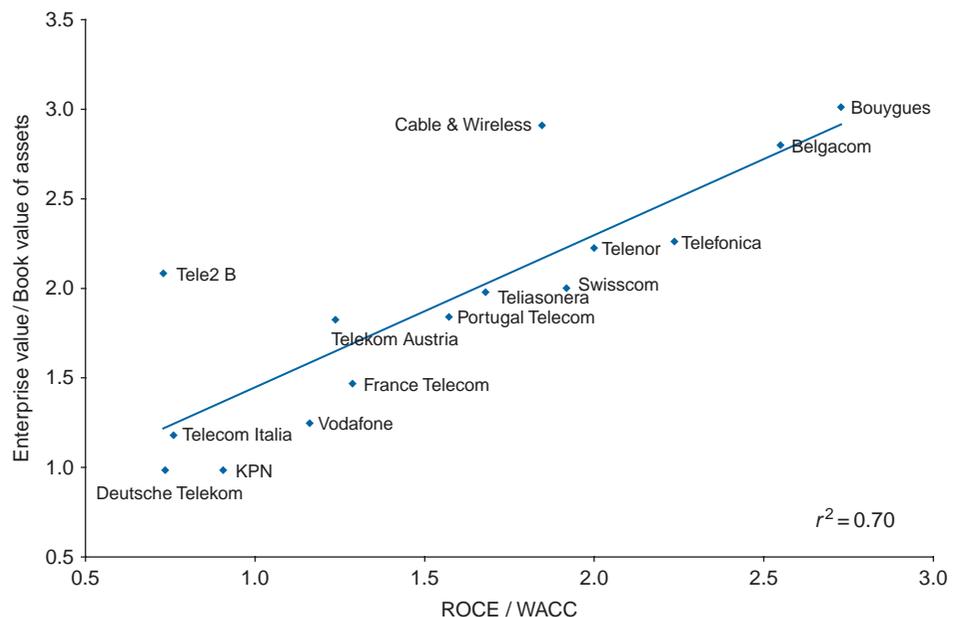
- Where the expected return on an investment is higher than that required by investors, the value of capital employed rises instantly. An investment of 100 that always yields 15% in a market requiring a 10% return is worth 150 ( $100 \times 15\%/10\%$ ). The value of capital employed thus immediately rises by 50.
- Where the expected return on the investment is equal to that required by investors, there is neither gain nor loss. The investors put in 100, the investment is worth 100 and no value has been created.
- Where the expected return on an investment is lower than that required by investors, they have incurred a loss. If, for example, they invested 100 in a project yielding 6%, the value of the project is only 60 ( $100 \times 6\%/10\%$ ), giving an immediate loss in value of 40.

- Value remains constant if the expected rate of return is equal to that required by the market.
- An immediate loss in value results if the return on the investment is lower than that required by the market.
- Value is effectively created if the expected rate of return is higher than that required by the market.

The resulting gain or loss is simply the positive or negative net present value that must be calculated when valuing any investment. All this means, in fact, that if the investment was fairly priced, nothing changes for the investor. If it was “too expensive”, investors take a loss, but if it was a good deal, they earn a profit.

The graph below shows that value is created (the value of capital employed exceeds its book value) when the economic return exceeds the weighted average cost of capital, i.e. the rate of return required by all suppliers of funds to the company.

**VALUE CREATION FOR MAIN EUROPEAN TELECOM COMPANIES (2007)**



Source: Exane BNP Paribas

## 2/ THE RELATIONSHIP BETWEEN COMPANIES AND THE FINANCIAL WORLD

In the preceding chapters we examined the various financial securities that make up the debt issued by a company from the point of view of the investor. We shall now cross over to the other side to look at them from the issuing company’s point of view.

- Each amount contributed by investors represents a **resource** for the company.
- The financial securities held by investors as assets are recorded as liabilities in the company’s balance sheet.
- And, most importantly, the **rate of return** required by investors represents a financial cost to the company.

At the financial level, a company is a portfolio of assets financed by the securities issued on financial markets. Its liabilities, i.e. the securities issued and placed with investors, are merely a financial representation of the industrial or operating assets. The financial manager's job is to ensure that this representation is as transparent as possible.

What is the role of the investor?

Investors play an active role when securities are issued, because they can simply refuse to finance the company by not buying the securities. In other words, if the financial manager cannot come up with a product offering a risk/reward trade-off acceptable to the financial market, the lack of funding will eventually push the company into bankruptcy.

We shall see that when this happens, it is often too late. However, the financial system can impose a sanction that is far more immediate and effective: the valuation of the securities issued by the company.

**The investor has the power not just to provide funds, but also to value the company's capital employed through the securities already in issue.**

Financial markets continuously value the securities in issue. In the case of debt instruments, rating agencies assign a credit rating to the company, thus determining the value of its existing debt and the terms of future loans. Similarly, by valuing the shares issued the market is, in fact, valuing the company's equity.

So how does this mechanism work?

If a company cannot satisfy investors' risk/reward requirements, it is penalised by a lower valuation of its capital employed and, accordingly, its equity. Suppose a company offers the market an investment of 100 that is expected to yield 10 every year over a period long enough to be considered to perpetuity.<sup>1</sup> However, the actual yield is only 5. The disappointed investors who were expecting a 10% return will try to get rid of their investment. The equilibrium price will be 50, because at this price investors receive a return of 10% (5/50) and it is no longer in their interests to sell. But by now it is too late. . .

