MERGERS AND ACQUISITIONS

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1. Introduction

In order to effect the takeover of a company (i.e. take control of it) the acquirer must procure 50% of its equity share capital plus at least one additional share. Thus the acquirer will usually have to pay a premium for control. That is it must pay more than the current market price per share in the target company to acquire control over it. In addition, there are transactions costs associated with acquisitions (mergers) such as fees for investment bankers to be considered. It is not surprising therefore that there is some doubt as to whether mergers add value in general or for the acquirers in particular. This article addresses these issues.

The article first outlines why mergers (takeovers) are important in corporate finance. It then proceeds to examine why mergers are undertaken. The third section briefly examines different classifications of mergers while the fourth section considers the academic evidence regarding the winners and losers in mergers. Section 5 considers post-merger integration and section 6 concludes. There are two appendices: the first appendix clears up some issues regarding merger terminology and the second appendix demonstrates how overall merger gains are measured and how these gains are distributed amongst the parties to the merger.

2. The importance of mergers

Investment decisions are among the most important decisions a firm can make. At one level acquiring another company can be described as just a particular type of investment decision. However, this is to underestimate the complexity and importance of the topic. Typically, acquisitions are larger and more intricate than any internal investment. Their success or failure can determine the ultimate success or failure of the enterprise undertaking them.

In the UK £6.4 billion was spent on acquiring 111 public companies in 1989. In 1995 85 public companies were acquired for a total of £36.2 billion. In 1997 and 1998 the figures were £31 billion (for 120 plcs) and £50 billion (63 plcs) respectively. The scale of merger activity in the US is even larger. For example, in 1995 Disney acquired Capital Cities/ABC for £19.0 billion dollars. But the largest ever merger up to the end of 1998 was $80 billion merger between Exxon and Mobil. This has been surpassed a number of times since and the largest takeover to date is Vodafone's acquisition of Mannesmann for 126.96 billion British Pounds or $202.785 billion US. The next largest takeover of all-time was the AOL takeover of Times Warner for $186 billion. Unfortunately this was also the most famous case of value destruction. Later AOL and Times Warner split up having lost about six sevenths of their worth on the date of the merger. The merger that is most in the news in late 2014 is the Burger King takeover of Tim Hortons for $11 billion.

3. Motives for mergers

Takeovers have a chequered history when it comes to creating value e.g. AOL and Time Warner. Several studies have argued that mergers are on average destructive of value for acquirers (they are mainly negative NPV projects). One possible reason for value destroying mergers is that they are undertaken by managers using shareholders' money. So managers may have different reasons to wish to take-over a company other than to simply increase wealth for shareholders. In addition, managers can make mistakes even if they have the best of intentions. Figure 1 below shows that there are two primary types of motivation for undertaking a merger or takeover: the first to enhance value and second to enhance the situation of managers (managerialism). Figure 1 further shows that we can separate efforts to increase the value of the acquirer into two types (i) synergy or the 2 + 2 = 5 effect and (ii) the exploitation of mis-pricing of either the acquirer or the target.

