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## BEYOND CASH DIVIDENDS: BUYBACKS, SPIN OFFS AND DIVESTITURES

Shares of stock in a firm give their holders equal claims on all of the assets of the firm, after the firm has met its debt obligations. Thus, the value of a share in Boeing or the Home Depot is determined by three variables – the value of the assets in these firms, the value of debt claims against them and the number of shares outstanding. There are several ways in which a firm can change this value per share. Investment decisions can alter the value of the assets by changing the expected cash flows. Changing the financial mix can alter asset value (by changing the cost of capital), the value of debt, and the number of shares outstanding. Dividend decisions affect the value per share by reducing the firm's assets (with the payment of cash).

In this chapter, we consider other ways in which firms can affect their value per share. We begin with stock buybacks; like dividends, stock buybacks reduce the value of a firm's assets, but unlike dividends, they reduce the number of shares outstanding. While we presented evidence on the magnitude of stock buybacks in the last chapter, we consider the choice between dividends and stock buybacks in this one. When should a firm opt to buy back stock rather than increase dividends, or in the more extreme scenario, replace dividend payments with a stock buyback program? We also look at a variant of stock buybacks, where firms enter into forward contracts to buy stock in future periods.

We next consider stock dividends and splits, actions that change the number of shares outstanding without altering the value of the underlying assets. We look at why firms may split their stock or pay stock dividends, and how markets react to these actions.

Finally, we consider actions that change the nature of a stockholders' claims on a firm's assets. We begin with divestitures, where firms sell some of their assets to another firm or entity; divestitures are often followed either by stock buybacks or special dividends. As an alternative, firms can also spin off or split off assets, and existing stockholders

receive new claims on the spun off assets that they can choose to keep or sell; these spun off units become independent entities and the firm receives no cash from the spin offs. In contrast, in an equity carve out, firms issue stock on portions of the firm to financial markets to raise cash for investments; in this case, the firm usually retains a controlling interest in the carved out entity. We also consider tracking stock, where existing stockholders receive new claims on portions of the firm, but these entities remain part of the firm. We close this chapter by examining how firms choose among these alternative actions, all of which affect their stockholders, albeit in different ways.

### **Alternative Ways of Returning Cash to Stockholders**

In chapter 22, we noted that dividends represent just one way of returning cash to stockholders, and presented evidence that an increasing number of firms are returning cash by buying back stock. In this section, we consider two ways of buying back stock. In the first, we consider the typical equity repurchase, where cash is used to buy back outstanding stock in the firm. In the second, we examine the use of forward contracts to buy equity in future periods; in this case, firms are committing to buying stock in future periods at a fixed price.

#### **Equity Repurchases**

In the last chapter, we argued that the effects on a firm of paying dividends and buying back stock are the same; the cash assets of the firm decline by the amount of the stock buyback or dividend and the book value of equity drops by the same value. We begin this section by looking at the process of buying back stock, and then examine why firms may buy back stock, rather than pay dividends.

#### ***The Process of Buying Back Stock***

The process of repurchasing equity depends largely upon how much equity the firm is planning to buy back, and over what period. If a firm wants to buy a large proportion of its stock, say 10% or greater, over a short period, it will generally have to make a tender

offer for its own shares. In a repurchase tender offer, a firm specifies a price at which it will buy back shares, the number of shares it intends to repurchase, and the period of time for which it will keep the offer open. It then invites stockholders to submit their shares for the repurchase. In many cases, firms retain the flexibility to withdraw the offer if an insufficient number of shares are submitted, or to extend the offer beyond the originally specified time period. Firms will often use the services of investment banks, while making tender offers, and the transactions costs will include investment banking fees.

Firms that intend to buy only a small percentage of the outstanding stock can buy them in the market, in a process called an open market repurchase. There are three differences between tender offers and open market repurchases. First, in an open market repurchases, firms buy shares in securities markets at the prevailing market price, and do not have to offer the premiums that are required for tender offers. Second, firms do not have to disclose publicly their intent to buy back shares in the market, though they have to comply with SEC requirements on price manipulation and insider trading. For instance, they cannot trade ahead of information that they will be releasing to markets. Finally, open market purchases can be spread out over much longer time periods than tender offers. In terms of flexibility, an open market repurchase affords the firm much more freedom in deciding when to buy back shares and how many shares to repurchase.

There is a third choice available for firms with a stockholder who owns a substantial percentage of the shares. The firm can privately negotiate with the stockholder or stockholders, and buy their stock back. Privately negotiated repurchases are not as widely used as the tender offers or open market repurchases for two reasons. The first is that it is difficult to find large stockholders who are willing to sell all or most of their stake back to the firm. The second is that the process is open to abuse, since it can be used by managers to eliminate a troublesome stockholder and consolidate control of the firm.

☞ *CC 23.1:* When making privately negotiated repurchases, would you expect firms to pay a higher or lower price than if they made open market purchases?

### ***Reasons for Stock Buybacks***

Firms that want to return substantial amounts of cash to their stockholders can either pay a large special dividend or buy back stock. There are several advantages to using stock buybacks as an alternative to dividend payments:

1. Unlike regular dividends, which typically commit the firm to continue payment in future periods, firms use equity repurchases primarily as one-time returns of cash. Consequently, firms with excess cash, that are uncertain about their ability to continue generating these cash flows in future periods, should repurchase stocks rather than pay dividends. These firms could choose to pay special dividends instead of repurchasing stock, however, since special dividends also do not commit the firm to making similar payments in the future.
2. The decision to repurchase stock affords a firm much more flexibility to reverse itself and to spread the repurchases over a longer period than does a decision to pay an equivalent special dividend. In fact, there is substantial evidence that many firms that announce ambitious stock repurchase plans do not carry them through to completion.
3. Equity repurchases may offer tax advantages to stockholders, since dividends are taxed at ordinary tax rates, while the price appreciation that results from equity repurchases is taxed at capital gains rates. Furthermore, stockholders have the option not to sell their shares back to the firm and therefore do not have to realize the capital gains in the period of the equity repurchases.
4. Equity repurchases are much more selective in terms of paying out cash only to those stockholders who need it. This benefit flows from the voluntary nature of stock buybacks: those who need the cash can tender their shares back to the firm, while those who do not can continue to hold on to them.
5. Equity repurchases may provide a way of increasing insider control in firms, since they reduce the number of shares outstanding. If the insiders do not tender their shares back,

they will end up holding a larger proportion of the firm and, consequently, having greater control.

6. Finally, equity repurchases may provide firms with a way of supporting their stock prices, when they are declining<sup>1</sup>. For instance, in the aftermath of the crash of 1987, many firms initiated stock buyback plans to keep stock prices from falling further.

In summary, equity repurchases allow firms to return cash to stockholders and still maintain flexibility for future periods.

### ***Equity Repurchase and the Illusion of Higher Value***

Some equity repurchases are motivated by the desire to reduce the number of shares outstanding and therefore increase the earnings per share. If we assume that the firm's price earnings ratio will remain unchanged, reducing the number of shares will usually lead to a higher price. This provides a simple rationale for many companies embarking on equity repurchases.

There is a problem with this reasoning, however. Although the reduction in the number of shares might increase earnings per share, the increase is usually caused by higher debt ratios and not by the stock buyback per se. In other words, a special dividend of the same amount would have resulted in the same returns to stockholders. Furthermore, the increase in debt ratios should increase the riskiness of the stock and lower the price earnings ratio. Whether a stock buyback will increase or decrease the price per share will depend on whether the firm is moving to its optimal by repurchasing stock, in which case the price will increase, or moving away from it, in which case the price will drop.

To illustrate, assume that an all-equity financed firm in the specialty retailing business, with 100 shares outstanding has \$100 in earnings after taxes and a market value

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<sup>1</sup> This will be true only if the price decline is not supported by a change in the fundamentals – drop in earnings, declining growth etc. If the price drop is justified, a stock buyback program can, at best, provide only temporary respite.

of \$1,500. Assume that this firm borrows \$300 and uses the proceeds to buy back 20 shares. As long as the after-tax interest expense on the borrowing is less than \$ 20, this firm will report higher earnings per share after the repurchase. If the firm's tax rate is 50%, for instance, the effect on earnings per share is summarized in Table 23.1 for two scenarios: one where the interest expense is \$ 30 and one where the interest expense is \$ 55.

*Table 23.1: Effect of Stock Repurchase on Earnings per Share*

	<i>Before Repurchase</i>	<i>After Repurchase</i>	
		Interest Expense = \$ 30	Interest Expense = \$ 55
EBIT	\$ 200	\$200	\$ 200
- Interest	\$ 0	\$ 30	\$ 55
= Taxable Inc.	\$ 200	\$ 170	\$ 145
- Taxes	\$ 100	\$ 85	\$ 72.50
= Net Income	\$ 100	\$ 85	\$ 72.50
# Shares	100	80	80
EPS	\$ 1.00	\$ 1.125	\$ 0.91

If we assume that the price earnings ratio remains at 15, the price per share will change in proportion to the earnings per share. Realistically, however, we should expect to see a drop in the price earnings ratio, as the increase in debt makes the equity in the firm riskier. Whether the drop will be sufficient to offset or outweigh an increase in earnings per share will depend upon whether the firm has excess debt capacity and whether, by going to 20%, it is moving closer to its optimal debt ratio.

#### ***Limitations of Equity Repurchases***

Until recently, many of those in the “dividends are bad” school agreed that equity repurchases were preferable to both regular dividends, because buybacks offer more flexibility and tax advantages for investors, and to special dividends, because of the tax benefits. There is a drawback to this flexibility, however. To the degree that actions taken by firms signal their assurance about future cash flows, a firm that repurchases stock rather than instituting or increasing dividends is signaling a greater uncertainty about its future cash flows. As a consequence, the increase in value that follows an equity repurchase would be smaller than the increase in value following an equivalent regular dividend

payment. And if the firm fails to carry out equity repurchase plans to completion, markets will become increasingly skeptical of these plans and respond accordingly.