Investors who are unhappy with the offered risk/reward trade-off sell their securities, thus depressing the value of the securities issued and of capital employed, since the company's investments are not profitable enough with regard to their risk. True, the investor takes a hit, but it is sometimes wiser to cut one's losses. . .

In doing so, he is merely giving tit for tat: an unhappy investor will sell off his securities, thus lowering prices. Ultimately, this can lead to financing difficulties for the company.

**The "financial sanction" affects first and foremost the valuation of the company via the valuation of its shares and debt securities.**

As long as the company is operating normally, its various creditors are fairly well protected.<sup>2</sup> Most of the fluctuation in the value of its debt stems from changes in interest rates, so changes in the value of capital employed derive mainly from changes in the value of equity. We see why the valuation of equity is so important for any normally-developing company. This does not apply just to listed companies: unlisted companies are also affected whenever they envisage divestments, alliances, transfers or capital increases.

<sup>1</sup> This strong assumption simplifies the calculation but it does not modify the reasoning.

<sup>2</sup> Since there is always a risk, their required rate of return comprises a risk premium.

The role of creditors looms large only when the company is in difficulty. The company then “belongs” to the creditors, and changes in the value of capital employed derive from changes in the value of the debt, by then generally lower than its nominal value. This is where the creditors come into play.

The valuation of capital employed, and therefore the valuation of equity, are the key variables of any financial policy, regardless of whether or not the company is listed.

### 3/ IMPLICATIONS

Since we consider that creating value is the overriding financial objective of a company, it follows that:

- A financial decision harms the company if it reduces the value of capital employed.
- A decision is beneficial to the company if it increases the value of capital employed.

A word of caution, however! Contrary to appearances, this does not mean that every good financial decision increases earnings or reduces costs.

**Financial shortsightedness consists in failing to distinguish between cost and reduction in value, or between income and increase in value.**

Remember, we are not in the realm of accounting, but in that of finance – in other words, value. An investment financed by cash from operations may increase earnings, but could still be insufficient with regard to the return expected by the investor who, as a result, has lost value.

Certain legal decisions, such as restricting a shareholder’s voting rights, have no immediate impact on the company’s cash, yet may reduce the value of the corresponding financial security and thus prove costly to the holder of the security.

We cannot emphasise this aspect enough and insist that you adopt this approach before immersing yourselves further in the raptures of financial theory.

## Section 31.2

### VALUE CREATION AND MARKETS IN EQUILIBRIUM

Corporate financial policy consists first and foremost of a set of principles necessary for taking decisions designed to maximise value for the providers of funds, in particular shareholders.

#### 1/A CLEAR THEORETICAL FOUNDATION

We have just said that a company is a portfolio of assets and liabilities, and that the concepts of cost and revenue should be seen within the overall framework of value. Financial management consists of assessing the value created for the company’s fund providers.

Can the overall value of the company be determined by an optimal choice of assets and liabilities? If so, how can you be sure of making the right decisions to create value?

You may already have raised the following questions:

- Can the choice of financing increase all alone the value of the firm, particularly when certain investors, such as banks, have allowed the company to incur more debt than would have been wise?
- Is capital employed financed half by debt and half by equity worth more than if it were financed wholly through equity?
- More generally, can the entrepreneur increase the value of capital employed, that is, influence the market's valuation of it, by either combining independent industrial and commercial investments or implementing a shrewd financing policy?

If your answer to all these questions is yes, you attribute considerable powers to financial managers. You consider them capable of creating value independently of their industrial and commercial assets.

And yet, the equilibrium theory of markets is very clear:

**When looking at valuations, financial investors are not interested in the underlying financial engineering, because they could duplicate such operations themselves. This is called the *value additivity rule*.**

We now provide a more formal explanation of the above rule, which is based on arbitrage. To this end, let us simplify things by imagining that there are just two options for the future: either the company does well, or it does not. We shall assign an equal probability to each of these outcomes. We shall see how the free cash flow of three companies varies in our two states of the world:

	<i>Free cash flow</i>	
	<i>State of the world: bad</i>	<i>State of the world: good</i>
<i>A</i>	200	1000
<i>B</i>	400	500
<i>G</i>	600	1500

Note that the sum of the free cash flows of companies *A* and *B* is equal to that of company *G*. We shall demonstrate that the share price of company *G* is equal to the sum of the prices of shares *B* and *A*.<sup>3</sup> To do so, let us assume that this is not the case, and that  $V_A + V_B > V_G$  (where  $V_A$ ,  $V_B$ , and  $V_G$  are the respective share prices of *A*, *B* and *G*).

You will see that no speculation is necessary here to earn money. Taking no risk, you sell short one share of *A* and one share of *B* and buy one share of *G*. You immediately receive  $V_A + V_B - V_G > 0$ ; yet, regardless of the company's fortunes, the future negative flows of shares *A* and *B* (sold) and positive flows of share *G* (bought) will cancel each other out. You have realised a gain through arbitrage.

The same method can be used to demonstrate that  $V_A + V_B < V_G$  is not possible in a market that is in equilibrium. We therefore deduce that  $V_A + V_B = V_G$ . It is thus clear that a diversified company, in our case *G*, is not worth more than the sum of its two divisions *A* and *B*.

