

## Chapter 38

# RETURNING CASH TO SHAREHOLDERS: DIVIDEND POLICIES

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*To each his own habit*

The topics addressed in this chapter are the logical complement of the preceding chapter, since there are only two possible destinations for net earnings: either they are reinvested in the business, or they are distributed to shareholders as dividends or through share buybacks.

We pursue our inquiry by looking this time at the external aspect of distribution policy and how the value of the share is directly linked to the dividend.

We will also deal in this chapter with share buybacks, which are an alternative means for the company to return excess cash to its shareholders.

### Section 38.1

#### DIVIDENDS AND MARKET VALUE

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##### 1/DIVIDENDS AND EQUILIBRIUM MARKETS

In markets in equilibrium, payment of a dividend has no impact on the shareholder's wealth, and the shareholder is indifferent about receiving a dividend of one euro or a capital gain of one euro.

At equilibrium, by definition, the company is earning its cost of equity. Consider a company, Equilibrium plc, with share capital of €100 on which shareholders require a 10% return. Since we are in equilibrium, the company is making a net profit of €10. Either these earnings are paid out to shareholders in the form of dividends, or they are reinvested in the business at Equilibrium plc's 10% rate of return. Since that rate is exactly the rate that shareholders require, €10 of earnings reinvested will increase the value of Equilibrium plc by €10 – neither more nor less. Thus, either the shareholders collectively will have received €10 in cash, or the aggregate value of their shares will have increased by the same amount.

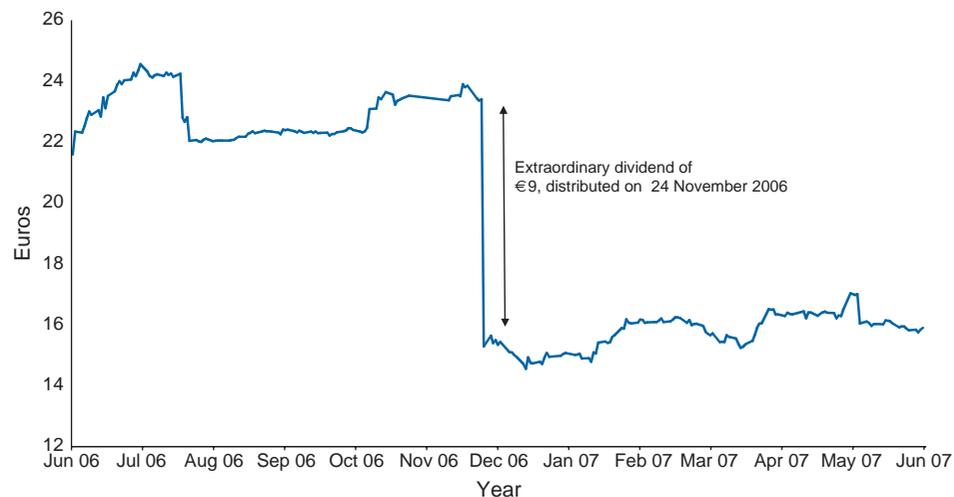
If Equilibrium plc now wishes to increase its payout ratio without disposing of assets or cutting back its investment programme, it will have to raise new money to finance the higher dividends. It has two choices:

- It can issue new shares. If it raises only as much new money as it has just paid out in dividends, the value of its equity capital will be unchanged. The old shareholders (who received cash) will own less of the company, and the new shareholders (who subscribed to the rights issue) will own more.
- It can borrow. The increase in the dividend will then be offset by a reduction in the value of equity capital due to the increase in debt.

**In markets in equilibrium, there are no good or bad dividend policies.**

If the company pays out a high proportion of its earnings, its shares will be worth less but its shareholders will receive more cash. If it distributes less, its shares will be worth more (provided that it reinvests in projects that are sufficiently profitable) and its shareholders will receive less cash – but the shareholder, if he wishes, can make up the difference by selling part of his shares.

The chart below plots the share price of Pages Jaunes, which on 24 November 2006 paid a special dividend of €9. The price of the shares adjusted immediately. Pages Jaunes' shares fell by €9 but shareholder wealth was unchanged.



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**In a universe of markets in equilibrium, paying out more or less in dividends will have no effect on shareholder wealth.**

Companies should thus not be concerned about dividend policy and should treat dividends as an adjustment to cash flow. This harks back to the Modigliani–Miller approach to financial policy: there is no way to create lasting value with merely a financing decision.

In any case, it's a false idea to present the dividends distribution as a remuneration for shareholders, similar to the salary for the company's employees. The wealth of the employee increases with the salary. Conversely, the wealth of shareholders is not modified by the dividends they receive: while they are certainly happy about getting this periodical remuneration, on the other hand, they must consider that the value of their shares will fall by an equivalent amount.

**Dividends do not enrich shareholders. They simply modify their wealth composition, like a transfer from the left to the right pocket.**

## **2/ DIVIDENDS AS SIGNALS**

Equilibrium market theory has a hard time finding any good reason for dividends to be paid at all. Since they do exist in the real world, new explanations must be sought for the earnings distribution problem.

A justification for the existence of dividends is proposed by the theory of signalling, around which an entire literature has developed, mainly during the 1980s.

**The dividend is a means of communication between the company and the market.**

The financial information that investors get from companies may be biased by selective disclosure or even manipulative accounting. Managers are naturally inclined to present the company in the best possible light, even if the image they convey does not represent the exact truth. Companies that really are profitable will therefore seek to distinguish themselves from those that are not through policies that the latter cannot imitate because they lack the resources to do so. Paying dividends is one such policy because it requires the company to have cash. A company that is struggling is not able to imitate a company that is prospering.

For this reason, dividend policy is a means of signalling that cannot be faked, and managers use it to convince the market that the picture of the company they present is the true one.

Dividend policy is also a way for the company's managers to show the market that they have a plan for the future and are anticipating certain results. If a company maintains its dividend when its earnings have decreased, that signals to the market that the decline is only temporary and earnings growth will resume.

Dividends are paid a few months after the close of the year, therefore the level of the dividend depends on earnings during both the past and the current period. That level thus provides information – a signal – about expected earnings during the current period.

**A dividend reduction, though, is not necessarily bad news for future earnings. It might also indicate that the company has a new opportunity and need to invest.**

Thus, during the 1990s we saw a number of groups traditionally positioned in mature industries reorient themselves towards businesses with faster growth. Examples in France include Bouygues and Vivendi (formerly Générale des Eaux), and Mannesmann (before being taken over and split by Vodafone). With the wave of privatisation in slow-growth industries such as electricity and gas, growth opportunities abroad also revitalised companies in those sectors. On the other side, some sectors reached some kind of maturity and in companies like Microsoft dividend policy changed.

The strategic communication aspect of dividend policy is of crucial importance, especially when there is a change in policy. One trap to be avoided is having a dividend rise interpreted as signalling a scarcity of investment opportunities. A dividend cut can be justified to investors by a strategy of renewed growth. Telefonica, for example, eliminated its dividend altogether to finance part of its expansion in Latin America.

### 3/ DIVIDENDS AND AGENCY THEORY

By requiring managers to pay out a fraction of the company's earnings to shareholders, dividend policy is a means of imposing "discipline" on those managers and forcing them to include in their reckoning the interest of the company's owners. A generous dividend policy will increase the company's dependence on either shareholders or lenders to finance the business.