### ***The Empirical Evidence on Equity Repurchases***

Intuitively, we would expect stock prices to increase when companies announce that they will be buying back stock. Studies that have looked at the effect of the announcement by a firm that it plans to buy back stock on stock price find strong evidence that stock prices increase in response. Lakonishok and Vermaelen (1990) looked at a sample of 221 repurchase tender offers that occurred between 1962 and 1977, and examined stock price changes in the 15 days<sup>2</sup> around the announcement. Table 23.2 summarizes the fraction of shares bought back in these tender offers and the change in stock price for two sub-periods: 1962-79 and 1980-86.

*Table 23.2: Returns around Stock Repurchase Tender Offers*

	1962-1979	1980-1986	1962-1986
Number of buybacks	131	90	221
Percentage of shares purchased	15.45%	16.82%	16.41%
Abnormal return to all stockholders	16.19%	11.52%	14.29%

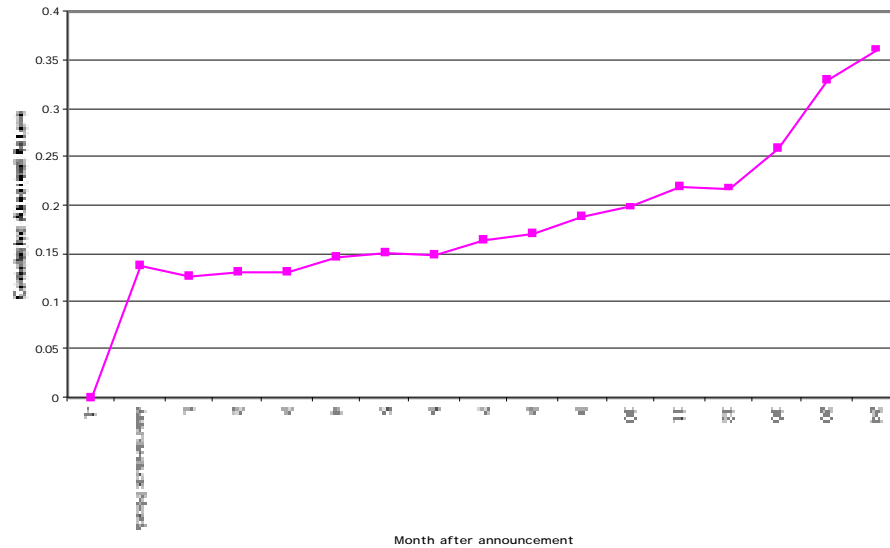
On average, across the entire period, the announcement of a stock buyback increased stock value by 14.29%.

They also tracked these companies for 24 months following the announcement to see if these excess returns are transitory rather than permanent. Figure 23.1 reports on the returns from buying stock in firms after the repurchase announcement, and holding the stock for two years:

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<sup>2</sup> The fifteen days started five days before the announcement, to capture any leakage of information before the announcement, and ended ten days after the announcement.

Figure 23.1: Abnormal Returns after Stock Repurchase Announcements



Note that these are cumulative excess returns, i.e., they are returns over and above what you would expect these stocks to earn, given their riskiness. As noted in the earlier table, there is a large positive excess return in the month of the announcement. The excess return not only persists in the months following the repurchase, but becomes more positive. Two years after the announcement, investors in the firm have earned an additional excess return of 22%. This would suggest that the price increase is not just the result of a liquidity effect<sup>3</sup>, but of something deeper. It is not clear, however, which of the following hypotheses best explains these excess returns:

- The increase in value seems too large to be explained solely by the tax benefits of equity repurchase relative to dividends. Since the typical repurchase in this sample involved a buyback of 15 to 20% of the outstanding shares, the tax savings should be roughly 5-

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<sup>3</sup> The liquidity effect is created by the surge in buying created by the stock buyback. This should have at least a temporary positive effect on stock prices.



6%, at the maximum<sup>4</sup> Unless firms are expected to continue repurchasing large proportions of their equity every year — a very unlikely scenario — it is difficult to arrive at price increases of the magnitude observed in most of these studies.

- It is also not clear that the price increase can be explained purely in terms of increased debt ratios, i.e., that the firms studied were underlevered initially, and that buying back stock brought them closer to their optimal debt ratios (and higher firm values). For instance, Vermaelen reports that firms that do not issue debt but use existing cash balances to repurchase equity actually have higher price increase than firms that do use debt.
- The final possibility is that the increase in stock prices on the announcement of the buyback is the result of the information conveyed to financial markets by such buy backs; in particular, investors view the equity repurchase as a signal that the firm believes that its stock is significantly undervalued. Dann and DeAngelo tested this hypothesis by categorizing equity repurchases into privately negotiated buybacks (in which the motivation is usually control of the firm) and open market repurchases/tender offers (in which the motivation may include undervaluation), and concluded that stock prices actually declined slightly for the first group. This suggests that at least some of the price increase can be attributed to information effects.

It is unfair to compare the price increase associated with equity repurchases in these studies to the price increases associated with dividend increases noted in chapter 21, because of the difference in dollar values between the two. Rather, a more appropriate comparison would look at the impact on stock prices of a given dollar change in regular dividends with an equivalent equity repurchase. In that case, we would expect dividend

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<sup>4</sup> A simple approximation of the tax benefit can be estimated by multiplying the equity repurchase proportion by the differential tax rate. Even taking the highest tax differential during the period (about 40%) yields a tax benefit of only 6% on an equity repurchase of 15% of the outstanding equity.

increases to have a much larger impact, because they imply a much larger commitment on the part of the firm for the future.

☞ CC 23.2: Some stocks, even in the studies noted above, report stock price decreases on the announcement of equity repurchases. How would you explain this?

### ***Choosing between Dividends and Equity Repurchases***

Firms that plan to return cash to their stockholders can either pay them dividends or buy back stock. In general, the net benefit of equity repurchases, as opposed to dividends will depend upon the following:

- *Sustainability and Stability of Excess Cash Flow:* Both equity repurchases and increased dividends are triggered by excess cash flows. To decide which action is more appropriate, we have to look at how sustainable these excess cash flows are. If the excess cash flows are temporary or unstable, firms should repurchase stock; if they are stable and predictable, we would be more inclined to pay dividends, because they provide a stronger signaling benefit.
- *Stockholder Tax Preferences:* When capital gains and dividends are taxed at different rates, the tax preferences of the stockholders will determine whether a firm should repurchase stock or pay dividends. If stockholders are taxed at much higher rates on dividends and, consequently are averse to dividends the firm will be better off repurchasing stock. If, on the other hand, stockholders prefer dividends, the firm may gain by paying a special dividend.
- *Predictability of Future Investment Needs:* Firms that are uncertain about the magnitude of future investment opportunities should use equity repurchases as a way of returning cash to stockholders. The flexibility that is gained will be useful, if they need cash flows in a future period to accept an attractive new investment.
- *Undervaluation of the Stock:* An equity repurchase makes even more sense when managers believe or perceive their stock to be undervalued. By buying back the stock,

managers can achieve two objectives. First, if the stock remains undervalued, the remaining stockholders will benefit if managers buy back stock at less than true value. Second, the stock buyback may send a signal to financial markets that the stock is undervalued, and the market will react accordingly, by pushing up the price.

- *Management Compensation:* Managers often receive options on the stock of the companies that they manage. The prevalence and magnitude of such option-based compensation can affect whether firms use dividends or buy back stock. The payment of dividends reduces stock prices, while leaving the number of shares unchanged. The buying back of stock reduces the number of shares, and the share price usually increases on the buyback. Since options become less valuable as the stock price decreases, and more valuable as the stock price increases, managers with significant option positions may be more likely to buy back stock than pay dividends.

Bartov, Krinsky and Lee (1998) examined three of these determinants – undervaluation, management compensation and institutional investor holdings (as a proxy for stockholder tax preferences) – of whether firms buy back stock or pay dividends. They looked at 150 firms announcing stock buyback programs between 1986 and 1992, and compared these firms to other firms in their industries that chose to increase dividends instead. Table 23.3 reports on the characteristics of the two groups.

*Table 23.3: Characteristics of Firms Buying Back Stock versus Increasing Dividends*

	<i>Firms buying back stock</i>	<i>Firms increasing dividends</i>	<i>Difference is significant</i>
Book/Market	56.90%	51.70%	Yes
Options/shares	7.20%	6.30%	No
No of institutional holders	219.4	180	yes

While the option holdings of managers seemed to have had no statistical impact on whether firms bought back stock or increased dividends, firms buying back stock had higher book to market ratios than firms increasing dividends, and more institutional stockholders. The higher book to price ratio can be viewed as an indication that these firms are more likely to

view themselves as under valued. The larger institutional holding might suggest a greater sensitivity to the tax advantage of stock buybacks.

*Illustration 23.1: Dividends versus Equity Repurchases*

In 1998, The Home Depot generated free cash flows to equity of \$ 36 million and paid out dividends of \$ 168 million, resulting in a cash shortfall of \$ 132 million. Looking forward, though, we forecast an increase in the free cash flow to equity to \$ 455 million in 2003. As this increase in free cash flow to equity occurs, the Home Depot will have to decide whether to increase dividends or buy back stock. We would argue that some or all of this excess cash should be used to buy back stock rather than pay dividends for the following reasons:

- The earnings and cash flows of specialty retailers are cyclical. If the Home Depot commits to paying higher regular dividends, it might be unable to maintain those dividends if the economy goes into a recession.
- The Home Depot's stockholders generally have bought the stock for its price appreciation rather than its dividend yield. It is reasonable to assume, therefore, that they would much rather have the ability to sell their shares back and earn a capital gain, rather than receive a larger dividend (or a special dividend).
- The Home Depot has ambitious expansion plans, especially for growth overseas, which create uncertainty about future investment needs; if overseas expansion goes well, future investment needs will be much higher. This uncertainty tilts the scales in favor of an equity repurchase.