<sup>3</sup> We are assuming that companies *A*, *B* and *G* have the same number of shares.

Let us now look at the following three securities:

Company	Free cash flow	
	State of the world: bad	State of the world: good
C	100	1000
D	500	500
E	600	1500

According to the rule demonstrated above,  $V_C + V_D = V_E$ . Note that security  $D$  could be a debt security and  $C$  share capital.  $E$  would then be the capital employed. The value of capital employed of an indebted company ( $V_{(C+D)}$ ) can be neither higher nor lower than that of the same company if it had no debt ( $V_E$ ).

The additivity rule is borne out in terms of risk: if the company takes on debt, financial investors can stabilise their portfolios by adding less risky securities. Conversely, they can go into debt themselves in order to buy less risky securities. So why should they pay for an operation they can carry out themselves at no cost?

This reasoning applies to diversification as well. If its only goal is to create financial value without generating industrial and commercial synergies, there is no reason why investors should entrust the company with the diversification of their portfolio.

## 2/ ILLUSTRATION

Are some asset combinations worth more than the value of their individual components, regardless of any industrial synergies arising when some operations are common to several investment projects? In other words, is the whole worth more than the sum of its parts?

Or again, is the required rate of return lower simply because two investments are made at the same time? Company managers are fuzzy on this issue. They generally answer in the negative, although their actual investment decisions tend to imply the opposite. Take *Les Echos* (a leading French economic newspaper), for example, which was sold by Pearson to LVMH in 2007. If financial synergies exist, one would have to conclude that the required rate of return in the economic press segment differs depending on whether the company is independent or part of a group. *Les Echos* would therefore appear to be worth more as part of the LVMH group than on a standalone basis.

The question is not as specious as it seems. In fact, it raises a fundamental issue. If the required return on *Les Echos* has fallen since it became part of LVMH, its financing costs will have declined as well, giving it a substantial, permanent and possibly decisive advantage over its competitors.

**Diversifying corporate activities reduces risk, but does it also reduce the rate of return required by investors?**

Suppose the required rate of return on a company producing a single product is 10%. The company decides to diversify by acquiring a company of the same size on which the required rate of return is 8%. Will the required rate of return on the new group be

lower than  $(10\% + 8\%) / 2 = 9\%$  because it carries less risk than the initial single-product company?

We must not be misled into believing that a lower degree of risk must be always matched by a lower required rate of return. On the contrary: **markets only remunerate systematic or market risks, i.e. those that cannot be eliminated by diversification.** We have seen that unsystematic or specific risks, which investors can eliminate by diversifying their portfolios, are not remunerated. Only non-diversifiable risks related to market fluctuations are remunerated. This point was discussed in Chapter 21.

Since diversifiable risks are not remunerated, **a company's value remains the same whether it is independent or part of a group.** *Les Echos* is not worth more now that it has become a division of the LVMH group. All else being equal, the required rate of return in the economic press sector is the same whether the company is independent or belongs to a group.

On the other hand, *Les Echos* value will increase if, and only if, LVMH's management allows it to improve its return on capital employed.

### Purely financial diversification creates no value.

Value is created only when the sum of cash flows from the two investments is higher because they are both managed by the same group. This is the result of **industrial synergies** ( $2 + 2 = 5$ ), **and not financial synergies**, which do not exist.

The large groups that indulged in a spate of financial diversifications in the 1960s have since realised that these operations were unproductive and frequently loss-making. Diversification is a delicate art that can only succeed if the diversifying company already has expertise in the new business. Combining investments *per se* does not maximise value, unless industrial synergies exist. Otherwise, an investment is either "good" or "bad" depending on how it stacks up against the required rate of return.

In other words, managers must act on cash flows; **they cannot influence the discount rate applied to them** unless they reduce their risk exposure.

**There is no connection between the required return on any investment and the portfolio in which the investment is held.**

**Unless it can draw on industrial synergies, the value of a company remains the same whether it is independent or part of a large group. The financial investor does not want to pay a premium in the form of lower returns for something he can do himself at no cost by diversifying his portfolio.**

## 3/A FIRST CONCLUSION

The value of the securities issued by a company is not connected to the underlying financial engineering. Instead, it simply reflects the market's reaction to the perceived profitability and risk of the industrial and commercial operations.

The equilibrium theory of markets leads us to a very simple and obvious rule, that of the additivity of value, which in practice is frequently neglected. Regardless of developments in financial criteria, in particular earnings per share, value cannot be created simply by adding (diversifying) or reducing value that is already in equilibrium.

To ensure a flow of financing, financial managers have to transform their industrial and commercial assets into financial assets. This means that they have to sell the very substance of the company (future risk and returns) in a financial form.

Financial investors evaluate the securities offered or already issued according to their required rate of return. By valuing the company's share, they are, in fact, directly valuing the company's operating assets.

The valuation of the different securities has nothing to do with financial engineering; it is based on a valuation of the company's industrial and commercial assets.

We emphasise that this rule applies to listed and unlisted companies alike, a fact that the latter are forced to face at some point. Capital employed always has an equilibrium value, and the entrepreneur must ultimately recognise it.