In either case, those putting up the money have the power to say no. In the extreme, shareholders could demand that all earnings be paid out in dividends in order to reduce managers' latitude to act in ways that are not in the shareholders' interest. The company would then have to have regular rights issues, to which shareholders would decide whether to subscribe based on the probability of the projects proposed to them by the managers. This is the virtuous cycle of finance.

Although attractive intellectually because it greatly reduces the problem of asymmetric information, this solution runs up against the high costs of carrying out a capital increase – not just the direct costs, but the cost in terms of management time as well.

Bear in mind also that creditors watch out for their interest and tend to oppose overly generous dividends that could increase their risk, as we saw in Chapter 37.

Even though the dividend is often quite small in relation to the value of equity capital (a few percent at most), it plays an important role. It is a signal from the company to the financial markets. It is an instrument for control of managers by the market, in that it deprives the company of some of the cash the managers would have been able to invest as they saw fit. If the managers still wish to invest that much cash, they will have to borrow; and because debt imposes a discipline of its own (repayment), this pushes them to be more efficient.

### 4/ BECAUSE SHAREHOLDERS WISH IT

Baker and Wurgler (2004) have demonstrated that in some periods shareholders demand dividends and are thus ready to pay higher prices for more generous shares. From 2002 we have been exactly in this situation. Whilst our readers know that dividends do not enrich shareholders (since the value of the shares falls correspondingly), shareholders may nonetheless be happy about receiving more dividends. A good example of this attitude was provided by John Rockefeller in the 1920s: "Do you know the only thing that I like? To touch my dividends!"

Conversely, there are some periods when investors prefer companies that retain most of their earnings. In these cases, the stock market penalises generous shares, as happened in the second half of the 1990s: at the end of 1998, Telefonica announced the suppression of its dividend for financing its expansion in Latin America. At the announcement, the stock increased by 9%.

The reader may wonder why a series of opposite phases are often observed. We believe that there is no better answer than the existence of fads, even in finance. Waves of optimism lead to the reinvestment of earnings; conversely, pessimism pushes companies to distribute a higher portion of earnings.

## Section 38.2

## DIVIDEND DISTRIBUTION IN PRACTICE

## 1/ PAYOUT RATIO AND DIVIDEND GROWTH RATE

In practice, when dividends are paid, the two key criteria are:

- the rate of growth of dividends per share;
- the **payout ratio** ( $d$ ), represented by

$$d = \frac{\text{Dividend}}{\text{Net profit}}$$

All other criteria are irrelevant, frequently inaccurate and possibly misleading. For example, it is absurd to take the ratio of the dividend to the par value of the share since par value often has little to do with equity value.

Hence the difficulty for a company of meeting a dividend yield objective. It is the shareholder who, when evaluating the company, determines the desired yield, not the other way round.

In this regard, numerous tests have been performed to show that investors systematically re-evaluate a company when the amount of the dividend is made public.

In Europe, a payout ratio lower than 20% is considered to be a low dividend policy, whereas one greater than 60% is deemed high. The average in 2008 was about 40%.

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## PAYOUT RATIO FOR LARGE LISTED EUROPEAN COMPANIES IN 2008

0% < d < 20%		20% < d < 30%		30% < d < 40%		40% < d < 50%		50% < d < 100%	
Alcatel-Lucent	0%	Havae	21%	Publicis	31%	Carrefour	41%	Sodexo	51%
Ryanair	0%	Delhaize	22%	Heineken	31%	Metro	41%	Telecom Italia	52%
British Airways	0%	Italcementi	24%	Siemens	32%	Hermès	41%	Vivendi Universal	52%
Faurecia	0%	Arkema	24%	Philips	32%	Axa	42%	Casino	53%
BMW	0%	Eiffage	25%	Thales	34%	Repsol	43%	Veolia	55%
EADS	6%	Thyssenkrupp	25%	Essilor	34%	Dexia	44%	STMicroelectronics	56%
Heidelberg Cement	13%	Michelin	25%	Bayer	35%	JC Decaux	44%	Telefonica	57%
Air France - KLM	16%	Fiat	26%	Royal Dutch Shell	35%	Danone	45%	Société Générale	59%
Sacyr-Vallehermoso	17%	Continental	27%	Saint-Gobain	36%	Suez	45%	Belgacom	60%
Volkswagen	17%	Norbert Dentressangle	28%	Nokia	36%	BASF	46%	Energias de Portuga	63%
Ciments Français	18%	Beiersdorf	28%	LVMH	38%	PPR	48%	Bulgari	65%
Adidas	19%	Peugeot	28%	BNP Paribas	39%	Vinci	49%	Endesa	68%
Salzgiltstr	20%	Porsche	29%	Total	39%	Lagardère	49%	France Telecom	69%
Grupc Ferrcvial	20%	SAP	29%	Lafarge	40%	Air Liquide	50%	M6	80%
ArcelorMittal	20%	Allianz	30%	L'Oréal	40%	E.ON	50%	TF1	96%

Source: Exane BNP Paribas.

In 2003, only 32 out of the 600 largest listed companies in Europe had paid no dividend. In the United States the proportions are quite different. Eugene Fama and Kenneth French have established that, although 66% of listed US companies were paying a dividend in 1978, only 21% were doing so in 1999. Of course, the increase in the number of young, listed technology and Internet companies explains part of this trend. But even companies

that pay dividends had declining payout ratios, because profitable investment opportunities abounded during the period and shareholders became convinced that increasing the retention ratio was a good choice. The growing popularity of stock option plans gave beneficiaries of those plans no incentive to have their company pay out more in dividends, since a high payout ratio reduces the value of stock options.

A confluence of events has conspired of late to make bosses and investors think again about dividend policies. Investors have noticed the minimal amounts of cash they are earning from their shares. They have grown more sceptical about accounting profits in the wake of Enron and WorldCom and now wonder if evidence of profitability in the form of a dividend cheque might help them to sleep more easily. Some big firms have piled up so much cash that it seems to burn a hole in their pockets.

The now-passing unfashionability of dividends was most pronounced in the US, where technology firms have seized on the idea that paying a dividend indicates weakness, telling investors that they could not find profitable growth opportunities to use the money. As a result, maturing technology firms have come to own large cash piles: in 2008 Microsoft has \$23 billion, Cisco \$26 billion, Dell \$8 billion and Apple \$15 billion, for example. One of Europe's cash hoarders is Nokia, with over €11 billion.

Reduced transaction costs mean shareholders who want cash can get it by selling shares; the cost of this alternative to receiving a dividend is no longer prohibitive. The current tax treatment, as we shall see in Section 38.4, does not encourage the payment of dividends. Lastly, the sharp rise in share prices over the past 20 years has made the returns from dividends seem insignificant in comparison with those realised from capital gains – another incentive for managers not to focus on an aggressive payout policy.

**For these reasons, the payout ratio and the dividend growth rate (per share) are the only concrete parameters that are useful in analysing dividend policy.**

As John Lintner (1956) has established, managers have a payout ratio target expressed in terms of future earnings, an absolute reference. For example, managers set an objective of distributing 45% of the company's earnings and try to keep fluctuations in the unit dividend as small as possible in the face of significant variations in earnings.