We would make a stronger recommendation regarding current dividends. Given that these dividends exceed free cash flows to equity, these dividends should be replaced with stock buybacks to prepare stockholders for the change in dividend policy.

### **Forward Contracts to Buy Equity**

Many firms that announce equity repurchase plans fail to carry these plans to fruition. Although stock repurchases give the firm flexibility in returning cash to stockholders, they reduce the signaling benefit (and the concurrent price increase) of buying back stock. An alternative strategy, which preserves the tax advantages of equity repurchases while also providing the signaling benefit, is to enter into forward contracts to acquire stock at a fixed price. Since these contracts are commitments, the firm is forced to repurchase the shares at that price. Consequently, the market will likely view the action as a commitment and react more positively.

Another advantage of forward contracts is that unlike regular equity repurchases in which the number of shares that will be bought back in future periods is unknown because the stock price will be different, the number of shares that will be bought back in a forward contract is known because the purchases are at a fixed price. Consequently, the effects of the equity repurchase plans on earnings per share and related multiples (like price earnings ratios) can be estimated more precisely.

This approach certainly has a price, however. By agreeing to buy back shares at a fixed price, the firm increases its risk exposure, because it commits to paying this price even if the stock price drops. Although it may gain an offsetting advantage if stock prices go up, the commitment to pay a higher price to buy stocks when stock prices are lower can be a burden, especially if the stock price dropped as a consequence of lower earnings or cash flows.

The decision to commit to buying back stocks by entering into a forward contract will depend, in large part, on whether the signaling benefits are large enough to offset the higher risk and lost flexibility associated with the forward contract. The choice between paying an increased dividend or entering into a forward contract involves a trade-off between the tax savings that may accrue from the forward contract and the increased risk associated with the forward contract.

✍ CT 23.1: An alternative strategy is to sell puts on the firm's stock, giving holders the option to sell back stock to the firm at a fixed price in the future. How is this different from the forward contract described above?

## **Actions that affect Number of Shares Outstanding**

There are actions that firms take that change the number of shares outstanding, but have no effects on either the cash flows of the firm or its assets. Included in these actions are stock dividends and stock splits. We will argue that these actions cannot affect overall firm value, but can change the value per share. In some cases, they might convey information to financial markets.

### **Stock Splits**

In a stock split, a firm gives each stockholder in the firm additional shares in proportion to their existing holdings. The number of shares received by each stockholder will depend upon the terms of the stock split. For instance, in a two-for-one split, stockholders receive one additional share for each one that they own. There is no cash paid out, and the proportional ownership of the firm is not altered by the stock split.

### ***The Process of a Stock Split and its Effect on Value***

The mechanics of a stock split or dividend are simple. The firm issues additional shares to existing stockholders, based upon their holdings. Just as with dividends, there is an ex-date, after which the share price reflects the number of shares outstanding as a result of the split. Thus, with a two-for-one split, the stock price will drop after the ex-date; if it drops by 50%, the stockholders will be left unaffected by the split; if it drops by less, the stockholders will be wealthier as a consequence.

Should stock splits have wealth consequences for stockholders? Since stock dividends and stock splits change only the number of shares outstanding, they should not affect the cash flows of the firm, and thus should not change the value of the firm or

equity, in the aggregate. Rather, the share price should decline to reflect the increased number of shares. To illustrate, assume that a small manufacturing firm with an aggregate value of equity of \$ 110 million and 10 million shares outstanding declares a three for one stock split. The aggregate value of equity will remain \$ 110 million, but the price per share should drop from \$ 11 per share ( $\$ 110 \text{ million} / 10 \text{ million}$ ) to \$ 3.67 per share ( $\$ 110 \text{ million} / 30 \text{ million}$ ). Note, though, that the stockholders in this firm are no worse off after the stock dividend, the stock price drop notwithstanding, because they receive a compensatory increase in the number of shares outstanding.

### ***Reasons for Stock Splits and Stock Dividends***

If there is no wealth consequence, why do so many firms split their stock? A reason given is the desire on the part of some firms to keep their stock prices within a specified trading range. Consequently, if the stock price rises above the range, a stock split may be used to bring the price back down. To illustrate, assume that a firm wants its stock to trade in the \$20 to \$40 range and that the stock price rises to \$ 45. With a two-for-one stock split, the number of shares will double and the stock price will drop back down to \$ 22.50. Why would a firm have a desired trading range in the first place? Some firms do believe that, given restrictions on buying shares in even lots (i.e. 100 shares), a price that is too high reduces the potential market for the stock to wealthier investors and institutional investors. Bringing the price down, they argue, increases the number of potential buyers for the stock, leading to a higher stock price. Furthermore, they note, there is a control benefit to the stock being more widely held. Both of these arguments are dubious, however. The transactions costs, if one counts the bid-ask spread as one component, actually increases<sup>5</sup> as a percentage of the stock price as the price drops. Thus, the firm may

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<sup>5</sup> To illustrate, assume that a \$40 stock trades at a bid-ask spread of 1/2; the bid-ask spread is 1.25% of the stock price. With a two-for one stock split, assume that the stock trades at \$ 20 and that the bid-ask spread drops to 3/8; the bid ask spread is now 1.875% of the stock price.

lose more investors than it gains by cutting the price. There is a cost to being widely held, as well, since it increases the gulf between stockholders and managers and leads to higher agency costs.

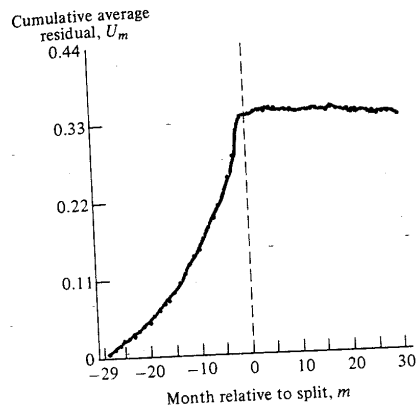
Stock splits may also convey information to financial markets. Those who advance this as the reason for splits argue that only firms who expect their earnings and stock price to increase in the future will split their stock. Therefore, a stock split operates as a positive signal of a firm's future prospects. The stock price should therefore increase on the announcement of a stock split, notwithstanding the fact that there is no real change in the company's underlying cash flows.

### ***Empirical Evidence on the Effect of Stock Splits***

In one of the earliest studies of market efficiency, Fama, Fisher, Jensen and Roll examined the stock price reaction to 940 stock splits between 1927 and 1959 by cumulating excess returns in the 60 months around the actual split date. The results for the overall sample are reported in Figure 23.2.

*Figure 23.2 : Market Reaction to Stock Splits*

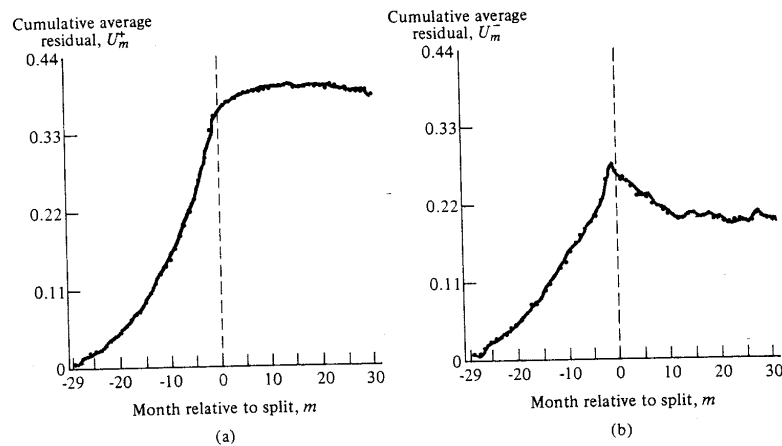




**Figure 10.13**  
 Cumulative average residuals for 60 months  
 around stock splits. (From Fama, E., L. Fisher,  
 M. Jensen, and R. Roll, "The Adjustment of  
 Stock Prices to New Information," reprinted with  
 permission of *The International Economic  
 Review*, February 1969, 13. Copyright © *The  
 International Economic Review*.)

On average, their study found that stock splits tended to follow periods of excess returns; this is not surprising, since splits typically follow price run-ups. They also found no evidence of excess returns around the splits themselves, suggesting that the splits had no effect on value. The authors also classified the firms into two groups: those that followed the splits with dividend increases, and those that followed them up with cuts in the dividends. They found that the firms that cut dividends after stock splits had negative excess returns, at the time of the stock splits, as shown in Figure 23.3. Firms that increased dividends after stock splits had positive excess returns.

Figure 23.3: Excess Returns around Stock Splits – Classified by Dividend Changes



**Figure 10.14**  
 Cumulative average residuals for splits with (a) dividend increases and (b) decreases.  
 (From Fama, E., L. Fisher, M. Jensen, and R. Roll, "The Adjustment of Stock Prices to New Information," reprinted with permission of *The International Economic Review*, February 1969, 15. Copyright © *The International Economic Review*.)

One of the limitations of this study was its dependence on monthly stock returns, rather than on daily or intra-day returns, which would help isolate the effect of the stock splits much more effectively. Studies in the last two decades that have used daily returns, for instance, do find a small positive price effect associated with stock splits<sup>6</sup>. This evidence is supportive of the signaling hypothesis, i.e. that stock splits are a positive signal of a firm's future prospects.