This approach should be incorporated into the methodology of financial decision-making. Some strategies are based on maximising other types of value, for example nuisance value. They are particularly risky and are outside the conceptual framework of corporate finance. The first reflex when faced with any kind of financial decision is to analyse whether it will create or destroy value. If values are in equilibrium, financial decisions will be immaterial.

Does this mean that, ultimately, financing or diversification policies have no impact on value?

On the contrary, the equilibrium theory of markets represents a kind of ideal that is very useful for the financial professional but, like all ideals, tends to remain out of reach. In a way, it is the paradise that all financial managers strive for, while secretly hoping never to reach such a perfect state of boredom . . .

Our aim is not to encourage nihilism, merely a degree of humility.

## Section 31.3

### VALUE AND ORGANISATION THEORIES

#### 1/ LIMITS OF THE EQUILIBRIUM THEORY OF MARKETS

The equilibrium theory of markets offers an overall framework, but it completely disregards the immediate interests of the various parties involved, even if their interests tend to converge in the medium term.

Paradoxically, the neoclassical theory emphasises the general interest while completely overlooking that of the individual parties.

We cannot rely on the equilibrium theory alone to explain corporate finance.

Since the equilibrium theory demonstrates that finance cannot change the size of the capital employed, but only how it is divided up, it follows that many financial problems stem from the struggle between the various players in the financial realm.

First and foremost we have the various parties providing funding to the company. To simplify matters, they can be divided into two categories: shareholders and creditors. But we shall soon see that, in fact, each type of security issued gives rise to its own interest group: shareholders, preferred creditors, ordinary creditors, investors in hybrid products, etc. Further on in this chapter, we shall see that interests may even diverge within the same funding category.

One example should suffice. According to the equilibrium theory of markets, investing at the required rate of return does not change the value of capital employed. But if the investment is very risky and, therefore, potentially very profitable, creditors, who earn a fixed rate, will only see the increased risk without a corresponding increase in their return. The value of their claims thus decreases to the benefit of shareholders whose shares increase by the same amount, the value of capital employed remaining the same. And yet, this investment was made at its equilibrium price.

This is where the financial manager comes into play! His role is to distribute value between the various parties involved. **In fact, the financial manager must be a negotiator at heart.**

But let's not forget that the managers of the company are stakeholders as well. Since portfolio theory presupposes good diversification, there is a distinction between investors and managers, who have divergent interests with different levels of information (internal and external). This last point calls into question one of the basic tenets of the equilibrium theory, which is that all parties have access to the same information (see Chapter 15).

## 2/ SIGNALLING THEORY AND ASYMMETRIC INFORMATION

Signalling theory is based on two basic ideas:

- the same information is not available to all parties: the managers of a company may have more information than investors;
- even if the same information were available to all, it would not be perceived in the same way, a fact frequently observed in everyday life.

Thus, it is unrealistic to assume that information is fairly distributed to all parties at all times, i.e. that it is symmetrical as in the case of efficient markets. On the contrary, **asymmetric information** is the rule.

**In short, perfect and equally-shared information is at best an objective, and most often an illusion.**

This can clearly raise problems. Asymmetric information may lead investors to undervalue a company. As a result, its managers might hesitate to increase its capital because they consider the share price to be too low. This may mean that profitable investment opportunities are lost for lack of financing, or that the existing shareholders find their stake adversely diluted because the company has launched a capital increase anyway.

This is where the **communication policy** comes into its own. Basing financial decisions on the financial criteria alone is not enough: managers also have to convince the markets that these decisions are wise.

As a result, pure financial expertise does not suffice if it is not matched by an ability to communicate and to shape market sentiment.

The cornerstone of the financial communications policy is the **signal** the managers of a company send to investors. Contrary to what many financial managers and CEOs believe, the signal is neither an official statement or a confidential tip. **It is a real financial decision, taken freely and which may have negative financial consequences for the decision-maker if it turns out to be wrong.**

After all, investors are far from naive and they take each signal with the requisite pinch of salt. Three points merit attention:

- **Investors' first reaction is to ask themselves why the signal is being sent, since nothing comes for free in the financial world.** The signal will be perceived negatively if the issuer's interests are contrary to those of investors. For example, the sale of a company by its majority shareholder would, in theory, be a negative signal for the company's growth prospects. Managers must therefore persuade the buyer of the contrary or provide a convincing explanation for the disposal.

Similarly, owner-managers cannot fool investors by praising the merits of a capital increase without subscribing to it!

However, the market will consider the signal to be credible if it deems that it is in the issuer's interest that the signal be correct. This would be the case, for example, if the managers reinvest their own assets in the company. . .

- **The reputation of management and its communications policy** certainly play a role, but we must not overestimate their importance or lasting impact.
- **The market supervisory authorities stand ready to impose penalties** on the dissemination of misleading information or insider trading. If investors, particularly international investors, believe that supervision is effective, they will factor this into their decisions. This said, some managers may be tempted to send incorrect signals in order to obtain unwarranted advantages. For example, they could give overly optimistic guidance on their company's prospects in order to push up share prices. However, markets catch on to such misrepresentations quickly and react to incorrect signals by piling out of the stock.

In such a context, the "watchdog" role played by the market authorities is crucial and the recent past has shown that the authorities intend to assume it in full. Such rigour is essential if we are to have the best possible financial markets and the lowest possible financing costs.