The regression model used by Lintner is the following:

$$\Delta D_{it} = A_i + C_i(r_i E_{it} - D_{i(t-1)}) + U_{it}$$

where  $\Delta D_{it}$  is the change in dividends per share observed from period  $t - 1$  to  $t$  for firm  $I$ ,  $A_i$  is the intercept term for firm  $I$ ,  $C_i$  the speed of adjustment coefficient for firm  $i$ ,  $r_i$  the target payout ratio for firm  $i$ ,  $E_{it}$  the earnings after taxes per share in period  $t$  for firm  $i$ ,  $D_{i(t-1)}$  the dividends per share paid out last period for firm  $i$ , and  $U_{it}$  the error term for firm  $i$  in period  $t$ .

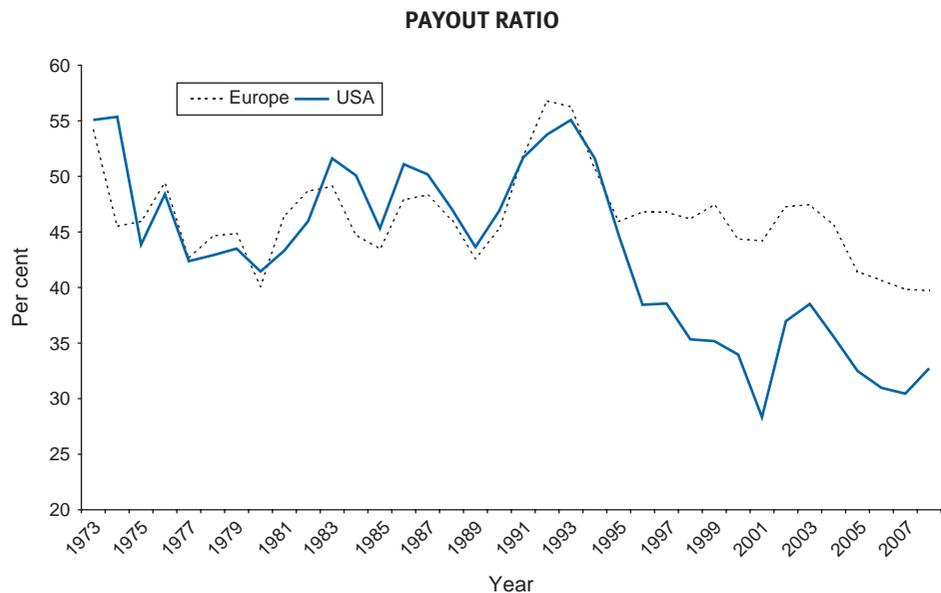
Lintner tested his model with actual corporate dividends and found a coefficient of determination ( $R^2$ ) of 85%. In other words, 85% of the variation in dividend changes year to year was explained by this compact mathematical model. Importantly, the intercept term was significant and positive. This evidence indicated that managers consciously do avoid dividend cuts even when earnings decline, consistent with Lintner's impression from his interviews.

Lintner's results show us that managers do try to do what they normally describe verbally. They:

- 1 stabilise dividends with gradual, sustainable increases whenever possible;
- 2 establish an appropriate target payout ratio; and
- 3 avoid dividend cuts, if at all possible.

In 1993, payout ratios in Europe and the United States were quite high (60%), but the explanation has more to do with poor earnings than with any change in dividend policy. To avoid a cut in dividend per share, managers allowed the payout ratio to rise temporarily. The same phenomenon explains the rise in payout ratios in 2002.

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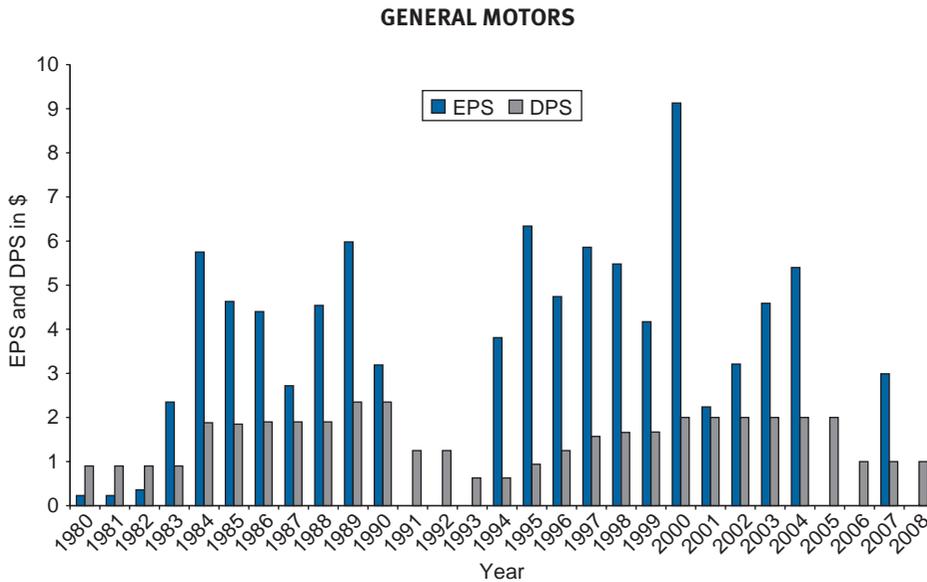
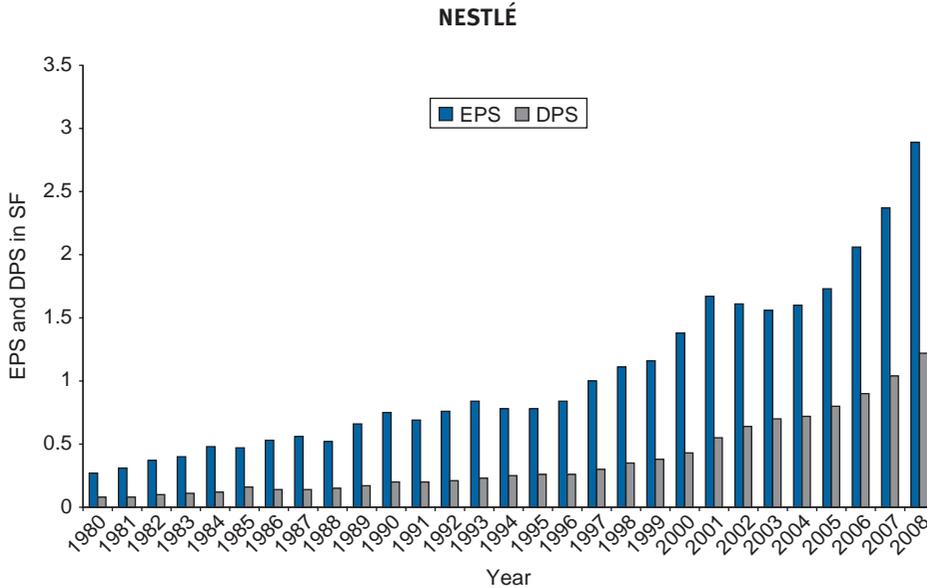
Source: Datastream–Exane BNP Paribas.

Some degree of regularity is desirable, either in earnings growth or in dividends paid out, so the company must necessarily choose an objective for the pro le of dividends over time. For this purpose, dividend pro les can be classi ed in the following three categories.

- If earnings growth is regular, dividend policy is of lesser importance and the company can cut its payout ratio without risk.
- If earnings are cyclical owing to the nature of the business sector, it is important for the dividend to be kept steady. The company needs to retain enough room to manoeuvre to ensure that phases of steady dividends are followed by phases of rising dividends.
- Lastly, a dividend that varies frequently conveys no useful information to the investor and may even suggest that the company's management has no coherent strategy for doing business in its sector. A pro le of this kind can hardly have any bene cial effect on the share price.