In recent years, a few studies have pointed out that stock splits have an unintended negative effect on stockholders by raising transactions costs. Copeland (1979) chronicles the increase in transactions costs and the decline in trading volume following splits. This additional cost has to be weighed off against the positive signaling implications of a stock

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<sup>6 6</sup> See Charest (1978) and Grinblatt, Masulis and Titman (1984).

split. This may explain the small positive returns some researchers have found around stock split announcement dates.

☞ CC 23.3: Why would the bid-ask spread increase as a percentage of the stock price when the stock price drops?

### **Stock Dividends**

A stock dividend provides existing stockholders additional shares in the company at no cost. Thus, in a 5% stock dividend, every existing stockholder in the firm receives new shares equivalent to 5% of the number of shares currently owned. A stock dividend resembles a stock split in its effect on the number of shares outstanding.

Unlike stock splits, stock dividends have a small effect on the number of shares outstanding. Therefore, the two arguments that we used for stock splits – shifting prices to a preferred trading range and conveying information to financial markets – do not really apply for stock dividends.

There are three reasons firms use stock dividends. Some firms view stock dividends as a way of fooling stockholders; thus, a firm that is in trouble and unable to pay its regular cash dividend may announce that it is substituting an equivalent stock dividend. It is possible that some stockholders may actually believe that these are substitutes, but it is extremely unlikely that financial markets will not see through this deception.

Other firms view stock dividends as a supplement to cash dividends and use them in periods in which they have higher earnings. By committing to continue paying the same dividends per share, these firms are, in fact, increasing the expected dividends in future periods. Here, the reason seems to be to send a positive signal to financial markets about future prospects.

Finally, there are a handful of firms that have two classes of stock – on one class, they pay a cash dividend, and on the other, they pay an equivalent stock dividend. Shares in the latter class are freely exchangeable into cash dividend shares. We considered one

such example – Citizen’s utility – in chapter 21. Here, stock dividends can make a real difference to stockholders by offering them a choice between cash dividends and capital gains.

✍ CT 23.2: There are some firms that do reverse stock splits, where investors receive one share for every three or four that they own. What might be the rationale for a reverse stock split and what effect will it have on stock prices?

### **Actions that affect nature of claims on assets**

Stock splits and stock dividends change the number of shares outstanding in a firm, but do not change the composition of the assets of the firm or the expected cash flows from these assets. In this section, we consider several actions that change the claims that stockholders have on assets, or the composition of the assets. Divestitures and equity carve outs, for instance, result in portions of the firm being sold to the other firms or the market. The cash from the sale is sometimes invested in other assets, but is more often returned to stockholders as dividends or stock buybacks. Spin offs and split offs create new entities out of portions of the firm, and the shares in these new entities are offered to existing stockholders. Often, the new entities operate as separate businesses, with independent management. In the case of tracking stock, firms issue stock against portions of the business that remain part of the existing firm. In this section, we consider all of these actions.

#### **Divestitures**

In a divestiture, a firm sells assets or a division to the highest bidder. On the sale, it receives cash that is either reinvested in new assets or returned to stockholders as dividends or stock buybacks. In this section, we will look at how divestitures work, the reasons for divestitures and how financial markets react to divestitures.

### ***Process and Follow-up***

A divestiture can be initiated either by the divesting firm or by an interested buyer. In the first case, the divesting firm will offer assets for sale, and invite potential bids. If the asset has substantial value, it will use the services of an investment banker in seeking out bidders. In the second case, the process starts with an interested buyer approaching the firm and offering to buy a division or assets. While this buyer cannot force the divestiture, it can elicit interest if it offers a high enough price. The final price will then be determined by negotiations between the two sides.

How should a divestiture affect a firm's value? The price received on the divestiture should be compared to the present value of the expected cash flows that the firm would have received from the divested assets. There are three possible scenarios:

- If the divestiture value is equal to the present value of the expected cash flows, the divestitures will have no effect on the divesting firm's value.
- If the divestiture value is greater than the present value of the expected cash flows, the value of the divesting firm will increase on the divestiture.
- If the divestiture value is less than the present value of the expected cash flows, the value of the firm will decrease on the divestiture.

The divesting firm receives cash in return for the assets, and can choose to retain the cash and invest it in marketable securities, invest the cash in other assets or new investments or return the cash to stockholders in the form of dividends or stock buybacks. This action, in turn, can have a secondary effect on value.

#### *Illustration 23.2: The Effect of a Divestiture on Value*

Assume that Boeing is interested in selling its information, space and defense systems division, and that it has found a potential buyer who is willing to pay \$ 11 billion for the division. The division reported cash flows before debt payments, but after reinvestment needs and taxes, of \$ 393 million in the most recent year, and the cash flows

are expected to grow 5% a year in the long term. The cost of capital for the division is 9%.

The division, as a continuing part of Boeing, can be valued as follows:

$$\text{Value of Division} = \$ 393 (1.05) / (.09 - .05) = \$ 10,318 \text{ million}$$

With the divestiture value of \$ 11 billion, the net effect of the divestiture will be an increase in Boeing's value of \$ 682 million.

$$\begin{aligned} \text{Net Effect on Value} &= \text{Divestiture Value} - \text{Continuing Value} = \$11,000 \text{ mil} - \$10,318 \text{ mil} \\ &= \$ 682 \text{ million} \end{aligned}$$

☞ CC 23.4: Assuming that the buyer of the division in the illustration above has the same expected growth rate and cost of capital as Boeing, how much more would it have to generate in cash flows next period from this division to break even with a value of \$ 11 billion?

### ***Reasons for Divestitures***

Why would a firm sell assets or a division? There are at least three reasons. The first is that the divested assets may have a higher value to the buyer of these assets. For assets to have a higher value, they have to either generate higher cash flows for the buyers or result in lower risk (leading to a lower discount rate). The higher cash flows can occur because the buyer is more efficient in utilizing the assets, or because the buyer finds synergies with its existing businesses. The lower discount rate may reflect the fact that the owners of the buying firm are more diversified than the owners of the firm selling the assets. In either case, both sides can gain from the divestiture, and share in the increased value.

The second reason for divestitures is less value-driven and more a result of the immediate cash flow needs of the divesting firm. Firms that find themselves unable to meet their current operating or financial expenses may have to sell assets to raise cash. For instance, many leveraged acquisitions in the 1980s were followed by divestitures of assets. The cash generated from these divestitures was used to retire and service debt.

The third reason for divestitures relates to the assets not sold by the firm, rather than the divested assets. In some cases, a firm may find the cash flows and values of its core businesses affected by the fact that it has diversified into unrelated businesses. This lack of focus can be remedied by selling assets or businesses that are peripheral to the main business of a firm.

### ***Market Reaction to Divestitures***

There are a number of empirical questions that are worth asking about divestitures. What types of firms are most likely to divest assets? What happens to the stock price when assets are divested? What effect do divestitures have on the operating performance of the divesting firm? We will look at the evidence on each of these questions in this section.

There are three scenarios where firms divest assets. The first is when the firms are forced by the government to divest because of anti-trust laws. The second is divestitures by financially distressed firms that need the cash to meet their financial obligations. The third is divestitures as part of a major restructuring effort, designed to return a firm to its core businesses. In some cases, this process is initiated by the existing management, and in some cases, by an acquirer. Bhide (1989) looked at firms that were targets of hostile acquisitions, and noted that there were substantial asset divestitures in 60% of them; more than half of the assets of the firms were divested in these cases. The divestitures were of units that were distinct from the rest of the firm's business and had often been acquired as part of an earlier diversification effort.

Linn and Rozeff (1984) examined the price reaction to announcements of divestitures by firms and reported an average excess return of 1.45% for 77 divestitures between 1977 and 1982. They also note an interesting contrast between firms that announce the sale price and motive for the divestiture at the time of the divestiture, and those that do not: in general, markets react much more positively to the first group, than to the second, as shown in Table 23.4.

*Table 23.4: Market Reaction to Divestiture Announcements*

<i>Price Announced</i>	<i>Motive Announced</i>	
	Yes	No
Yes	3.92%	2.30%
No	0.70%	0.37%

It appears that financial markets view firms that are evasive about the reasons for and the proceeds from divestitures with skepticism. Klein (1986) confirms this finding by noting that the excess returns are positive only for those divestitures where the price is announced at the same time as the divestiture. She extended the study and concludes that the magnitude of the excess return is a function of the size of the divestiture. For example, when the divestiture is less than 10% of the equity of the firm, there is no significant price effect, whereas, if it exceeds 50%, the stock price increases by more than 8%.

Studies that have looked at the performance of parent firms after divestitures report improvements in a number of operating measures: operating margins and returns on capital increase, and stock prices tend to outperform the rest of the sector.

### **Spin Offs, Split Offs and Split Ups**

In a spin off, a firm separates out assets or a division, and creates new shares with claims on this portion of the business. Existing stockholders in the firm receive these shares in proportion to their original holdings. They can choose to retain these shares or sell them in the market. In a split up, which can be considered an expanded version of a spin off, the firm splits into different business lines, distributes these shares to the original stockholders, in proportion to their original ownership in the firm, and then ceases to exist. A split off is similar to a spin off, insofar as it creates new shares in the undervalued business line. In this case, however, the existing stockholders are given the option to exchange their parent company stock for these new shares, which changes the proportional ownership in the new structure.