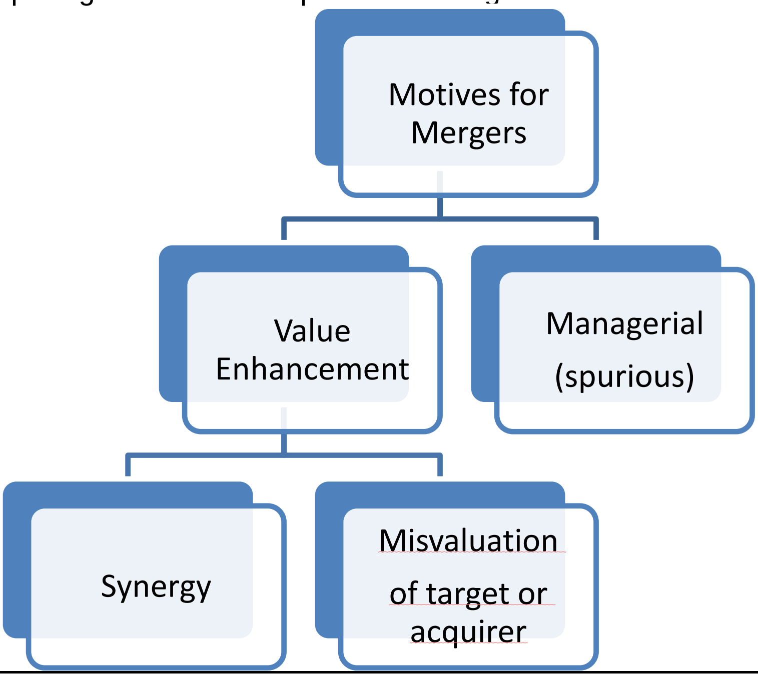

Figure 1

Taking each motivation for a takeover in turn we will evaluate how mergers can enhance or destroy value. Takeovers which are undertaken for value enhancement reasons *may* increase the value of acquirers however they do not always deliver the expected benefits and value may be destroyed.

(i) Synergies

a. Economies of scale: most of this type of merger activity involves taking over a competitor in the same business i.e. a **horizontal** merger. Scale economies can be achieved by amalgamating manufacturing, distribution or service functions. Many of the mergers in the US banking industry in the 1990s were motivated by economies of scale. Another example of such a merger is that of Bardon and Camas two UK building materials companies who merged in 1997. The benefits as reported in the Financial Times included reducing staff and overheads as well as "squeezing" suppliers for better terms.

b. Complementary resources: a small firm with good production or engineering skills but a weak distribution network may be taken over by a larger competitor who has better access to markets. An example of this type of take-over is that of Daewoo's bid for the UK car manufacturer, Lotus, to obtain its engineering and design capabilities.

c. Economies and Control over access to supplies or markets: this is so-called **vertical integration**. Here a predator acquires its suppliers and/or customers. This may be most useful if scarce sources of supply need to be protected from competitors. It also reduces the costs of negotiating and bargaining with suppliers or customers. Some disadvantages include complacency due to lack of competition for some divisions of the integrated company.

d. To access new markets: a company can acquire a competitor which operates in different geographical areas or that has a slightly different brand profile. Tesco would have had a difficult (if not impossible) time if it tried to start from "scratch" in the Irish market. It is doubtful if the market could have sustained another multiple. Thus, the take-over of Quinnsworth was a logical move. It looks like it certainly paid off and added value for Tesco's shareholders notwithstanding Tesco's current travails. Nestle's take-over of Rowantree is cited as motivated by the desire to enter the toffee and boiled sweet market and capture an effective distribution operation. (Arnold, 1998 p849).

e. Unused Tax Shields: this is often overstated as a factor. But it has certainly been a major motivation is some US mergers. Essentially a company with lots of taxable profits and low tax shields takes over another with more tax shields that has not the profits to exploit them. This of course can work in the opposite direction also. The logic here involves a transfer of wealth from the Government to shareholders. In the US there is legislation preventing mergers that are undertaken *solely* on the grounds of tax avoidance. Academic research there suggests that while tax may be a factor it is most unusual for it to be the sole reason for a take-over. An exception to this received wisdom may be Burger King's proposed Merger with Tim Hortons.[1] This is suspected as being motivated by Tax inversion. The enlarged company will be tax resident in Canada and thus pay less tax than if it were a US company.

f. Market Power: taking over a competitor has the attractions of acquiring its profits and reducing the competition. Sales and profits are increased and competition is reduced simultaneously. However, this type of merger is likely to be opposed by regulatory authorities (e.g. Ryanair's proposed takeover of Aer Lingus).

(ii) Mis-pricing and Under-performance of the Target

This is represented in the box at the bottom right of Figure 1. Mispricing seems to be at odds with the efficient markets hypothesis (EMH). An efficient market is unlikely to significantly undervalue companies. Some view the market as short-termist or myopic, that is, it over-weights current and near future cash flows relative to the long-term benefits. Such a market would clearly be inefficient. Thus, it is argued that stocks with good long term-prospects but low current earnings are likely take-over targets. Research has shown that firms with high R&D expenditure, those most likely to have good long-term prospects while at the same time being undervalued by a myopic market, are less likely to be taken over. Thus, the contention that the market is short-termist is simply not supported by the evidence.