Financial managers must therefore always consider how investors will react to their financial decisions. They cannot content themselves with wishful thinking, but must make a rational and detailed analysis of the situation to ensure that their communication is convincing.

Signalling theory says that corporate financial decisions (e.g. financing, dividend payout) are signals sent by the company's managers to investors. It examines the incentives that encourage good managers to issue the right signals and discourage managers of ailing companies from using these same signals to give a misleading picture of their company's financial health.

In sum, information asymmetry may lead to a share being priced at less than its objective value, with two consequences:

- investments are not maximised because the cost of financing is too high;
- the choice of financing is skewed in favour of sources (such as debt) where there is less information asymmetry.

Stephen Ross initiated the main studies in this field in 1977.

### 3/ AGENCY THEORY

Agency theory says that a company is not a single, unified entity. It considers a company to be a legal arrangement that is the culmination of a complex process in which the conflicting objectives of individuals, some of whom may represent other organisations, are resolved by means of a set of contractual relationships.

On this basis, a company's behaviour can be compared to that of a market, insofar as it is the result of a complex balancing process. Taken individually, the various stakeholders in the company have their own objectives and interests that may not necessarily be spontaneously reconcilable. As a result, conflicts may arise between them, especially since our modern corporate system requires that the suppliers of funds entrust the managers with the actual administration of the company.

Agency theory analyses the consequences of certain financial decisions in terms of risk, profitability and, more generally, the interests of the various parties. It shows that some decisions may go against the simple criteria of maximising the wealth of all parties to the benefit of just one of the suppliers of funds.

To simplify, we consider that an agency relationship exists between two parties when one of them, the agent, carries out an activity on behalf of the other, the principal. The agent has been given a mandate to act or take decisions on behalf of the principal. This is the essence of the agency relationship.

This very broad definition allows us to include a variety of domains, such as the resolution of conflicts between:

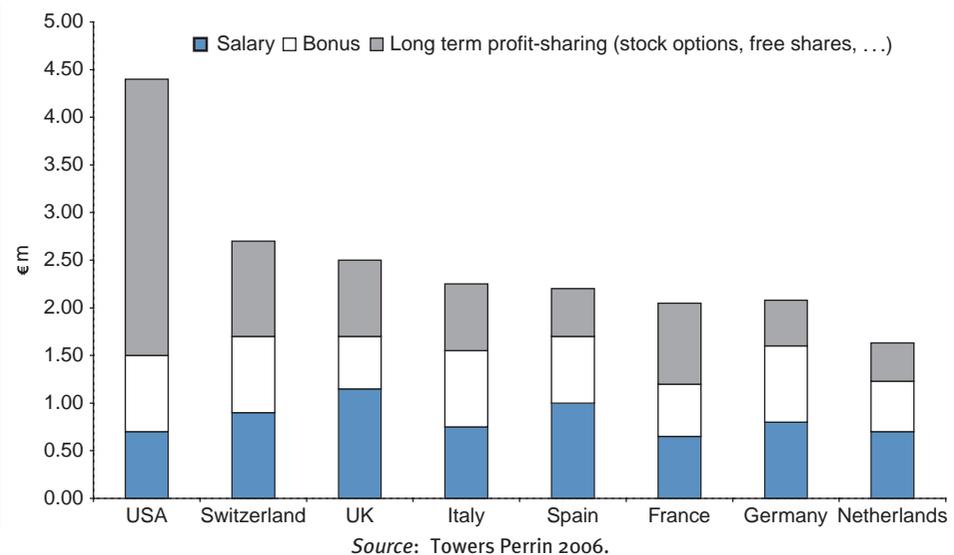
- executive shareholders/non-executive shareholders;
- nonshareholder executives/shareholders;
- creditors/shareholders.

Thus, shareholders give the company executives a mandate to manage to the best of their ability the funds that have been entrusted to them. However, their concern is that the executives could pursue objectives other than maximising the value of the equity, such as increasing the company's size at the cost of profitability, minimising the risk to capital employed by rejecting certain investments that would create value but could put the company in difficulty if they fail, etc.

One way of resolving such conflicts of interest is to use stock options or linking management compensation to share performance. This gives managers a financial incentive that coincides with that of their principal, the shareholders. Since stock options give the holders the right to buy or subscribe to shares at a fixed price, the managers have a financial incentive to see the price of their company's shares rise so that they receive significant capital gains. It is then in their interests to make the financial decisions that create the most value. In France over half of listed companies have set up stock option plans.

### CEO COMPENSATIONS FOR COMPANIES WITH ANNUAL SALES OF C. €5BN

Variable part accounts for 50%–66% of top executives' compensations in Western European countries. In the USA this figure amounts to 85% which is mainly due to profit-sharing plans.



Debt plays a role as well since it has a constraining effect on managers and encourages them to maximise cash flows so that the company can meet its interest and principal payments. Failing this, the company risks bankruptcy and the managers lose their jobs. Maximising cash flows is in the interests of shareholders as well, since it raises the value of shareholders' equity. Thus, the interests of management and shareholders converge. Maybe debt is the modern whip!

The diverging interests of the various parties generate a number of costs called "agency costs". These comprise:

- the cost of monitoring managers' efforts (control procedures, audit systems, performance-based compensation) to ensure that they correspond to the principal's objectives. Stock options represent an agency cost since they are exercised at less than the going market price for the stock;
- the costs incurred by the agents to vindicate themselves and reassure the principals that their management is effective, such as the publication of annual reports;
- residual costs.