### ***Process and Follow-up***

Spin offs, split offs and split ups require far more procedural steps than a typical divestiture. Miles and Woolridge (1999) lay out the following steps in a typical spin off; the steps are similar for a split off or split up. The process begins when the firm announces its intention to spin off a subsidiary or division. The market reaction to a spin off usually occurs on this announcement. Once the announcement is made, the firm approaches the Internal Revenue Service or obtains a professional tax opinion on the tax status of the spin off. While the tax code in the United States treats a spin off as a dividend, the spin off is tax exempt if the firm fulfils the following requirements:

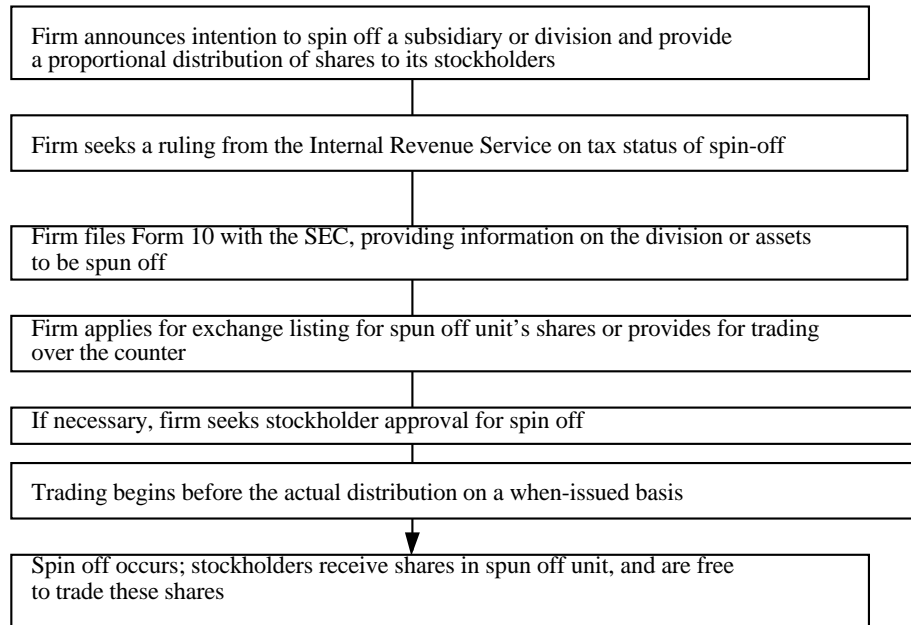
- Both the parent and the subsidiary have been in active operations for at least 5 years prior to the spin off distribution date.
- The parent company had control of the subsidiary before the spin off and gives up this control after the spin off. In general, the spun off shares have to represent at least 80% of the outstanding value of the unit, and the parent company must not be able to maintain effective control with the remaining shares. In other words, the subsidiary has to become independent of the parent company.
- There must be a business reason for the spin off, and the objective cannot be purely distribution of profits. Legitimate business reasons are usually defined widely to include giving managers a stake in ownership of the unit, complying with anti-trust laws and enhancing access to capital markets.

After obtaining a legal opinion, the firm will have to file a form 10 with the SEC. This form, which resembles the prospectus in an initial public offering, contains information about the unit being spun off, and supporting financial statements. If the spin off is a large portion of the firm (as a percent of firm value) or if the corporate charter requires it, the firm will put the spin off to a stockholder vote and has to obtain their assent.

The firm will then either apply for exchange listing of the shares in the spun off unit, or arrange for over-the-counter trading. Often, institutional investors will begin

trading these units before they are actually issued; such trading is said to occur on a “when issued” basis. Thus, by the time the distribution of shares to existing stockholders occurs, the shares already have been priced in the market. Shareholders are then free to hold on to the shares, or sell them in the market. The steps in the process are summarized in figure 23.4.

*Figure 23.4: Steps in a Spin Off*



### ***Reasons for Spin Offs***

There are two primary differences between a divestiture and a spin off. The first is that there is no cash generated for the parent firm from a spin off. The second is that the division being spun off usually becomes an independent entity, often with existing management in place. As a consequence, the first two reasons given for divestitures – a buyer who generates higher value from the assets than the divesting firm and meeting cash flow needs – do not apply for spin offs. Improving the focus of the firm and returning to

core businesses, which we offered as reasons for divestitures, can be an argument for spin offs as well. There are four other reasons.

A spin off can be an effective way of creating value, when subsidiaries or divisions are less efficient than they could be, and the fault lies with the parent company, rather than the subsidiaries. For instance, consider the case of Cyprus Minerals, a firm that was a mining subsidiary of Amoco in the early 1980s. Cyprus was never profitable as an Amoco subsidiary. In 1985, Cyprus was spun off by Amoco, after losing \$ 95 million in the prior year. Cyprus cut overhead expenses by 30% and became profitable within six months of the spin off. Since the management of Cyprus remained the same after the spin off, the losses prior to it can be attributed to the failures of Amoco's management. When a firm has multiple divisions, and the sum of the divisional values is less than what the parent company is valued at, we have a strong argument for a split off, with each division becoming an independent unit.

The second advantage of a spin off or split off, relative to a divestiture, is that it might allow the stockholders in the parent firm to save on taxes. If spin off and split offs meet the tax tests described in the last section, they can save stockholders significant amounts in capital gains taxes. In 1992, for instance, Marriott spun off its hotel management business into a separate entity called Marriott International; the parent company retained the real estate assets and changed its name to Host Marriott. The entire transaction was structured to pass the tax test, and stockholders in Marriott were not taxed on any of the profits from the transaction.

The third reason for a spin off or split off is when problems faced by one portion of the business affect the earnings and valuation of other parts of the business. As an example, consider the pressure brought to bear on the tobacco firms, such as Philip Morris and RJR Nabisco, to spin off their food businesses, because of the perception that the lawsuits faced by the tobacco businesses weigh down the values of their food businesses as well.

Finally, spin offs and split offs can also create value when a parent company is unable to invest or manage its subsidiary businesses optimally because of regulatory constraints. For instance, AT&T, as a regulated telecommunications firm, found itself constrained in decision making in its research and computer divisions. In 1995, AT&T spun off both divisions: the research division (Bell Labs) was renamed Lucent Technologies and its computer division reverted back to its original name of NCR.

Why would a firm use a split up instead of spin off or split off? By giving existing stockholders an option to exchange their parent company stock for stock in the split up unit, the firm can get a higher value for the assets of the unit. This is because those stockholders who value the unit the most will be likely to exchange their stock. This approach makes sense when there is wide disagreement between stockholders on how much a unit is worth.

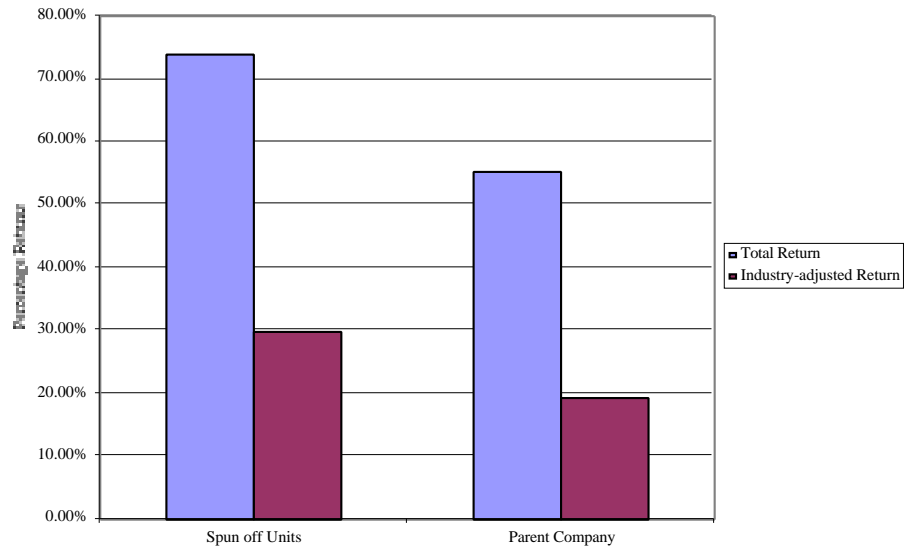
### ***Market Reactions to Spin Offs***

There are two issues that have been examined by researchers who have looked at spin offs. The first relates to the stock price reaction to the announcement of spin offs. In general, these studies find that the parent company's stock increases on the announcement of a spin off. Schipper and Smith (1983) examined 93 firms that announced spin offs between 1963 and 1981, and reported an average excess return of 2.84% in the two days surrounding the announcement. Similar results are reported in Hite and Owens (1983) and Miles and Rosenfeld (1983). Further, there is evidence that the excess returns increase with the magnitude of the spun off entity. Schipper and Smith also find evidence that the excess returns are greater for firms in which the spin off is motivated by tax and regulatory concerns.

The second set of studies look at the performance of both the spun off units, and the parent companies, after the spin off. These studies, which are extensively documented in Miles and Woolridge, can be summarized as follows:

- Cusatis, Miles and Woolridge (1993) report that both the spun off units and the parent companies report positive excess returns in the 3 years after the announcement of the spin offs. Figure 23.5 reports the total returns and the returns adjusted for overall industry returns in the three years after the spin off.

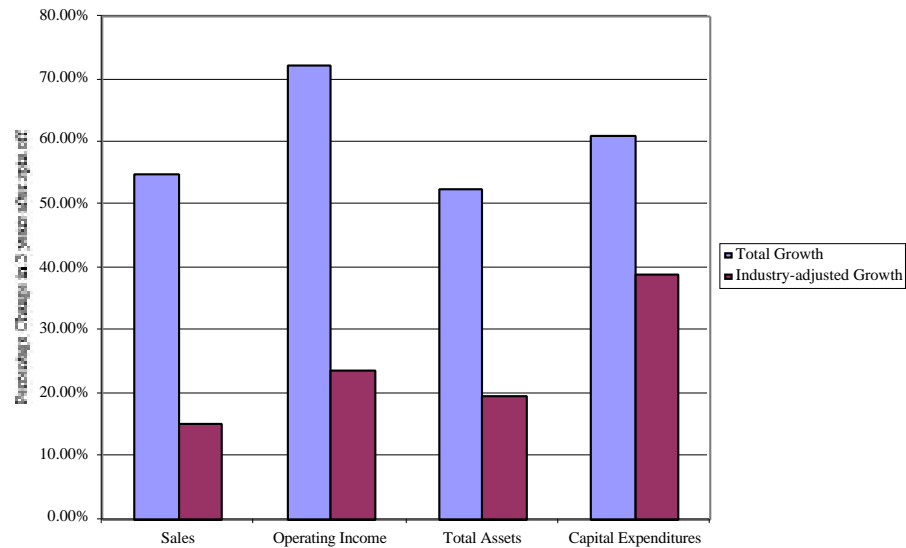
Figure 23.5: Returns at Spin Offs and Parent Company



Both groups are much more likely to be acquired, and the acquisition premiums explain the overall positive excess returns.