[1] http://www.theguardian.com/business/2014/aug/26/burger-king-tim-hortons-11bn-deal

To reconcile the undervaluation of companies with the EMH we must examine the **market for corporate control**. Jensen and Ruback (1983) characterise the take-over market as a "market in which alternative managerial teams compete for the right to manage corporate resources". Thus, an incumbent management team may be inefficient. This would lead to a situation where the firm is undervalued relative to what it would be if it were run to its full potential. The current share price will reflect the value of the company as a separate (and poorly managed) entity plus a take-over premium times the probability of take-over. Obviously this probability will be less than one until a bid is launched. A well-known take-over of this type is the Guinness take-over of Distillers in the 1980s. It has been argued that Distillers was a sleeping giant. It had excellent Whisky brands which it was not exploiting to their full potential. Argyll, identified Distillers as being under-priced and launched a bid. This put Distillers into play. The management of Distillers under the (mistaken) impression that Guinness was still a traditional company like itself made approaches to Guinness to take on the role of a white knight. Guinness quickly realised the motivation behind Argyll's bid and launched a counter-bid. After a take-over battle between Argyll and Guinness the latter emerged "victorious" and acquired Distillers. However, this victory came at a heavy cost for the Guinness CEO, "Deadly" Ernest Saunders. Since the consideration for Distillers was partly in Guinness shares and partly in cash it was in the interests of Guinness to have its share price as high as possible to ensure acceptance of its offer by the shareholders of Distillers. Unfortunately for Mr. Saunders he was found to have been involved in manipulating the Guinness share price and served some time in prison for his trouble. The takeover was massively successful financially for Guinness.

The main lesson one gleans from the market for corporate control is that inefficient management will be disciplined by the market. If they do not at least satisfy shareholders the latter will be made an offer that they cannot refuse and the new owners will most likely remove incumbent management.

(iii) Over-valuation of the Acquirer

Mis-pricing of the bidder or acquirer is the second reason mentioned in box on the bottom right of Figure 1. Shleifer and Vishny (2003) argue that firms take-over other firms when they perceive themselves to be overvalued by the market. Essentially they try and convert their over-valued equity into other assets before it begins to fall back in price. The subsequent under-performance of their share price has as much if not more to do with the fact that the acquirer was over-valued to begin with as it has to do with the acquisition. So it may be that the performance of the acquirer, though poor, is better than the unobserved alternative where there is no acquisition using the over-priced shares. This can also be seen as an example of the Behavioural Timing Hypothesis of Loughran and Ritter (2000). Firm's management undertake transactions when it is opportunistic for them to do so, e.g. issuing equity when stocks are overpriced.

(iv) Spurious Reasons for Take-overs/ Managerial Motives

These rather dubious reasons are represented in the box on the far right of Figure 1. Most, but not all, of these reasons suit management rather than shareholders: thus, they are sometimes referred to as managerial motives for take-overs.

a. Diversification is demonstrated to reduce risk. When a company purchases other companies in unrelated industries it engages in **conglomerate** diversification and ultimately becomes a conglomerate. However, this is unlikely to benefit shareholders who are already diversified. If they are not they can individually diversify at a much lower cost than their company can on their behalf. They will not pay take-over premia, have the large transactions costs or suffer the pains of integration that an acquisition brings. Conglomerate diversification is more likely to benefit managers whose human capital is not easily diversified outside the company than it is to benefit shareholders.

b. To increase EPS: **The Bootstrap or EPS Game**

The idea here is to make acquisitions in order to increase earnings per share (EPS). But, increasing EPS does not necessarily mean that shareholder's wealth is increased. For example a reduction in current R&D expenditure increases present EPS at the expense of future EPS & dividends. Thus, a reduction in R&D may actually reduce shareholder wealth while simultaneously increasing EPS. In the bootstrap game acquiring companies hope that investors will continue to multiply their high P/E ratio by the increased EPS thus increasing the value of the firm. In the example of Fastback and Slow Coach below, if the former's P/E ratio remained at 20 for the merged firm its share price would be €28.57 and its market value €5m. The example, however, shows that this is unlikely to be the case.