**A dividend policy must be credible – that is, consistent with the earnings that the company achieves. In the long term, no dividend pro le, regardless of how smooth it is, can have favourable effects unless it appears sustainable. In other words, it must not be inconsistent or incompatible with the earnings pro le.**

Compare, for example, the dividend and earnings pro les since 1980 of two industrial groups: Nestlé being a growth company and General Motors a cyclical one:



On the stock market, a high payout ratio implies low price volatility, other things being equal. This is easily demonstrated with the dividend discount valuation model. The share

price of a company that pays out all its earnings in dividends will behave much like the price of a bond.

Here we re-encounter the concept of *duration*. The security with the highest duration will also have the highest volatility. A high payout ratio tends to reduce duration and thereby makes the share price less volatile.

Of course, the payout ratio is not the only determinant of a share's volatility.

For a company, paying out little or none of its earnings translates into growth in book value, an increase in market value and thus eventually into capital gains. To realise those gains, though, the shareholder has to sell. If selling the company's shares is a "crime" – and some managers come close to regarding it as one – then a low-dividend policy is an inducement to crime. A family-owned company that pays low dividends risks weakening its control.

A high-dividend policy, on the other hand, is certainly one way of retaining the loyalty of shareholders that have got used to the income and forget about the value. This tends to be particularly true of family shareholders without management roles in the company.

A financial holding company that wishes to pay dividends must either have received dividends itself from the companies in which it holds stakes or have realised potential capital gains by selling off some assets. One euro of dividends received goes directly onto the income statement and can therefore be redistributed. One euro of capital gain, in contrast, must be realised before it can go into earnings. There has to be a sale.

Brav et al. (2003) surveyed 384 CFOs and Treasurers, and conducted in-depth interviews with a further 24, to determine the key factors that drive dividend and share repurchase policies. They found that managers are very reluctant to cut dividends, that dividends are smoothed through time, and that dividend increases are tied to long-run sustainable earnings but much less so than in the past. Rather than increasing dividends, many firms use repurchases as an alternative. Paying out with repurchases is viewed by managers as being more flexible than using dividends, permitting a better opportunity to optimise investment. Managers like to repurchase shares when they feel their stock is undervalued and in an effort to affect EPS. Dividend increases and the level of share repurchases are generally paid out of residual cash flow, after investment and liquidity needs are met. Financial executives believe that retail investors have a strong preference for dividends, in spite of the tax disadvantage relative to repurchases. In contrast, executives believe that institutional investors as a class have no strong preference between dividends and repurchases. In general, management views provide at most moderate support for agency, signalling, and clientele hypotheses of payout policy. Tax considerations play only a secondary role.

## 2/ HOW DIVIDENDS ARE PAID

### (a) Advance dividend

This practice consists in paying a fraction of the forthcoming dividend in advance, hence the name. The decision is taken by the board of directors or the executive board and need not be approved by the AGM. An advance dividend offers a way of smoothing cash flows to shareholders and cash outflows from the company. The advance is typically

paid in December or January (midway between two annual dividend dates) and represents between a quarter and a half of the annual dividend.

In the United States, Canada and the United Kingdom, infra-annual dividends are common.

### (b) Dividend paid in shares

Companies may offer shareholders a choice of receiving dividends in cash or in shares of the company.<sup>1</sup> The decision is taken by shareholders at the ordinary general meeting at which the accounts of the year are approved. However, the company's by-laws must specifically allow such a choice.

Paying the dividend in shares allows the company to make a distribution of earnings while retaining the corresponding cash funds.

There is no tax advantage for shares issued in payment of dividends. The value of the shares received is taxed as if it were paid in cash. A shareholder who chooses to be paid in the form of shares must therefore pay tax on the dividend without having received any cash, which may present a problem.

Offering to pay dividends in shares may lead to some limited redistribution of ownership among the shareholders, since some will accept and others will decline.

A share dividend represents no special financial advantage for shareholders other than the ability to reinvest dividends at no charge and generally at a slight discount to the market price (at most 10%). Some investors have no compunctions about taking payment of their dividends in shares and immediately selling those shares in order to pocket the discount. Manipulation of this kind drives down the price. For this reason, the practice, although quite popular in the early 1990s, has practically disappeared.<sup>2</sup>

### (c) Preferential dividend

To reward loyal shareholders that have held their shares for more than two years, some companies (for example, Air Liquide) have instituted the practice of paying a preferential dividend.

A preferential dividend can be established only by decision of an extraordinary general meeting and only when the company has issued securities such as convertible bonds or warrants that could give rise to new shares.

Lastly, we should mention once again preference shares, which have a higher dividend than ordinary shares.

<sup>1</sup> If its by-laws allow, a company may distribute shares that it holds in portfolio in place of a cash dividend. This is not the same as paying the dividend in its own shares.

<sup>2</sup> The practice is making a comeback in 2008 with UBS and Crédit Agricole who wanted to preserve their cash reserves amid the subprime crisis.

## Section 38.3

### SHARE BUYBACKS AND CAPITAL REDUCTION

A company may in certain circumstances buy back its own shares and either keep them on the balance sheet or cancel them, in which case there is said to be a **capital decrease** or **capital reduction**. Even when shares are repurchased but not cancelled, analysts will (in their own calculations) reduce the number of shares in circulation by the quantity of shares bought back.

Neglecting taxes, if one supposes that the company buys back shares from all shareholders in proportion to their holdings and then cancels those shares, the resulting capital

decrease is strictly identical to the payment of a dividend. Cash is transferred from the company to the shareholders with no change in the structure of ownership.

As we shall see below, however, an actual capital decrease cannot be egalitarian in this way. Furthermore, a capital decrease is likely to be a more exceptional event than payment of dividends.

We know that no earnings retention policy is attractive unless the company can invest its funds at a rate of return greater than or equal to the weighted average cost of capital. Let us take the reasoning here to its logical extreme. Every euro reinvested by the company must earn at least the rate of return required by providers of funds; if it does not, value will be destroyed. Rather than destroy value, it is better to return that euro to the owners. We can call this “decapitalisation”.

**From a theoretical viewpoint, when a business no longer has any investment projects that are sufficiently profitable, it should not only pay out all its earnings but also return all or part of its equity capital.**

Equity capital is also needed to finance the risk of the business. Without it, the company could find itself in a serious cash crisis at the first downturn in the economy. On the other hand, when the company has acquired a strategic position in its market strong enough to ensure continued profitability and value, the normal course of action is to reduce equity financing and increase debt. Free cash flow has become sure enough to support the regular scheduled repayments required on borrowings.

**Equity capital serves to bear business risk. When that risk appears under control, equity can normally be replaced in part by debt capital.**

## 1/ DESCRIPTION

We will not be talking here of capital decreases that occur following an accounting determination that the book value of equity is insufficient. A capital reduction in this context may be required by law or undertaken voluntarily (to lower the par value of the share and make possible a new issue of shares as part of a recapitalisation). **Since capital decreases of this kind do not result in an outflow of cash, they are altogether different, a matter of law and accounting rather than finance.**

Our attention will be focused on capital decreases that correspond to an actual distribution of cash and subsequent cancellation of shares. From an economic standpoint, this is analysed as a reduction in equity capital, although from a tax standpoint, as we shall see, it is treated as a distribution of assets.