- There is a significant improvement in operating performance at the spun off units in the 3 years after the spin off. Figure 23.6 reports on the change in revenues, operating income, total assets and capital expenditures at the spun off units in the three years after the spin off, before and after adjusting for the performance of the sector.

Figure 23.6: Operating Performance of Spun Off Units



Note that the spun off units grow faster than their competitors in terms of revenues and operating income; they also reinvest more in capital expenditures than other firms in the industry.

### Equity Carve Outs (ECOs)

In an equity carve out, a firm separates out assets or a division, creates shares with claims on these assets and sell them to the public. In contrast to a spin off, the sale brings in cash into the firm. In general, the parent company retains control of the carved out unit, though some equity carve outs are accompanied by spin offs or the issue of tracking stock.

### Process and Follow-up

An equity carve out is the equivalent of an initial public offering of shares in the units being carved out of the parent company. The steps involved in an equity carve out therefore reflect many of the same steps involved in taking a company public. An equity carve out begins with the announcement by the parent company that it plans to issue new

stock in a subsidiary or division. This is followed by a filing of an S-1 registration statement with the SEC, containing information on the unit on which the shares are to be issued. This statement, which is required before all initial public offerings, includes past financial data on the division being carved out. As with all initial public offerings, equity carve outs are underwritten by an investment bank or investment banking syndicate.

The proceeds from an equity carve out can go either to the subsidiary or the parent company. When they go to the parent company, the firm is taxed on the difference between the proceeds and the book value of the unit that has been carved out. When they go to the subsidiary, they represent a primary offering and neither the parent nor the subsidiary is taxed on the gain. In 70% of equity carve outs, the cash raised goes to the subsidiary.

The proceeds from the offering are used to meet several needs. Miles and Woolridge report that when the proceeds go to the subsidiary, about 50% is used to pay off debts to the parent company, about 30% is used for new investments in the subsidiary and 20% is used to repay the subsidiary's debts. When the proceeds go to the parent, about 50% is retained by the parent and the rest goes to pay off the parent company's debt.

In most equity carve outs, the parent company retains a controlling interest in the subsidiary. This is in contrast to spin offs, where the spun off unit has to be independent of the parent company, for the spin off to retain its tax advantages.

To provide an illustration<sup>7</sup>, consider Du Pont's carve out of Photomasks, a fully owned subsidiary that was one of two leading manufacturers of glass masks used in silicon chips. In June 1996, Du Pont made an initial public offering of 4 million shares in Photomasks at \$ 17 per share. These shares represented 28% of the outstanding stock in Photomasks, and DuPont retained the remaining 72%. The investment banking syndicate for the initial public offering was lead by Morgan Stanley and Needham and Company,

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<sup>7</sup> A more complete description of this carve out is available in "Spin Offs and Equity Carve Outs" by Miles and Woolridge.

who underwrote the offering price. The investment banking fees and other costs amounted to about \$ 6 million of the \$ 78 million issue proceeds; thus, the costs of an equity carve out resemble those of conventional initial public offerings. After the equity carve out, Photomasks was run as a separate business, though DuPont retained its controlling interest.

### ***Reasons for Equity Carve Outs***

Some of the reasons we offered for divestitures apply for equity carve outs, as well. For instance, equity carve outs allow firms that have entered different businesses and lost their focus, to become more focused again, by making these businesses semi-independent entities. In a sense, it allows conglomerates to de-conglomerate. However, equity carve outs differ from spin offs in two significant ways.

First, equity carve outs bring in cash either to the parent company or the subsidiary. A firm, therefore, is much likely to use an equity carve out for a division that has both high growth opportunities and significant investment needs. The cash raised from the equity carve outs can be utilized to meet these needs.

Second, the parent company usually retains control after the spin off. As a consequence, some of the operating improvements that follow after spin offs, that result from separation from the parent company, may not occur in equity carve out. In some cases, equity carve outs can be coupled with spin offs to provide partial tax benefits for the parent company's stockholders. AT&T, for instance, sold 17% of Lucent Technologies to the general public in an equity carve out. Instead of retaining the remaining 83%, AT&T then chose to spin off the balance to make Lucent an independent entity and deliver tax benefits to its stockholders.

### ***Market Reactions to Equity Carve Outs***

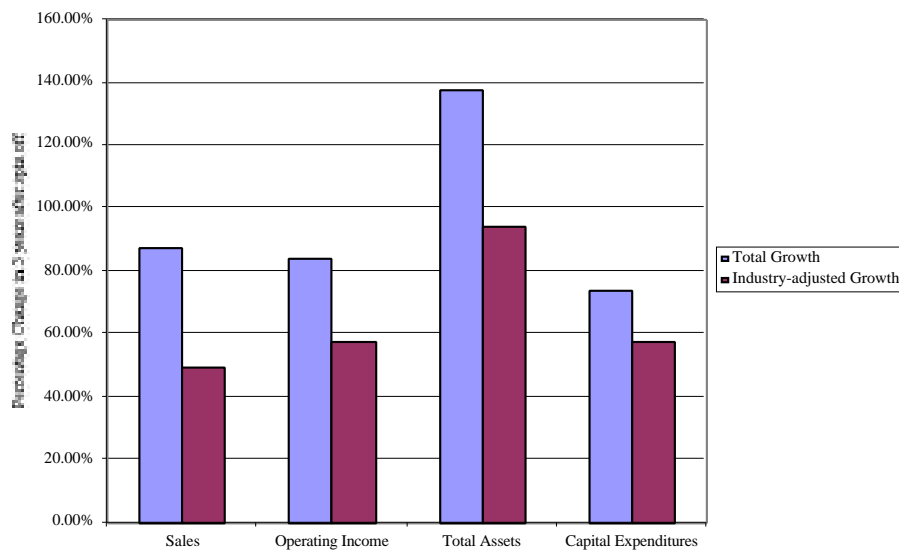
The initial market reaction to equity carve outs, as with spin offs and divestitures, is positive. Schipper and Smith (1986) report that, on average, the stock price of the parent



company increases 2% on the announcement of the equity carve out. They also find that equity carve outs represent an intermediate step for most firms. In their sample of 76 carve outs, 26 of the carved out units were reacquired by the parent company, 7 were spun off and 15 were ultimately divested. Allen (1993) notes that the stock price response to an equity carve out is much more positive when the proceeds from the carve out accrue to the parent company, and increase further, if the parent company returns the cash to its stockholders.

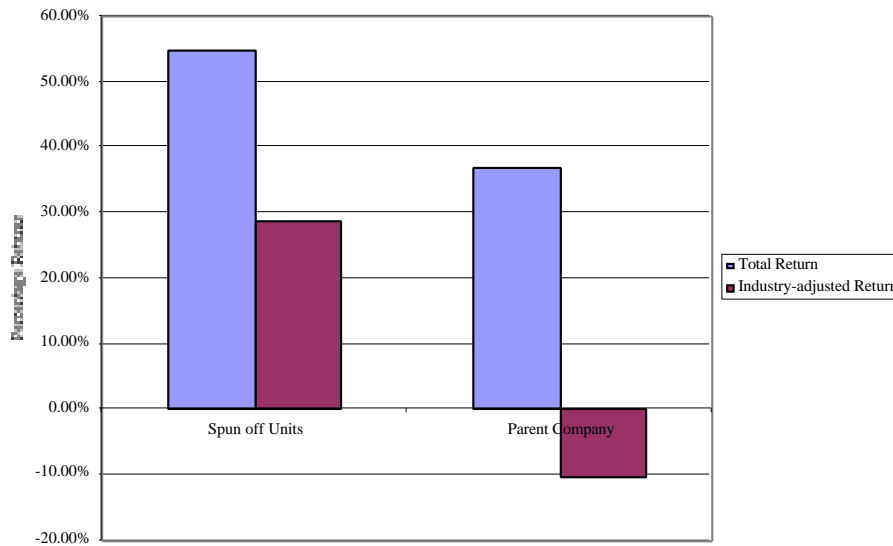
Miles and Woolridge (1999) look at the operating performance of firms after equity carve outs. In figure 23.7, we report their findings on how fast the carved out units grow, relative to other firms in the industries in which they operate, and how much they reinvest.

Figure 23.7: Operating Performance of Equity Carve Outs



As with spun off units, carved out units grow faster than other firms in their industries, and have bigger increases in capital expenditures than the rest of the industry. Miles and Woolridge also report on the stock price performance in the 36 months after an equity carve out for both the parent company and the carved out unit. Figure 23.8 documents their findings on both total and industry-adjusted returns for both groups.

Figure 23.8: Returns at Equity Carve Outs and Parent Companies



The carved out unit deliver higher returns than comparable firms, but the parent company under performs the rest of the industry.

☞ CC 23.5: Why might stock in the parent company under perform the rest of the industry in the period after a carve out? Does it follow that stockholders in the parent company are worse off as a result of the carve out? Why or Why not?