Mergers can be achieved by transfer of shares i.e. the acquiring firm will issue shares in itself to pay for shares in the target company. In order for a merger to achieve a higher EPS the P/E ratio of the target company must be lower than the P/E ratio of the acquiring company. The first rule of EPS games is to acquire shares in companies with lower P/E ratios. This is done by using shares in the acquirer as consideration for the transaction.

For example consider the case of a growth stock Fastback Ltd. taking over Slow Coach Ltd. Fastback offers 1 of its own shares for every 4 Slow Coach shares.
There is no synergy here so $\mathbf{PV_{FS} = PV_F + PV_S}$

	Fastback Ltd	Slow Coach Ltd
E.P.S.	€1.00	€0.50
Price per share	€20.00	€5.00
P/E	20	10
Number of shares in Issue	100,000	300,000
Total Equity Earnings (€)	€100,000	€150,000
Market Value	2,000,000	1,500,000

	MERGED COMPANY
EPS	€1.43
Price per share	€20.00
P/E	14
Number of shares	175,000
Total Earnings	250,000
M.V.	3,500,000

Fastback is correct in assuming that its EPS will rise because of this acquisition. Let us now examine why this is so. Remember the P/E ratio reflects growth prospects. Fastback's high P/E implies that the present value (PV) of its future growth opportunities is high. When it acquires Slow Coach it is hoping that investors will perceive that is has increased current earnings but not reduced its ability to grow earnings from their current base. However by acquiring a company with a lower P/E Fastback is trading additional current earnings for lower future growth from these earnings. Shareholders (investors) recognise that there is a trade-off of less future growth for increased current earnings. The P/E ratio of the acquirer is reduced and in the absence of any real economic benefit the merger does not affect the share price. In our example here the P/E of Fastback falls from 20 to 14. Therefore, by buying a company with a lower P/E ratio you are trading off future growth for higher immediate earnings (per share) per € invested. The value of your firm is unaffected because the decrease in growth is just compensated for by higher current earnings per share.

c. Lower Financing Costs

This can be a genuine reason for a merger.

But a merger does not guarantee lower financing costs.

The rationale is that the larger merged firm borrows more at a lower rate of interest and also has lower transaction costs. The lenders demand a lower rate of interest because it is now lending to two businesses - if one fails the other picks up the tab. Thus, the lenders are getting something for the lower rate of interest implying that there is not necessarily a transfer of wealth to the stockholders.

The borrower gains because of the lower rate of interest but, most importantly, loses because it is now guaranteeing the part of the loan going to the other side of the business. It is unlikely that there is a net gain.

One way to look at this is to consider a market value balance sheet. Here the value of the firm's assets is equal to the value of its equity plus the value of its debt. Changing the borrowing rate will not affect the value of the assets: merely the proportion owned by equity and debt. Remember if shareholders borrow on the security of firm's assets, they are in effect selling to assets to the lender and purchasing a call option to buy them back by repaying the debt. The value of a firm's equity is then the value of a call option on the firm's assets.

One can perceive the shareholders call option as being comprised of:

i. The Assets of the Firm
ii. An obligation to repay the bond with certainty
iii. A Put option entitling them to sell the asset s of the firm to the bondholders.

Value of Call = Asset Value - PV (Risk Free Bond) + Value of Put
But we know that the value of Debt is equal to the value of the Assets less the value of the shareholders equity (Value of Call)
Value of Debt = Asset Value – Value of Call
If we put the two equations together we see that
Value of Debt = PV (Risk Free Bond) – the Value Put

It's this value of a put that is the difference between a risk free bond and a risky bond. What makes the bond risky - the fact that shareholders need not exercise their call option. We can put this another way and say that the shareholders have the option to default and this is essentially a put option to sell the assets of the firm to the bondholders.