A capital decrease corresponding to a distribution of cash can be accomplished in a number of ways.

- By reducing the par value of all shares, thereby automatically reducing authorised capital.
- For listed companies only, by buying back shares on the **open market**. In France and Italy, such repurchases are limited to 10% of the share capital and must be made as part of an authorised share buyback programme. The company must have published an information document about the programme approved by stock exchange authorities prior to its release. The programme may last no longer than 18 months.

The shares acquired may be cancelled (up to a limit of 10% of the capital every 24 months) and the purchase cost deducted from the par value of the repurchased shares, with any excess cost charged against distributable reserves. The repurchased shares may also be kept in treasury by the company to serve as acquisition currency or to fulfill the exercise of stock options held by employees. Lastly, they can be sold on the open market for the purpose of stabilising the share price. If the shares are not cancelled, however, the repurchases cannot really be described as a capital decrease.

On the company's books, repurchased shares appear on the consolidated balance sheet as marketable securities if they were acquired for the purpose of stabilising the share price or fulfilling employee stock options. In all other cases, the purchase cost is subtracted from shareholders' equity. Under IAS and US accounting standards, repurchased shares are always deducted from consolidated equity.

- By **tender offer**. For a listed company in France, for example, this takes the form of a public share repurchase offer by the company for its own shares. In practice, the board of directors, using an authorisation that must have been granted to it at an extraordinary general meeting, makes an offer to all shareholders to buy all or part of their shares at a certain price during a certain period (usually about one month). If too many shares are tendered under the offer, the company scales back all the surrender requests in proportion. If too few are tendered, it cancels the shares that are tendered. If management decides on a tender offer, it has the option of considering the traditional fixed-price offering or the *Dutch auction method*. In Dutch auctions, the firm no longer offers to repurchase shares at a single price, but rather announces a *range* of prices. Each shareholder thus must specify an acceptable selling price within the prescribed range set by the company. If he chooses a high selling price, he will increase the proceeds provided the shares are accepted by the company, but he reduces the probability that shares will be accepted for repurchase. At the end of the offer period, the firm tabulates the received offers, and determines the lowest price that allows repurchasing the desired number of shares. The French food and facilities management company Sodexo used this technique in 2008, for example.

In some other European countries, a share buyback can be accomplished by issuing **put warrants** to each shareholder, each warrant giving the holder the right to sell one share to the company at a specified price. Such a warrant is a put option issued by the company. This technique has never been used in France, mainly for tax reasons.

A capital decrease changes the capital structure and thereby increases the risk borne by creditors. To protect the latter, law generally allows creditors to require additional guarantees or call their loans early, although they cannot block the operation outright.

## 2/THEORETICAL ANALYSIS

Jagannathan et al. (2000) have measured the growth in open market stock repurchases and the manner in which stock repurchases and dividends are used by US corporations. Stock repurchases and dividends are used at different times from one another, by different kinds of firms. Stock repurchases are very pro-cyclical, while dividends increase steadily over time. Dividends are paid by firms with higher "permanent" operating cash flows, while repurchases are used by firms with higher "temporary", nonoperating cash flows.

Repurchasing firms also have much more volatile cash flows and distributions. Finally, firms repurchase stock following poor stock market performance and increase dividends following good performance. These results are consistent with the view that the flexibility inherent in repurchase programmes is one reason why they are sometimes used instead of dividends.

Several different considerations might explain why a company would buy back its own shares.

- Absence of opportunities to invest at the required rate of return. Managers therefore pass the funds to shareholders, who take it upon themselves to find investments elsewhere that meet their requirements.
- Signalling good news (managers believe the shares are undervalued).
- Increasing financial leverage, to take fuller advantage of the corresponding tax break (not very persuasive!).
- Direct tax incentive: if the object is to transfer cash from the business to shareholders, it is more tax-efficient to buy back shares than to pay a dividend.
- Hurting creditors: buying back shares increases the risk of the business and therefore diminishes the value of its debt. Creditors may try to block it.
- Transferring value between shareholders who decline the offer for reasons of power (they want to increase their stake in the company) and shareholders who agree to sell back their shares at a price exceeding their value.

Empirical analysis confirms that share buybacks are mainly undertaken for signalling purposes. On this point, Jagannathan et al. have established that, compared with dividends, share buybacks give little indication of future earnings. Companies that raise their dividends do in fact see their earnings increase, but this is not the case when companies buyback shares. In a way, declaring a dividend represents an undertaking by the company's managers to maintain that dividend, whereas a share buyback entails no such moral commitment. Thus, cyclical businesses are more likely to use share buybacks than businesses with steady growth.

Dittmar (2000) has investigated the relation between stock repurchases and distribution, investment, capital structure, corporate control, and compensation policies over the 1977–1996 period. He finds that firms repurchase stock to take advantage of potential undervaluation and, in many periods, to distribute excess capital. However, firms also repurchase stock during certain periods to alter their leverage ratio, fend off takeovers, and counter the dilution effects of stock options.

Grullon and Ikenberry (2000) argue that repurchases add value in two main ways:

- 1 for the tax efficiency in returning excess capital to shareholders;
- 2 for the signal managers send to investors about their belief that the company is undervalued.

If stock repurchase and dividends serve the same economic function, why is repurchasing popularity growing so rapidly? Basically for two reasons:

- they are more efficient taxwise in distributing excess capital;
- they provide corporate managers with the flexibility to make small adjustments in the capital structure in order to correct perceived undervaluation of the firm's shares.

We frequently see it argued that a capital decrease, by replacing a more costly form of financing (equity) with a less costly one (debt), lowers the weighted average cost of capital. The reader who has absorbed the lessons of Modigliani and Miller and understands that cost of capital is independent of capital structure (remember “the size of a pizza is the same no matter how you slice it”?) may be indulgent. To err is human; only to persist in error is diabolical!

**A capital decrease by itself does not reduce a company’s cost of capital and thus cannot create value. At best, it can avoid value destruction by preventing the company from investing cash at less than the cost of equity.**

**Only if the company manages to buy back its shares at less than they are worth could it hope to create value. The theory of markets in equilibrium leaves little hope of being able to do this.**

A share buyback should nowadays be regarded as a normal transaction. The message that it signals is this: the company’s managers take the shareholders’ interest to heart and exceptionally, for want of adequate investment opportunities, they are paying out part of a large cash flow to avoid destroying value.

Because the announcement of a share buyback draws media attention, it probably has more impact than an increase in the dividend – even one that might signal a lasting change in the company’s dividend policy.

**Share buybacks are becoming a normal way of reallocating cash from mature businesses to newer sectors or faster-growing companies.**

As an illustration, here are the top 20 share buybacks in 2007 in Europe:

	Company	€m
1	Vodafone	7490
2	GlaxoSmithkline	5107
3	BP	4865
4	Astrazeneca	4170
5	Anglo American	4161
6	BHP Billiton	4040
7	Ahold	4016
8	Nokia	3819
9	Daimler	3510
10	EON	3500
11	ING	3446
12	Crédit Suisse	3375
13	Novartis	3146
14	Nestlé	2696
15	Mittal Arcelor	2604
16	Atlas Copco	2586
17	Barclays	2519
18	Royal Dutch/Shell	2401
19	Munich Re	2305
20	Fortis	2279

Source: Datastream.