### Tracking Stock (ECOs)

In the last few years, a number of companies have created shares in divisions or subsidiaries that track the performance of just these units. These shares are called tracking stock. The firm may receive cash from issuing tracking stock, but the transaction can also be cash-free. The parent company usually retains complete control over the units. Tracking stock are often referred to as designer or letter stock, since another letter is usually added to a stock's symbol, with its introduction.

### ***Process and Follow-up***

The process of issuing tracking stock closely follows the process for spinning off units or divisions. The firm announces its intention to issue tracking stock, files the required documents with the SEC, applies for exchange listing and then issues tracking stock to existing stockholders of the firm, in proportion to their existing holdings.

Tracking stock was first used by General Motors in its acquisition of Electronics Data Systems and Hughes Aircraft in 1984. The resulting GME and GMH stock allowed investors to trade on these divisions separately from the parent company; General Motors, however, retained complete operating control of both divisions. Companies have a great deal of flexibility in setting the terms and conditions of tracking stock, but there are accounting rules restricting how closely the tracking stock can be tied to the division being tracked. Firms also have to consider the following:

- *Voting rights:* Do stockholders in tracking stock have voting rights? If so, what can they vote to change? Since the tracked divisions remain under the control of the parent company, this can be a critical component in how tracking stockholders price the stock. Most tracking stockholders get no voting rights.
- *Liquidation Rights:* In the event of liquidation of the parent company or the tracked unit, the priority of claims has to be clearly established. For instance, can stockholders in the tracked division claim any cash left over after debt claims against the division have been met, or do they have to wait until all debt claims against the parent company are satisfied? Again, in most tracking stock, tracking stockholders can claim residual cash flows only after the debt claims against the parent company have been met.
- *Inter-divisional transactions:* The tracked division sometimes has a business relationship with the parent company. If this is the case, the process of recording inter-division transactions can have a significant effect on the tracked division's profits and value.

### ***Reasons for Using Tracking Stocks***

Equity carve outs and tracking stock issues share a common feature: the division that is spun off or tracked has shares that reflect the value of that division, and these shares are publicly traded. In both cases, the parent company can generate cash from the transaction. The key difference between equity carve outs and tracking stock, however, is the degree of control that the parent company maintains over the separated unit. In an equity carve out, it maintains effective control, but the carved out entity still has its own management and board of directors; stockholders in the unit get voting rights. With tracking stock, the parent company maintains complete control over the tracked unit, and stockholders in the unit get no voting rights. There are two conditions under which a firm might choose to use tracking stock rather than an equity carve out. The first is if the tracked division gains substantially from its association with the parent company. To the extent that making it independent may sever or weaken this association, the division may be worth more, with tracking stock issued on it. The second is if the parent company needs to preserve control of the tracked division, because it supplies a product or service that is viewed as integral or irreplaceable to the parent.

In recent years, the use of tracking stock has expanded well beyond the original intent. Some firms have used tracking stock to pay for acquisitions. For instance, Genzyme, a biotechnology firm, acquired BioSurface Technology, another firm in the same business, by creating tracking stock on BioSurface. Other firms have tried to take advantage of the boom in the market valuations of internet stocks to issue tracking stock in internet divisions.

### ***Market Reactions to Tracking Stock***

There are few studies that have looked at the effect of tracking stock. The few individual case studies that have been done seem to suggest that the parent company's stock drops when tracking stock are created, especially when the tracked division represents a high growth portion of the firm's business. Donaldson, Lufkin and Jenrette saw its stock

price drop by 21.4% after it announced plans to create tracking stock on its online brokerage service, DLJ Direct. The net effect on the wealth of shareholders in DLJ might still be positive, if the value of the shares they get in DLJ Direct exceed the value lost on the parent company.

The evidence is also limited on whether the operating performance of tracked units improves after the issue of tracking stock. The control exercised by the parent company over the tracked unit opens the process up to a conflict of interest between its stockholders and those of the tracked unit.

✍ CT 23.3: Firms that introduce tracking stock on their highest growth divisions will see their values go up. Is this statement true? If not, why not?

### **Choosing among the Alternatives**

Divestitures, spin offs, equity carve outs and tracking stock are alternative ways available to a firm to separate a portion of its business and profit from the separation. In this section, we will consider some common objectives that all of these actions may help the firm meet, and then look at why firms may choose one alternative over the others.

#### **Common Objectives**

In the last section, we consider reasons for divestitures, spin offs, equity carve outs and tracking stock individually. There are some reasons that apply to all of these actions:

- If a division or asset of a firm is undervalued by financial markets, all of these actions serve to highlight the undervaluation. In the case of a divestiture, the benefit will show up in the form of a divestiture value that exceeds the market's assessment of how much the assets are worth. In the case of spin offs, tracking stock and equity carve outs, the difference will show up as an increase in the value of the combined holdings of the parent company and the stock in the separated unit.
- All of these actions might also result in additional information being provided to markets on the operations of the separated units. This might help investors assess the

value better. Thus, an investor who gets aggregated information on AT&T as a company may be better able to value the firm, if AT&T provided detailed information on its operating performance in its different businesses. While there is no bar to firms providing this information without spinning off units, or issuing tracking stock, these actions force them to provide this information in future periods.

- Firms that are interested in a market estimate of the value of different portions of the business will gain by using all of these actions. In the case of a divestiture, firms receive cash in return for the assets. With spin offs, equity carve outs and tracking stock, the prices of the stocks created on separated units provide an updated estimate of how much the market believes that the separated divisions are worth. This is useful not only for informational purposes, but also for determining compensation for managers of these units. Compensation packages can include options or stock on the units that these managers run, rather than reflecting the value of the parent company.

### **Key Differences**

There are four significant areas of difference across divestitures, equity carve outs, spin offs and tracking stock.

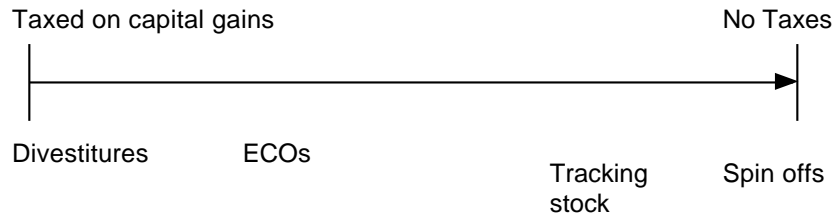
- *Effect on Cash:* Divestitures, equity carve outs and tracking stock result in cash proceeds, whereas spin offs do not generate cash for the parent company. In the case of divestitures, the division or asset is divested entirely for cash, and the cash accrues to the divesting company. In the case of equity carve outs, only a portion of the firm is divested for cash, and that cash can either go to the parent company or the carved out unit. With tracking stock, the transaction can be structured to generate cash or be cash-free to the parent company.



- *Effect on Control:* There are significant differences in how much control the parent company has over the portion of the firm that is separated under each alternative. In a divestiture, the divesting company has no control over the assets once they are divested. At the other extreme, when tracking stock is issued, the parent company usually retains complete control over the tracked unit, and stockholders in the unit get no voting rights. Spin offs and equity carve outs fall between these two extremes; in a spin off, the firm has to give up a controlling interest and settle for less than 20%, if it wants to preserve the tax advantages. In an equity carve out, the parent company usually maintains control, but the carved out unit has an independent management team, and its stockholders get voting rights.



- *Effect on Taxes:* Spin offs and tracking stock generally create no tax obligations for the stockholders of the parent company. Divestitures, on the other hand, create a capital gain for the parent company, on which taxes are due. Equity carve outs are tax free only if the subsidiary issues the shares and receives the proceeds. If the parent sells shares in the subsidiary, it will be taxed on the difference between the proceeds of the initial public offering and the book value of the subsidiary.



- *Effect on Bondholders:* The bondholders in the parent company have no claim on the assets that are divested. If the cash from the divestiture is paid out as a special dividend or used to buy back stock, the bondholders will be worse off. Bondholders can also be negatively affected by spin offs, since the parent company has only a minority interest in the spun off units. The effect on bondholders tends to be smaller in equity carve outs, since the parent company preserves a controlling interest in the carved out unit. With tracking stock, bondholders may be protected, since stockholders in the tracked units often have to wait until debt claims at the parent are met, before receiving any cash.



### Choosing between the alternatives

Divestitures should be the preferred course of action for firms that need the cash proceeds to pay off outstanding debt or to make investments in other businesses. In addition, divesting makes sense when divisions or assets that are worth more to other firms, either because of control reasons (the other firms can run them more efficiently) or synergy (the other firms get more side-benefits). The divestiture value will reflect at least a part of the control or synergy gains, and will generate cash to meet the firm's needs.

A spin off makes the most sense for firms that have sufficient cash on hand to meet their investment needs, and do not need additional cash. In addition, these firms should



have divisions that would be worth more, if they were run independently of the parent company; in other words, the parts of the firm are worth more than the whole firm. Finally, spin offs become more attractive when the value of the division is substantially higher than the book value, and would thus create a significant tax liability, if divested. The spin off creates value by severing the control exercised by the parent company, and effectively making the spun off units into independent firms, and ensures that stockholders will not be taxed on the resulting profit. However, firms can do this only if they meet the other requirements for a spin off to be tax exempt; in particular, this can be done only with assets that the firm has owned more than 5 years.

An equity carve out will add the most value for firms that need the cash from the carve out. If the cash is needed to repay the parent company's debt, the parent company should issue the shares and keep the proceeds; if the cash is required by the carved out unit to meet new investment needs, the subsidiary should issue the shares and use the cash. In addition, a carve out makes more sense when the division is worth more as a separate unit, but when the parent company still needs to maintain effective control of its operations. An equity carve out, under this scenario, will allow the carved out unit to separate itself from the rest of the firm, while preserving the parent company's control over it. Finally, an equity carve out may be part of or the first step towards a spin off or a divestiture.