If a merged company borrows it will get a lower rate of interest so the PV of the Risk Free Bond is reduced (lower interest rate for same borrowings). This will tend to increase value of equity (call option) since the value of equity equals the value of the Assets less the value of debt. However the equity value will simultaneously be reduced in value because of the reduction in value of the put option. This reduction in the put's value is due to lower volatility in the underlying asset (the assets of the firm) and the lower chance of default.

It is worth noting that there is transfer of wealth to the lenders in respect of borrowings taken out before the merger. The simplest way to think of this is that the risk of the assets decrease thus the value of equity's call option decreases. Alternatively the existing lenders rate was fixed when the firm was more risky and is higher than the rate justified by the current risk.

d. Managers like to manage - even when the shareholders are better off getting spare cash back from the company management might see this as a failure on their part and use the cash to bankroll their acquisition policy and maintain their power and importance.

e. Hubris or excessive pride - this notion is associated with Richard Roll who suggests that the management of predators consistently over-estimate their ability to run other corporations better than the incumbent management.

The following quote from Warren Buffet[2], chairman of Berkshire Hathaway and allegedly one of the most successful investors of all-time serves as an apt warning:

> *Many managers were apparently over-exposed in impressionable childhood years to the story in which the imprisoned, handsome prince is released from the toad's body by a kiss from the beautiful princess. Consequently, they are certain that the managerial kiss will do wonders for the profitability of the target company. Such optimism is essential. Absent that rosy view, why else should the shareholders of company A want to own an interest in B at a take-over cost that is two times the market price they'd pay if they made direct purchases on their own? In other words investors can always buy toads at the going price for toads. If investors instead bankroll princesses who wish to pay double for the right to kiss the toad, those kisses better pack some real dynamite. We've observed many kisses, but very few miracles. Nevertheless, many managerial princesses remain serenely confident about the future potency of their kisses, even after their corporate backyards are knee-deep in unresponsive toads.*

4. Classification of Take-over Bids

We have already mentioned
(i) Horizontal
(ii) Vertical
(iii) Conglomerate

Take-overs can also be classified as:
- Friendly: this is where the incumbent management recommend the bid to their shareholders.
- Hostile: the incumbent management advise against the take-over. Here management usually mount a defence with a view to persuading their shareholders to reject the bid.
- White Knight: here management feel that they may be unable to successfully repel the hostile bid so request another company, which would be more to their liking, to launch a counter-bid.

[2] From Berkshire Hathaway annual report as quoted by G Foster "Comments on M&A Analysis and the Role of Investment Bankers" reprinted in Brealey and Myers

Since the success of a bid depends on the attitude of the target's shareholders any of the above can be either successful or unsuccessful. The vast majority of take-over bids in the UK and Ireland are friendly and most of these are successful. A take-over bid is more likely to fail if it is hostile.

5. Winners and Losers in the Market for Corporate Control

The evidence from academic research suggests that shareholders of the target gain. The evidence regarding the shareholders of the acquirer or predator is not as clear cut. While the question of whether takeovers add value to acquirers is still not resolved it is abundantly clear that many takeover bids dissipate the wealth of the acquirer's shareholders. Some acquirers have done very well and others have done very badly as a result of takeovers. Thus, on average mergers are *probably* wealth creating.[3]

The one thing that is clear is that the shareholders of targets generally do very well from being taken over. Since acquirers' shareholders will be aware that, on average, acquirers are not likely to gain a lot and can lose significantly from mergers: why do they allow such deals to go ahead? One possible explanation is Roll's hubris hypothesis. Another is that the shareholders are well-diversified and they might be that shareholder of an acquirer one month and of a target the next month or even both simultaneously. Also the market for corporate control does discipline poorly performing management which is in the interests of all shareholders.

When a take-over bid is launched the incumbent management are under threat. There is an agency problem since bids are normally issued at a premium and while shareholders of the target company are generally better off by accepting the bid (or revised-bid) management lose out. Some of the most common defences against hostile take-over bids are:

- white knight
- management projects that the company will perform much better as a separate entity. This may involve some promised reform and belt-tightening by management[4].
- Asset restructuring: buy assets that the bidder does not want or may otherwise cause a problem with competition legislation.
- Lobby the authorities to get the take-over referred to the Monopolies and Mergers Commission.