### 3/ THE IMPACT ON THE COMPANY AND ITS RATIOS

Consider a company with book value of equity of €400m, one million shares outstanding and earnings of €20m. Suppose that it reduces its share capital by 20% by buying back its own shares at their market value, in one case at €200 per share and in another case at €800 per share. It pays for the buyback by borrowing at 3% after tax (or by liquidating short-term investments earnings 3%, which amounts to the same thing).

BEFORE						
Price per share	Book value of equity	Market value of equity	Earnings	Book value per share	EPS	P/E
€200	€400m	€200m	€20m	€400	€20	10
€800	€400m	€800m	€20m	€400	€20	40
AFTER						
Price per share	Book value of equity	Market value of equity	Earnings	Book value per share	EPS	P/E
€200	€360m	€160m	€18.8m	€450 +12.5%	€23.5 +17.5%	8.5
€800	€240m	€640m	€15.2m	€300 -25%	€19 -5%	42.1

After the transaction, the book value of equity has decreased by the amount of funds spent on the repurchase – €40 million in one case, €160 million in the other – and so has the market value. Going forward, earnings are reduced by the additional interest charges. The relevant analysis, however, is at the per-share level. The repurchase is made at the current share price (or at current value, if the company is not quoted), possibly increased by a premium of 5% or 10% to induce holders to tender their shares under the offer.

With repurchase at €200, earnings per share increase by 17.5%, whereas book value per share increases by 12.5%. With repurchase at €800, earnings per share decrease by 5% whereas book value per share decreases by 25%.

More generally, repurchase of shares by the company results in:

- an increase in earnings per share (accretion) whenever the reciprocal of P/E is greater than the after-tax rate of interest paid on incremental debt (or earned on short-term debt securities). If E/P is less than the rate of interest, there is a decrease in earnings per share (dilution).
- an increase in the book value of equity per share whenever book value per share before the purchase is greater than the purchase price per share.

The transaction is thus the inverse of a capital increase, which should come as no surprise to the reader.

**Bear in mind that, although the calculation of the change in earnings per share is of interest, it is not an indicator of value creation. The real issue is not whether a capital decrease will mechanically dilute earnings per share, but whether:**

- **the price at which the shares are repurchased is less than their estimated value;**
- **the increase in the debt burden will translate into better performance by management; and**
- **the marginal rate of return on the funds returned to shareholders by the buyback was less than the cost of capital.**

**These are the three sources of value creation in a capital decrease.**

#### 4/TAX ISSUES

As we have seen, the income tax borne by investors can reduce, eliminate or even reverse the advantage of debt financing conferred by the deductibility of interest expenses against the income tax borne by the company. Being nondeductible, dividends are taxed once by the corporate income tax on the company and a second time by the personal income tax on the shareholder. To avoid this double taxation, some countries have instituted an offsetting mechanism called the **dividend tax credit**, which is intended to neutralise the effect of the corporate income tax at the level of the investor.

For certain categories of shareholders, therefore, there is no tax friction when dividends are paid, and this is important.

Lastly, when dividends are paid out of earnings that are either not subject to corporate income tax or taxed at a rate lower than the normal rate (such as capital gains), the company must pay a special equalisation tax. This tax is equal to 50% of the amounts paid (and thus offsets the dividend tax credit). It is payable only on distributions eligible for dividend tax credit. Equalisation tax is also owed when dividends are paid out of the earnings of accounting periods closed more than 5 years before.

The way dividends are taxed can have wide-ranging consequences for how a firm is run. For an individual investor, the tax treatment depends on how his shares were sold. If they were bought back from him as part of a share buyback programme, the tax he must pay is the capital gains tax, as in a normal share sale. It may be remarked that, since the company bought the shares on the open market, it would be a complicated matter to subject the investor to any tax treatment different from that which would apply if he had sold to another investor. If the capital decrease was accomplished by a public share repurchase offer (not part of a buyback programme) or by reduction of the par value, the difference between the repurchase price and the investor's original acquisition price is deemed a dividend (without dividend tax credit, of course) and is taxed at the investor's marginal income tax rate.

Taxes largely explain the growing popularity of share buybacks compared with dividends. The firm may be indifferent about dividends and buybacks as a means of distributing profits, but many investors are not. In America and many other countries, dividends received by investors are taxed at a higher rate than capital gains, such as those created by share repurchases.

In most countries, tax rules allow firms to treat interest payments on debt as a tax deductible expense, whereas cash payments to equity holders in the form of dividends or share repurchases come out of after-tax income. All else being equal, therefore, the tax

system typically makes debt a cheaper source of finance for a firm, at the margin, than equity.

In recent years, governments almost everywhere have become increasingly concerned about the impact of taxation on companies. By and large, they have favoured tax reforms that are intended to boost business activity, such as cutting marginal tax rates – though in practice their reforms have often had unpredictable results.

Removing the tax disadvantage of paying dividends may force managers to find other plausible excuses for holding on to cash – or else to pay it out. This may make it harder for them to squander cash on ill-advised ventures such as, say, Microsoft's costly move into cable television.

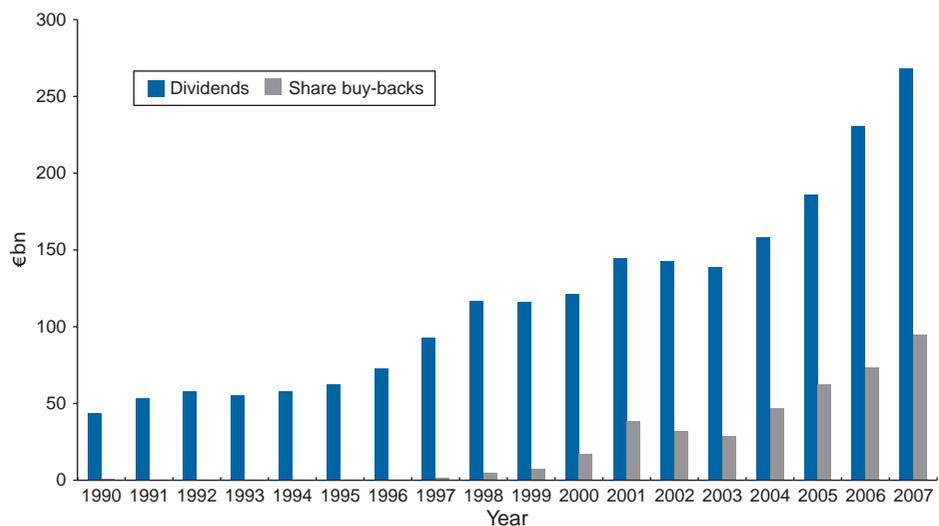
Lastly, we note that the company may offer its shareholders cash or securities that it holds in portfolio. In the latter case, the company will owe capital gains tax on the difference between the value of the securities distributed and its tax basis for those securities (initial acquisition cost).

## Section 38.4

### THE CHOICE BETWEEN DIVIDENDS, SHARE BUYBACKS AND CAPITAL REDUCTION

Dividends, share buybacks and capital reductions are all ways to return cash to shareholders, but as they have different impacts on a company's parameters one cannot be used instead of another. For instance, in Europe share buybacks amounted to almost nothing in the mid-1990s while they reached about €100bn in 2007:

**DIVIDENDS AND SHARE BUY-BACKS OF THE 600 LARGEST LISTED EUROPEAN COMPANIES (€BN)**



Source: Datastream.