Ang et al. (2000) have shown that the margins and asset turnover rates of small- and medium-sized American firms tend to be lower in companies managed by nonshareholding CEOs, and in which managers have little stake in the capital and many nonexecutive shareholders.

The main references in this field are Jensen and Meckling (1976), Grossman and Hart (1980), and Fama (1980). Their research aims to provide a scientific explanation of the relationship between managers and shareholders and its impact on corporate value.

Their main contribution is to try and compare financial theory and organisational theory.

This research forms the intellectual foundation on which the concept of **corporate governance** was built. Corporate governance attempts to regulate the decision-making power of executives to ensure that they do not serve their own vested interests to the detriment chiefly of shareholders, but also of creditors, employees and the company in general.

These developments have caused treasury shares, cross-shareholdings and voting right restrictions to be called into question. More board of director meetings are being held and a percentage of listed companies have set up committees to monitor internal auditing, compensation and the re-election of executives or directors. On a sample of 100 large French companies, 75% had established similar committees and 85% had independent directors with no links to company executives or the large shareholders. Of S&P 500 corporations, 81% of directors were independent directors in 2006 and the CEO was the only insider in 39% of boards. Similarly, the number of directorships held by the same person has been limited to five,<sup>4</sup> executive compensation is now routinely disclosed and the accounts are released more rapidly. All these measures are designed to give shareholders more control over managers.

*4 Not including directorships in controlled, unlisted companies.*

#### 4/FREE RIDERS

We saw above that the interests of the different types of providers of funds may diverge, but so may those of members of the same category.

**The term “free rider” is used to describe the behaviour of an investor who benefits from transactions carried out by other investors in the same category without participating in these transactions himself.**

This means, first, that there must be several – usually a large number – of investors in the same type of security and, second, that a specific operation is undertaken implying some sort of sacrifice, at least in terms of opportunity cost, on the part of the investors in these securities.

As a result, when considering a financial decision, one must examine whether free riders exist and what their interests might be.

Below are two examples:

- Responding to a takeover bid: if the offer is motivated by synergies between the bidding company and its target, the business combination will create value. This means that it is in the general interest of all parties for the bid to succeed and for the shareholders to tender their shares. However, it would be in the individual interest of these same shareholders to hold on to their shares in order to benefit fully from the future synergies.
- Bank A holds a small claim on a cash-strapped company that owes money to many other banks. It would be in the interests of the banks as a whole to grant additional loans to tide the company over until it can pay them back, but the interest of our individual bank would be to let the other banks, which have much larger exposure, advance the funds themselves. Bank A would thus hold a better-valued existing claim without incurring a discount on the new credits granted.

## Section 31.4

### HOW CAN WE CREATE VALUE?

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Before we begin simulating different rates of return, we would like to emphasise once again that a project, investment or company can only realise extraordinary returns if it enjoys a strategic advantage. The equilibrium theory of markets tells us that under perfect competition, the net present value of a project should be nil. If a financial manager wants to advise on investment choices, he will no doubt have to make a number of calculations to estimate the future return of the investment. But he will also have to look at it from a strategic point of view, incorporating the various economic theories he has learnt.

A project's real profitability can only be explained in terms of economic rent – that is, a position in which the return obtained on investments is higher than the required rate of return given the degree of risk. The essence of all corporate strategies is to obtain economic rents – that is, to generate imperfections in the product market and/or in factors of production, thus creating barriers to entry that the corporate managers strive to exploit and defend.

**The purpose of a financial strategy is to try to “skew” market mechanisms in order to secure an economic rent.**

But don't fool yourself, economic rents do not last forever. Returns that are higher than the required rate, taking into account the risk exposure, inevitably attract the attention of competitors or of the anti-trust authorities, as in the case of Microsoft. Sooner or later, deregulation and technological advances put an end to them. There are no impregnable fortresses, only those for which the right angle of attack has not yet been found.

A strategic analysis of the company is thus essential to put the figures in their economic and industrial context, as we explained in Chapter 8.

**We insist on the consequences of a good strategy. When based on accurate forecasts, it immediately boosts the value of capital employed and, accordingly, the share price. This explains the difference between the book value of capital employed and its market value, which may vary by a factor of 1–10, and sometimes even more.**

**Rather than rising gradually as the returns on the investment accrue, the share price adjusts immediately so that the investor receives the exact required return, no more, no less. And if everything proceeds smoothly thereafter, the investment will generate the required return until expectations prove too optimistic or too pessimistic.**

## Section 31.5

### VALUE AND TAXATION

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Depending on the company's situation, certain types of securities may carry tax benefits. You are certainly aware that tax planning can generate savings, thereby creating value or at least preventing the loss of value. Reducing taxes is a form of value creation for investors and shareholders. All else being equal, an asset with tax-free flows is worth more than the same asset subject to taxation.

Better to have a liability with cash outflows that can be deducted from taxes than the same liability with outflows that are not deductible.

This goes without saying, and any CFO worthy of his title will do his best to reduce tax payments.