US law allows greater latitude in take-over defences; these include:

- Poison Pills - undertaking financing which the bidder will find unattractive to unwind e.g. giving existing shareholders rights which can be used to purchase additional shares at a very attractive price.

- Liability restructuring - issue shares to a friendly third party or repurchase shares from existing shareholders at a premium.

- Pacman Defence - launch a bid for the bidder

[3] Since the predators are typically much larger than targets a small percentage loss for the former is likely to cancel out a large percentage gain to the latter in monetary terms.

[4] Research at UCC s regarding the performance of firms that have successfully fought off hostile bids in the UK suggest that such companies do not outperform the market. Thus, a failed take-over bid is not followed by better management of the escapee's resources.

- Golden or Tin Parachutes - attractive severance terms for management or blue-collar workers.

- Crown Jewels Defence - sell off some of the target's most attractive assets.

Some of the above defences can only be used before a take-over bid is launched (e.g. poison pill).

6. Post-Merger Integration

Having successfully acquired another firm the real work must commence. The newly acquired firm must be integrated into the current business. This can be a complex task but space does not permit a full analysis here. Some of the issues that arise include:

- integration of the accounting and information systems
- reconciling different corporate cultures
- revision of organisational structure
- spin-off of parts of target that are not needed/wanted.

Failure, to address the issue of integration properly can result in the failure of even the most logical of mergers. The take-over of WordPerfect by Novell is a case-in-point. An article written by D. Clarke in the *Wall Street Journal* as quoted in Brealey and Myers states:

> WordPerfect executives came to view Novell executives as rude invaders of the corporate equivalent of Camelot. They repeatedly fought with...Novell's staff from everything from the expenses and management assignments to Christmas bonuses. [This led to] a strategic mistake: dismantling a WordPerfect sales team... needed to push a long-awaited set of office software products.

This could not have come at a worse time because competition from other word-processing systems was intensifying. The result was extremely poor sales from WordPerfect post-merger.

7. Summary

- A Merger is likely to be the largest and most complex investment decision made by a company. They are amongst that largest financial transactions made in business.

- There are many motives for mergers but they can be summarised under three headings:

    - Synergy
    - Mis-Pricing (Under-performance or Behavioural timing)
    - Managerial

- It is not at all clear that bidders gain from mergers. This has led some observers to suggest that mergers are undertaken more for management's hubris than to enhance shareholders wealth. Some recent evidence suggests that if mergers are well planned and managed, acquirers can share in the benefits. While not all Takeovers create value some certainly do.

- The potential gains from Mergers are they MUST be compared with the costs before deciding to proceed. Many mergers that have yielded benefits have cost the bidders far too much. Thus while the merger provides overall gains all of these gains and more are captured by the shareholders of the target company and investments banks leaving the acquirer's shareholder to suffer a reduction in their wealth from a value creating merger. (See Appendix 2 below for an example of such a merger)

- It is not clear whether or not mergers are beneficial for the economy as a whole. It is useful to have a market for corporate control where managers are disciplined if they under-perform. But merger activity is costly, in terms of fees paid to investment banks, lawyers, accountants etc. and management time. Could managers be disciplined in a different way at a lower cost?

Appendix 1

Definition of Terms

The terms merger, take-over and acquisition are used interchangeably above. This does not cause a problem here and is common in the literature. However, it can lead to some confusion in some contexts. In fact there is not complete agreement on the meaning of the terms and inconsistencies between UK and US terminology adds to the confusion.

In the UK , a Take-over or acquisition can be defined as "a transaction whereby one company…acquires control of another company or the assets of another company". An alternative definition for a take-over is "the acquisition of the ordinary share capital by another company".

A merger occurs when the shareholders of one company become the shareholders in another company.