Five criteria can be used to understand the choice of the best technique for distributing the excess cash, given the desired objective.

### 1/ FLEXIBILITY

It is difficult to modify radically and rapidly the dividend level. Any change in the dividend policy raises concerns about the future evolution of the enterprise model and creates expectations regarding the medium-term sustainability of the new level of dividends. This is the major reason for which changes in the dividend policy generally occur very slowly and produce effects on the capital structure only after some periods.

Conversely, the capital reduction and the extraordinary dividends are specific *una tantum* decisions, and investors do not expect any regularity regarding them. They can perfectly fit situations where the company wants to distribute the cash generated by an important asset or intends to modify the capital structure rapidly.

### 2/ SIGNALLING

All financial decisions send signals to investors, and thus the company must ponder the expected perception investors may have following the adoption of a specific financial decision.

Applying this principle to dividends, we can reasonably say that the most neutral solution is represented by the extraordinary dividend: it is nonrecurring and it does not imply any judgement on the value of the stock. Moreover, it benefits all investors.

Changes in ordinary dividends and capital reductions, however, are clearly perceived as signals sent to the market: in the former case, regarding the level of future earnings; in the latter case, regarding the stock price because a company would not buy a portion of its shares if the management believed that the shares were overvalued.

Jagannathan et al. have demonstrated that share buyback gives little information about future results compared to dividends. While companies that increase dividends show an improvement of results, a similar conclusion cannot be reached with share buybacks. The distribution of dividends contains a commitment from the management to maintaining the same level of dividend (or increasing them) for a certain number of periods; share buybacks do not imply an analogous commitment. Thus, cyclical companies are more inclined to use share buybacks than noncyclical companies.

### 3/ IMPACT ON THE SHAREHOLDERS' STRUCTURE

Ordinary and extraordinary dividends do not affect the shareholders' structure because they do not modify the number of outstanding shares. On the contrary, capital reduction and share buybacks affect the shareholders' composition because some shareholders may simply decide not to participate in the capital reduction or to sell their shares in case of a share buyback. Their percentage of control increases.

As an example, consider the case Peugeot. Starting from 1999, the controlling family has regularly bought back shares of the company, for a total amount of €2580m, which allowed them to increase their percentage to 29.2%, compared to the initial 22.7%.

## 4/ IMPACT ON STOCK OPTIONS

According to the current legislation of some countries, the capital reduction realised by buying back shares at a high price requires an adjustment of the exercise price of the stock options with a neutral effect on stock option holders.

However, the French law (for example) does not regulate similar adjustments in case of ordinary dividends, buybacks executed at the current market price and extraordinary dividends. Since the extraordinary dividend can strongly reduce the stock price, the absence of any adjustment of the exercise price of the stock options explains why this instrument is not loved by the management.

The strong decrease in the number of companies distributing a dividend (66% in 1978 vs. 21% in 1999) in America in the last decade, can also be at least partially explained by the increasing popularity of share buybacks, probably pushed up by the managers holding stock options.

In fact, the distribution of a dividend mechanically reduces the stock price, thus decreasing the probability of a high capital gain for stock option holders. The share buy-back does not generate this negative effect on the value of the stock options. It also leaves unsophisticated investors believing that the stock price will go up.

## 5/ TAX ISSUES

Tax is naturally an important element that requires close attention. For individual investors belonging to the top classes of personal income, generally speaking the lowest taxation is on the capital gains rather than the ordinary dividends (in France 29%). This evidence pushes the shareholders to consider more favourably share repurchase.

In the United States, taxation on dividends for individual investors has been considerably sweetened since 2003, being now 15%. This has restored the attractiveness of periodical dividends and penalised capital gains which in fact are now the dominant way of distributing cash in the United States.

### SUMMARY



Within the framework of equilibrium market theory, dividend policy has little importance. The shareholder is indifferent about receiving a dividend and letting the company reinvest the cash in assets that will earn the rate of return he requires. His wealth is the same in either case.

Signalling theory interprets dividends as information communicated by managers to investors about future earnings. A rise in the dividend signals good news, a cut signals bad news.

Agency theory interprets dividends as a means of mitigating conflicts between owners and managers. Paying a dividend reduces the amount of cash that managers are able invest without much control on the part of shareholders. On the other hand, paying a dividend aggravates conflicts between owners and lenders when the amount of that dividend is significant.

All things considered, dividend policy should be judged on the basis of the company's marginal rate of return on capital employed. If that rate is above the weighted average cost of capital, the dividend can be low or nil because the company is creating value when it reinvests its earnings. If the marginal rate of return is below the cost of capital, shareholders are better off if the company distributes all its earnings to them.

As long as the company has opportunities to invest at a satisfactory return, managers set a target dividend payout ratio that will be higher or lower depending on whether the company has reached maturity or is still growing. Fluctuations in net earnings can be smoothed over in the per-share dividend so that it does not move erratically and send the wrong signal to investors.

The reader should not forget that, to some extent, dividend policy determines the composition of the shareholder body: paying no dividends leads to low loyalty on the part of shareholders, who must regularly sell shares to meet their needs for cash.

A capital decrease can take the form of either a reduction in the par value of all shares via distribution to shareholders of the corresponding amount of cash, or a buyback of shares in which shareholders are free to participate or not as they see fit.

A capital decrease may be undertaken for several different purposes: to return funds to shareholders when managers are unable to find investment projects meeting the shareholders' return requirements; to signal an undervalued share price; as an indirect means of increasing the percentage of control held by shareholders that do not take part in the buyback; or to distribute cash to shareholders at a lower tax cost than by paying a dividend.

The reduction in equity capital produces an increase in earnings per share if the reciprocal of the share's P/E ratio is higher than the after-tax interest rate paid on incremental debt (or forgone on short-term investments). But make no mistake, this has only a remote association with value creation.

Debt-financed capital decreases are economically sound when they allow equity capital to be reallocated away from companies that have reached maturity and achieved predictable cash flows, towards newer companies that are still growing. They are a means of preventing overinvestment and haphazard diversification. However, they lead to value creation only if one or more of the following hold: the added debt burden constrains managers to achieve better performance; the shares are bought back at a price below their true value; or the funds returned to shareholders would have earned less than the cost of capital if kept in the company.

- 1/What are the two criteria by which a dividend policy should be judged?
- 2/Does an increase in the dividend result in an increase in the value of the share?
- 3/Given tax neutrality, would you prefer to receive dividends or realise capital gains?  
Same question given the French tax system.
- 4/According to signalling theory, what is indicated by maintaining the per-share dividend following a capital increase by incorporation of reserves?
- 5/Is there a cost to the company of issuing bonus shares? Does such an issue change shareholder wealth? What purpose does it serve?
- 6/Does a high dividend provide assurance of a stable share price? Why?
- 7/Can a company have a target dividend yield for its shareholders? Why or why not?