**However, tax optimisation should not merely endeavour to reduce costs if this leads to higher risks. Financial managers must think in terms of value.**

They must carefully examine the impact each financial decision will have on taxes. The main issues we shall be addressing are:

- taxation of debt vs. equity;
- taxation of accelerated depreciation and one-off writedowns;
- taxation of capital gains vs. ordinary income (dividends or coupons);
- taxation of financial income and expenses;
- usable or unusable tax-loss carryforwards.

From a financial point of view, a company's aim is to create value, i.e. it should be able to make investments on which the rate of return is higher than the required rate of return, given the risk involved. If this condition is met, the share price or the value of the share will rise. If not, it will fall.

The theory of markets in equilibrium teaches us that it is very difficult to create lasting value. Rates of return actually achieved tend over the medium term to meet required rates of return, given technological progress and deregulation, which reduce entry barriers and economic rents that all managers must strive to create and defend, even if sooner or later they will be eliminated. Similarly, diversification or debt cannot create value for the investor who can, at no cost on an individual level, diversify his portfolio or go into debt. Finally, **there is no connection between the required return on any investment and the portfolio in which the investment is held** – value can only be created by industrial synergies. **Financial synergies do not exist.**

It is important to understand that the creation of value is not just the outcome of a calculation of returns. It has an economic basis which is a sort of economic rent that comes out of a strategy, the purpose of which is to “skew” market mechanisms. Accordingly, the conceptual framework of the theory of markets in equilibrium alone fails to explain corporate finance.

Signal and agency theory were developed to make up for the shortcomings of the theory of markets in equilibrium.

Signal theory is based on the assumption that information is not equally available to all parties at the same time, and that information asymmetry is the rule. This can have disastrous consequences and result in very low valuations or a suboptimum investment policy. Accordingly, certain financial decisions, known as signals, are taken to shake up this information asymmetry. These signals can, however, have a negative financial impact on the party who initiates them if they turn out to be unfounded.

Agency theory calls into question the claim that all of the stakeholders in the company (shareholders, managers, creditors) have a single goal – to create value. Agency theory

## SUMMARY

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shows how, on the contrary, their interests may differ and some decisions (related to borrowing for example) or products (stock options) come out of attempts at achieving convergence between the interests of managers and shareholders or at protecting creditors. Agency theory forms the intellectual basis of corporate governance.

## QUESTIONS

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quiz

- 1/ Take the example on p. 633 and give a probability of 50% to the two states of the world. Calculate the value of *A*, *B* and *G*. Calculate the value of *C*, *D* and *E*. What are your conclusions?
- 2/ You offer investors the opportunity to invest 100, financed solely with equity. Assuming that no taxes are payable, projected constant annual profits to perpetuity are 25 (we assume that necessary capital expenditure is equal to depreciation, that change in WCR is nil and that all profits are paid out).
  - (a) What is the rate of return required by the market on this investment?
  - (b) The return on this investment only comes to 10 per year. If the required rate of return is not modified, what will the value of this share be on the secondary market?
  - (c) Same question if the return on the investment is 50 per year? And if profits are nil?
  - (d) What impact will all of the above scenarios have on the company?
  - (e) Is it possible to define a simple rule on the creation and destruction of value?
- 3/ What does it mean when a source of financing is cheap?
- 4/ When is value created?
  - in the choice of investment;
  - in the choice of financing?
- 5/ You are required to analyse a number of decisions and establish whether or not they will create value. You then have to decide whether value was in fact created or transferred on a general level, and if so, who were the winners and who were the losers.

	Creation of value	Transfer of value
Set up an oligopoly		
Innovate		
Secure loans at a lower rate than the market rate		
Improve productivity		
Reduce income tax		

6/Analyse the following financial decisions. Do they send out positive, negative or neutral signals?

Signal	+	-	=
Sale of company by managing shareholder			
Sale of company by non-managing shareholder			
Failure of a managing shareholder who has invested most of his wealth in the company to subscribe to a capital increase			
Failure of a capital investor to subscribe to a capital increase			
Increase the dividend per share (DPS)			
A family-run company running up excessive debts			
Giving out free shares in order to maintain the dividend per share			
Giving subscription rights to all shareholders at a strike price that is twice the price at which the share is currently trading			

7/What is synergy?

8/Can we talk about financial synergy?

9/What is a conglomerate discount? How can it be avoided?

10/Show how the share price of a very profitable company which invests at a rate of return that is higher than the required rate of return can still drop.

11/Reread Chapter 27 with your new insight into investment policy, especially the link between P/E and PBR, and the rate of return on the investment.

12/Should an investment have a higher expected rate of return than required rate of return? Generally will value always be created?

13/Show how the conglomerate discount leads to an increase in the cost of equity.

14/Can a signal be sent if there is no cash flow?

15/What is an economic rent? What is it based on?

16/A company that is close to insolvency carries out a capital increase. Is this a signal? Why? What criteria can you identify as being necessary for a decision to be described as a signal?

17/An increasing number of large groups now ask their top managers to invest a large amount of their personal wealth (often more than 40%) in company shares. What is the theory behind this type of behaviour? Why?

18/Can you explain why the behaviour described in Question 17 could have the secondary effect of encouraging managers to diversify their groups' activities?