Things are slightly different in the US. Take-overs are complete through three forms
1. Mergers
2. Tender offers
3. Proxy contests

In a merger the "the bidder negotiates an agreement with the target management on the terms of the offer and then submits the proposed agreement to a vote of the shareholders". This is like a friendly take-over in the UK

In a tender offer the target's management are bypassed and the bidder makes an offer directly to shareholders to buy all or part of the stock in the target firm. (This approximates a hostile Take-over bid)

In a proxy contest a dissident group of shareholders try to obtain control of the board of directors.

Appendix 2

Question and Solution

This example shows how overall gains, gains to acquirer's (bidder's) and target's shareholders are computed. This is done for a takeover where the consideration is in the form of cash and also for a takeover where the consideration is in the shares of the acquiring company.

<u>Calculation of Gains (Losses) from Acquisition</u>

Bourgueil is considering making a bid for rival winery Saumur.

Consider the following data pertaining to Bourgueil and Saumur.

	Bourgueil	Saumur
Number of Shares in Issue	10 million	4 Million
Share Price	€5.50	€2.0

Bourgueil's investment bank advises it that the synergies available from the take-over would be in the order of €1,000,000. Transactions costs for the take-over are estimated at €350,000.

(i) Bourgueil offers cash of €2.15 per share to Saumur's shareholders. How much of the merger gains would be available to Saumur's shareholders?

(ii) Assuming Bourgueil's investment bankers are correct in their valuation of the synergies how much would Bourgueil's shareholders gain or lose?

(iii) If Bourgueil offers one of its shares for every two of Saumur's how much of the merger gains would be available to Saumur's shareholders.

(iv) If Bourgueil offers one of its shares for every two of Saumur's how much would its own shareholders gain or lose.

(v) Suppose the investment bankers are proved incorrect and there are no synergies from the merger. How much would each group of shareholders gain or lose under the cash offer?

(vi) Suppose the investment bankers are proved incorrect and there are no synergies from the merger. How much would each group of shareholders gain or lose under the share offer. Comment on how the shortfall, relative to (iii) and (iv) above, is distributed between Bourgueil's and Saumur's shareholders.

Solution to Question

i) Bourgueil is worth 10 million by €5.50 = €55m. before the merger
Saumur is worth 4 million by €2 = €8m. before the merger/takeover.

4million by 2.15 euro gives €8.6m - less €8m gives a gain of €0.6m to Saumur's shareholders.

ii) Bourgueil pays €8.6m for a company worth €9m (8 + 1) but the costs are €0.35m. so the gain is a mere €50,000

iii) Bourgueil issues 2 million new shares bringing the total number of shares in issue to 12 million

The value of the combined entity after the takeover is €55m + €8m + €1m – €0.35 = €63.65

2 million shares are given to Saumur's shareholders each is worth 63.65/12 = €5.304167

The total consideration is therefore 2m by €5.304167 = €10,608,333

Saumur was worth €8m before the Takeover so the gain to its shareholders is now €2,608,333

iv) The gain or loss to Bourgueil's shareholders

After the takeover Bourgueil's shareholders own 10m shares at €5.304167 each = €53,041,667
They previously had a company worth € 55million so have lost €1,958,333
The difference between Bourgueil's loss and Saumur's gain is €650,000 which is net gain to the merger after the transactions costs of €350,000.

v) Saumur still gains €0.6 million

Bourgueil's shareholders lose since they pay €8.6 for a company worth €8 million and also pay transactions costs of 350,000 giving a total loss of 950,000 euro.

vi) The combined company is now worth €8 + €55 – €0.35 = €62.65 million

The price per share is €62.65 million / 12 million = €5.220833

This gives a consideration of 2 million by €5.220833 = €10,441,667 to Saumur implying a gain of €2.441667 m

The shareholders of Bourgueil now have 10 million shares worth in total €52,208,333
They used to have shares worth €55 million so have lost €2,791,667.

The difference between the gain of Saumur and the loss of Bourgueil is €350,000: the cost of the merger which has to be borne by Bourgueil's shareholders. However, the gain to Saumur's shareholders has been reduced by €166,667 being their portion (1/6) of the shortfall in the valuation of €1m. Bourgueil's shareholders are €833,333 worse off since they own 5/6 of the company and take 5/6 of the shortfall.

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