## QUESTIONS



quiz

- 8/On the record date of the dividend, the value of the share decreases instantly by the amount of the dividend. Is the shareholder worse off?
- 9/What is the natural temptation of a company that is required to pay out 100% of its earnings, in terms of how much earnings it records?
- 10/On what condition would you invest in a company that pays no dividend?
- 11/A company that has not been paying dividends announces that it will pay one. How would you interpret this news according to (a) equilibrium market theory, (b) agency theory and (c) signalling theory?
- 12/Is a manager who holds stock options in favour of a high-dividend policy? Why or why not?
- 13/Do tobacco companies in western countries have high payout ratios? Why or why not?
- 14/What signal is sent by paying a dividend in shares?
- 15/Explain why a sharp increase in dividend often results in a decrease in the value of the company's borrowings.
- 16/What is the impact of a debt-heavy capital structure on the payout ratio?
- 17/In what circumstances does a company have good reason to have a capital decrease?
- 18/Forgetting tax considerations, can a capital decrease enhance the value of the company's operating assets? the value of its shares?
- 19/What difference do you see between payment of dividends and capital reduction?
- 20/What is the necessary condition for a share buyback to increase earnings per share? to increase the book value of equity capital per share?
- 21/What does a share buyback programme mean for the company's creditors?
- 22/Under what conditions might a fast-growing company with opportunities to invest at a rate of return higher than its cost of capital have a capital decrease?
- 23/Does a manager who holds stock options in the company prefer buybacks or dividends? Why?

## EXERCISES

1/ On 24 May 2002, you observe the following data on Yahoo! Finance:

- TotalFinaElf share price: €168.2
- Net dividend per share: €3.8
- Earnings per share: €10.82

Calculate TotalFinaElf's payout ratio and the gross yield and net yield on the company's shares. What do you think?

2/ What do you think of the dividend policies of the following companies?

		2003	2004	2005	2006	2007	2008	2009
A	EPS	100	115	131	150	160	165	167
	DPS	20	23	26	30	35	41	60
B	EPS	350	402	458	524	559	577	584
	DPS	70	80	92	105	112	115	117
C	EPS	100	50	0	-50	-50	0	50
	DPS	5	5	5	5	5	5	6
D	EPS	500	520	550	600	500	400	300
	DPS	100	80	70	100	120	150	200

3/ Gassoumi plc has the following characteristics:

- Net earnings: €100m
- Number of shares: 1,000,000
- Market price per share: €1000
- Book value of equity: €1200m
- EPS: €100
- Book value per share: €1200

The company decides to take advantage of a sudden stock market slump by buying back a quarter of its shares at a price of €500 per share. Its after-tax cost of debt is 5%.

Calculate EPS and book value per share. Same question if the buyback price is €1500 per share. What do you conclude?

4/ Rowak plc is a Syldavian industrial company listed on the Klow stock exchange. The number of shares in issue has been constant over the period at one million. The corporate income tax rate is 33%.

- (a) Calculate Rowak's after-tax ROCE and ROE in each year. What do you think?
- (b) What do you think of the fact that Rowak has never paid a dividend?
- (c) In early September 2006, the company's market capitalisation is 200 million, and its managers believe the shares are worth 150 each. Rowak's chairman proposes to the board of directors that 50 million be devoted to buying back (and cancelling) outstanding shares. The programme is to be financed by borrowing at 10% before tax. The board of directors refuses. Why, in your opinion?
- (d) In December 2008, the company's market capitalisation has fallen to 90 million (still with the same number of shares in issue) and the estimated value of the share is 120. Rowak's chairman puts forward his proposal again. What do you think now?

(figures in millions)	Revenue	Net profit	Pre-tax interest expenses	Book value of equity	Net debt	Market capitalisation
2003	170	8	9	50	60	55
2004	130	10	10	60	70	90
2005	170	11	10	71	75	152
2006	220	13	9	84	76	195
2007	230	13	7	97	70	210
2008	240	13	6	110	65	200

## ANSWERS

### Questions

- 1/Dividend growth rate and payout ratio.
- 2/Not according to equilibrium market theory, but it could be a positive signal.
- 3/According to equilibrium market theory, you should not care; according to agency theory, you should prefer dividends. If your marginal income tax rate is more than 44%, you should prefer capital gains.
- 4/The company expects to maintain its profitability.
- 5/The company does not gain or lose. An issue of bonus shares does not increase shareholder wealth. It can improve liquidity by increasing the number of shares in circulation. It can be a positive signal if the dividend per share is maintained.
- 6/A high dividend helps to ensure stability of the share price but in no way guarantees it.
- 7/No, because the shareholder determines what yield he chooses to receive.
- 8/No. The shares are worth less, but the shareholder receives the difference in cash. If this were not the case, there would be arbitrage opportunities.
- 9/Conceal earnings to avoid having to pay them out in dividends and thereby maximise internal financing.
- 10/If the marginal rate of return on capital employed is greater than the weighted average cost of capital.
- 11/
  - (a) Indifferent.
  - (b) Agency costs are reduced because managers will have less opportunity for uncontrolled investment.
  - (c) Growth is slowing.
- 12/No, because high dividends hold down the price of the shares on which the manager holds stock options.
- 13/Yes, because their growth prospects are weak (and also to get their shareholders addicted, like their customers!).
- 14/The company does not have the cash to pay a cash dividend!
- 15/Because there is a transfer of value from creditors, whose claims on the company become riskier, to shareholders.
- 16/Reduces the payout ratio because there are periodic interest and principal payments to be made.

- 17/Whenever the marginal rate of return on its investments is less than the rate of return required by its shareholders.
- 18/There will be a reduction in the informational asymmetry and a consequent increase in value.
- 19/Fundamentally, the two are the same, but the dividend goes to all shareholders whereas the capital reduction may be reserved for only some of them. The tax treatment may also be different.
- 20/EPS increase whenever the reciprocal of P/E is higher than the after-tax interest rate on debt (or short-term investments). Depends on the ratio of price to book value (PBR).
- 21/An increase in risk borne by them.
- 22/If its shares are particularly undervalued.
- 23/He prefers buybacks because paying a dividend reduces the value of the shares and therefore the value of his stock options.

### Exercises

- 1/ $d = 3.8/10.8 = 35\%$ , gross yield:  $3.8 \times 1.5/168.2 = 3.4\%$ , net yield:  $2/160 = 1.25\%$ . Average dividend level is that of a company approaching maturity.
- 2/(a) fast growth has been slowing, payout ratio increasing. This is fairly logical.  
 (b) same growth pattern, but payout ratio is constant. This is surprising because the marginal rate of return has become very low (1.6% in 2003) and is surely below the cost of capital.  
 (c) cyclical company that keeps its dividend per share steady. Payout ratio is very low at the top of the cycle (5%) and very high at the bottom (>100%).  
 (d) No coherent dividend policy at all.
- 3/At a cost of €500 per share – Repurchase amount: €125m. Associated interest costs = €6.25m. EPS after the repurchase = €125. Book value per share = €1433.  
 At a cost of €1500 per share: EPS = €108.3; book value per share = €1100.

4/(a)

	2003	2004	2005	2006	2007	2008
ROE	12.7	12.8	12.1	11.9	10.6	9.7
ROCE	16	16.7	15.5	15.5	13.4	11.8

Returns on equity and capital employed have declined, reducing the leverage effect and the company's financial risk.

(b)

	2004	2005	2006	2007	2008
$\Delta$ Earnings / $\Delta$ Equity	20%	9.1%	15.4%	0	0

The dividend policy Rowak has been following (no dividend) was consistent with its situation until 2006 since it was getting adequate returns on reinvested earnings. This is no longer the case. Earnings are not growing, and shareholders are becoming relatively poorer.

- (c) Why would you want to pay 200 for shares that you believe are worth 150?  
 (d) The proposal makes sense now because a gross disequilibrium in the market means the shares can be bought back at a price below their estimated value.

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