Issuing tracking stock makes sense for firms that want to retain complete control over the unit or assets being separated, but still want to highlight their value. Since there is no effective change in control, the gains in value have to come from two sources. The first is that the additional information made available on the tracked unit to financial markets may allow them to better assess the value of the unit, and thus could affect perceived value. The second is that tying the compensation of managers in the tracked unit to their own unit's share prices may increase their incentive to work harder to generate and enhance value.

✍ CT 23.4: Assume that the management of a firm that is viewed as incompetent creates tracking stock on its most valuable division. Would you expect the stock price reaction to be positive? Why or why not?

## Conclusion

In this chapter, we looked at three sets of actions. First, we looked at several ways in which firms can return cash to their stockholders, besides paying dividends. They can repurchase stock on the open market, in privately negotiated purchases or through tender offers. By doing so, they might be able to reduce the tax liability to their stockholders and solidify control in the firm. The signaling impact of a repurchase may be lower, however, because firms generally do not commit to making repurchases every year, and even firms that announce repurchases often do not carry them through. Alternatively, firms can indicate their commitment to buy back stock by entering into forward contracts to buy stock back at fixed prices in the future. The increased signaling benefit has to be weighed off against the loss of flexibility inherent in the commitment.

The second set of actions change the number of shares outstanding in the firm, without affecting the underlying assets or cash flows. They include stock splits, where existing stockholders get additional shares in the firm, in proportion to their holdings, and stock dividends, which are used to augment or substitute for cash dividends. We argue that stock splits and dividends do not affect a firm's cash flows and value, though they do affect per share value.

Finally, firms may choose to divest or spin off specific businesses they view to be undervalued. Alternatively, they can use equity carve outs or issue tracking stock in specific assets or divisions. In choosing between these alternatives, firms have to consider four factors – their need for cash, their desire for control, potential tax liability to their stockholders and protecting bondholders.

## Live Case Study

### Choosing between different ways of returning cash to the stockholders

- Given this firm's characteristics, would dividends, stock buybacks or some combination of the two be the best way of returning cash to the owners of the business?
- Is there a potential for value creation in this firm through spin-offs, split-offs, asset divestitures or tracking stock?

#### 1. *Dividends versus Stock Buybacks*

- Historically, has this firm paid large, small or no dividends? (Its existing stockholder clientele is going to reflect its dividend policy)
- How stable and sustainable (in future periods) are the excess cashflows that the firm plans to return to its stockholders?

#### 2. *Potential for value increases from spin-offs, split-offs, tracking stock and asset divestitures*

- Does the firm operate in multiple and separable businesses? (It is easier to do spin-offs or split-offs when this is the case)
- How do the firm's returns on capital in the businesses in which it operates compare with the returns of comparable firms in the same businesses?
- If the returns at some of these businesses lag the sector, what are the reasons for the under-performance?
- Do you think that your firm might gain from the use of spin offs, split offs, equity carve outs or tracking stock? If so, which of these alternatives is most likely to work for it?

### ***Getting Information on analyzing dividend policy***

You can get the information that you need on past dividends by visiting any of the sites that provide historical information over time, including Morningstar and Marketguide.com. The historical information will also be useful in assessing the stability of earnings and excess cash flows.

To get returns on the different businesses that a firm is in, look at the latest 10-K. Firms break down operating income by division and sometimes the capital invested in each division. You can get the latest 10-K by visiting the SEC site at [www.sec.gov/edgarhp.htm](http://www.sec.gov/edgarhp.htm)

## Questions

1. A company that has excess cash on hand is trying to decide whether to pay out the cash as a regular dividend or a special dividend or to repurchase stock with it. What are some of the considerations that would enter into this decision.
2. “An equity repurchase will always provide a lesser signaling benefit than will an equivalent dollar increase in regular dividends.” Explain this statement. Does it hold true if the comparison is to special dividends?
3. A stock split should have no effect on value, but it does seem to affect a firm’s stock price. How would you reconcile this contradiction?
4. A firm has a division that is performing poorly. Under what conditions would divestiture of the division be the optimal action?
5. Studies seem to indicate that the price reaction to divestitures that firms are forced to make, due to anti-trust laws, is generally negative. How would you reconcile that finding with the positive returns that seem to occur around other divestitures?
6. You are the CEO of a regulated utility. You have a technology division that is well regarded and has good management, but is constrained because of restrictions on what you (as the parent company) can do. What action or actions could you take to create value for your stockholders?
7. The New York Times is considering introducing tracking stock on its online business. What motivations might the Times have for the issue?
8. As a potential investor in this tracking stock, why might you be interested in it? What are some of your concerns in making this investment?

9. You are a stockholder in EK Corporation, a diversified conglomerate. The stock is trading at \$ 80 per share, and there are 500 million shares outstanding. The firm spins off its chemical division, and gives each stockholder one share in the chemical division for every 5 shares they own currently. After the spin off, the shares in the chemical division trade for \$ 22 per share, while the parent company shares drop to \$ 77 per share. Estimate the increase in equity value as a consequence of the spin off.

10. What is the primary difference between an equity carve out and a spin off?

## Problems

1. A firm is planning to borrow money to make an equity repurchase to increase its stock price. It is basing its analysis on the fact that there will be fewer shares outstanding after the repurchases, and higher earnings per share.
  - a. Will earnings per share always increase after such an action? Explain.
  - b. Will the higher earnings per share always translate into a higher stock price? Explain.
  - c. Under what conditions will such a transaction lead to a higher price?
  
- 2.. JR Computers, a firm that manufactures and sell personal computers is an all-equity firm with 100,000 shares outstanding, \$10 million in earnings after taxes and a market value of \$ 150 million. Assume that this firm borrows \$60 million at an interest rate of 8% and buys back 40,000 shares, using the funds. If the firm's tax rate is 50% estimate
  - a. the effect on earnings per share of the action.
  - b. what the interest rate on the debt would have to be, for the earnings per share effect to disappear.
  
3. Why are forward contracts to buy equity more risky to firms than repurchase agreements? Why might firms choose to use these contracts anyway?
  
4. JK Tobacco, a diversified firm in food and tobacco, concerned about its stock price, which has dropped almost 25% over the previous two years. The managers of the firm believe that the price drop has occurred because the tobacco division is the target of lawsuits, which may result in a large liability for the firm. What action would you recommend to the firm? What might be some of the barriers to such an action?
  
5. The stock price of GenChem Corporation, a chemical manufacturing firm with declining earnings, has dropped from \$ 50 to \$ 35 over the course of the last year, largely as a

consequence of the market perception that the current management is incompetent. The management is planning to split off the firm into three businesses, but plans to continue running all of them. Do you think the split off will cause the stock price to increase? Why or why not? What would you recommend?

6. Stock prices of firms generally increase when they announce spin offs. How would you explain this phenomenon? On which types of firms would you expect spin offs to have the largest positive impact, and why?

7. The managers of PC Software, an electronics mail order firm, have seen the stock price of the firm increase over the last year from \$ 25 to \$ 50, and are considering a stock split to bring the stock price down to what they view as a reasonable trading range. By doing so, they hope to make the stock more affordable and increase their investor base.

a. Would you agree with this rationale for a stock split? Why or why not?

b. How would you expect the stock price to react to the split? Why?

8. WeeKids, a firm that operates play arenas for children, has paid \$ 1 as a dividend per share each year for the last 5 years. Due to a decline in revenues and increased competition, their earnings have plummeted this year. They substitute a \$ 1 stock dividend for the cash dividend. What would you expect the market reaction to the stock dividend to be? Why?

9. In 1995, the Limited, the specialty retailing firm, announced that they were splitting up their businesses into three separate businesses - the Limited stores forming one business, Victoria's secret and lingerie becoming the second business and their other holdings forming the third business. The Limited had been struggling over the previous four years with lackluster sales and operating profits overall, and the market reacted positively to the announcement. What might be some of the explanations for this reaction?

10. JW Bell, a regulated company, also has extensive holdings in non-regulated businesses and reports consolidated income from all segments. There are severe restrictions on

investment and financing policy in the regulated component of the business. Can you provide a rationale for spinning off the non-regulated businesses?

11. An article in a business periodical recently argued that the only reason for spin offs and split offs was to make it easier for Wall Street to value firms. Why would a spin off or a split off make it easier to value a firm? Do you agree that this is the only reason for spin offs and split offs? If it were, what types of firms would you expect to take these actions?

12. JC Conglo Corporation is a firm that was founded in the 1960s and grew to become a conglomerate through acquisitions. It has substantial corporate costs that get allocated over the different divisions of the firm. Analysts argue that divesting the firm of these divisions will increase value, since the buyer will not have to pay the corporate costs. Under what conditions would divesting the divisions of the firm add to value of the firm? Conversely, under what conditions would a divestiture have a neutral effect on value.

13. RJR Nabisco, the food and tobacco giant, is waging a battle against dissident stockholders, who want it to divest itself of its food division and pay a large dividend to the stockholders. RJR Nabisco offers to spin off the food division, while keeping it under incumbent management. Are stockholders likely to be satisfied? Why or why not?

14. Disney announces that it will be creating tracking stock on its internet unit, and giving Disney's existing stockholders one share in the unit, for every five shares that they own in Disney right now. The stock price of Disney is \$ 30 currently, and there are 1 billion shares outstanding. Under what conditions would you expect the stock price to increase on the announcement?

15. Assume now that Disney issues the tracking stock, and that each Disney Internet stock trades at \$ 12 per share, and that Disney's stock price drops to \$ 28. Have Disney's stockholders gained from the transaction? (Remember that Disney's stock price before the



transaction was \$ 30 per share, there were 1 billion shares outstanding, and each stockholder gets one Disney internet stock for every five Disney shares owned.