## EXERCISES

- 1/ Rawhajpoutalah Intl., an Indian tobacco company, has two divisions, *A* and *B*, for which the figures are as follows:

	Division A	Division B
Capital employed	1000	1000
Expected return	15%	15%
Net operating income	50	300

- What are the values for divisions *A* and *B* if you assume, for calculation purposes, that operating income is constant to perpetuity?
- The company pays out 50 and so finances its investments for 300. The company invests everything in division *B* at the same return on capital employed (30%). How much value is created?
- Same question if the 300 is invested in division *A* at the average rate of return of *A* (5%).
- Same question if the 300 is divided equally between *A* and *B*.
- What are your conclusions?

## ANSWERS

## Questions

- 1/ $V_A = 600$ ,  $V_B = 450$ ,  $V_G = 1050$ ;  $V_C = 550$ ,  $V_D = 500$ ,  $V_E = 1050$ ;  $V_A + V_B = V_G$ ,  
 $V_E - V_D = V_C$
- 25%.
    - 40.
    - 200; 0.
    - None.
    - Value is created when the return is higher than the required rate of return; and vice versa.
  - That the risk is underestimated by providers of funds.
  - In the choice of investment: when an investment is made with a return that is higher than the required rate of return. In the choice of financing: when a company can finance its operations at a lower rate of return than usually required by the market for the same risk.
  - Transfer of client value to shareholders. Creation of value. Transfer of creditors' value to shareholders. Creation of value. Creation of value.
  - Signal: Negative. Neutral. Neutral. Negative. Positive. Positive. Positive. Neutral.
  - Synergy results from a reduction in charges or an improvement in products that leads to the value of the whole being greater than the sum of the values of the parts.
  - No.
  - The fact that a conglomerate is worth more than the parts of which it is made up. By dismantling conglomerates.
  - This is possible because of an error in anticipation (which was too high at the outset).
  - 12/This is the strength of a good corporate strategy, but obviously, if industrial markets are efficient, it is impossible. Macro-economically, this could be a simple transfer of value between the customers and the shareholders.

- 13/ If a conglomerate raises funds of 100 to invest in various assets, and if a discount of 25% is applicable, the 100 will only be worth 75 and it is at this price that new shares will be issued and not 100. This is where the higher cost of equity comes from.
- 14/ No, because a decision based on financial policy is only a signal if it has negative financial consequences for the management which took the decision if the signal turns out to be wrong.
- 15/ An economic rent is a situation in which it is possible to obtain a higher return on capital employed than the required rate of return given the risk, on the basis of a special strategic advantage. It is based on a (temporary) lack of equilibrium of the market.
- 16/ This cannot be interpreted as a signal because the company has no other choice than to carry out a capital increase if it wishes to avoid bankruptcy. A decision can only be qualified as a signal if it is taken freely and if there is a viable alternative.
- 17/ Agency theory, in order to reconcile management's financial criteria with those of the shareholders who have appointed them as managers.
- 18/ Because this severely limits the diversification of the personal portfolios of managers, who may wish to make up for this by diversifying the activities in which their groups are involved.

#### Exercises

- (a)  $V_A = 50/0.15 = 333.3$ ;  $V_B = 300/0.15 = 2000$ .
- (b)  $V_A$  unchanged;  $V_B = 390/0.15 = 2600$ ; for 300 reinvested, creation of value = 300.
- (c)  $V_B$  unchanged;  $V_A = 65/0.15 = 433.33$ ; for 300 reinvested, destruction of value = 200.
- (d)  $V_A = 57.5/0.15 = 383.33$ ;  $V_B = 345/0.15 = 2300$ ; for 300 reinvested, creation of value = 50.
- (e) Tendency within conglomerates to spread the investment budget. This does not make for optimal returns.

#### For more on signal and agency theories:

- A. Alchian, H. Demsetz, Production, information costs and economic organization, *American Economic Review*, 777–795, 1972.
- J. Ang, R. Cole, J. Wuhkin, Agency costs and ownership structure, *Journal of Finance*, 81–106, February 2000.
- J. Coles, N. Daniel, L. Naveen, Managerial incentives and risk-tracking, *Journal of Financial Economics*, 79, 431–468, 2006.
- E. Fama, Agency problems and the theory of the firm, *Journal of Political Economy*, 288–307, April 1980.
- M. Jensen, W. Meckling, Theory of the firm: Managerial behavior, agency costs and ownership structure, *Journal of Financial Economics*, 305–360, October 1976.
- M. Jensen, Value maximization, stakeholder theory, and the corporate objective function, *Journal of Applied Corporate Finance*, 14(3), 8–21, Autumn 2001.
- S. Ross, The determination of capital structure: Incentive signalling approach, *The Bell Journal of Economics*, 23–40, Summer 1977.
- S. Ross, Some notes on financial incentive signalling models, activity choice and risk preferences, *Journal of Finance*, 777–792, June 1978.

## BIBLIOGRAPHY

*For more on corporate governance:*

*www.ecgn.org*, the website of European Corporate Governance, an institution which monitors the corporate governance practices in the world.

*Stock options and more generally, other forms of variable compensation:*

A. Morgan, A. Poulser, Linking pay to performance-compensation proposal in the S&P 500, *Journal of Financial Economics*, 489–523, December 2001.

*An interesting website is:*

*www.towersperrin.com*

*And for more on all of the topics covered in this chapter:*

K. Ward, *Corporate Financial Strategy*, Macmillan, 2001.