More on Earnings Adjustments

By

J. R. HARRIS

In volume No. 1, December 1962, of this Journal the Society published my paper on Earnings per Share, Adjusted for New Issues, in which I dealt with what I felt were the main principles involved and avoided some difficult points of detail. Since then, I have had to consider a few of the awkward details.

In the earlier paper I demonstrated that, when earnings per share were adjusted for a cash issue by assuming that shareholders sold enough rights to take up the rest of their entitlements, that earnings per share before the issue should be multiplied by p/P
where p & P are equivalent ex-rights and cum-rights prices respectively. I did not deal explicitly with the question whether dividend differences should be considered when calculating these equivalent prices, but the formula I derived implied that they should be disregarded. I now investigate the question further.

Consider the following case:—

Issued capital before issue	\$1,000,000 in one million shares of \$1 each.
Issue	1 for 4 at \$2 per share
Market price cum-rights	(i) \$3 per share (ii) \$4 per share
Dividend	18 cents per share, payable as two half-yearly payments of 9 cents each.
Dividend difference.	New shares will miss one half-yearly dividend of 9 cents and will then rank equally with old shares.

(a) Ignore dividend differences.

Case (i)	Case (ii)
P = 3	P = 4
5p = 4×3 + 1×2 = 14	5p = 4×4 + 1×2 = 18
p = 2.8	p = 3.6
p/P = 0.933	p/P = 0.900

(b) Take dividend differences into account.

P = 3	P = 4
5p = 4×3 + 1×2.09 = 14.09	5p = 4×4 + 1×2.09 = 18.09
p = 2.818	p = 3.618
p/P = 0.939	p/P = 0.905

The main points of interest in this example are:—

(a) If we ignore dividend differences, we adjust earlier profits per share to a smaller figure than if we allow for them. Hence, ignoring dividend differences makes the rate of growth of earnings per share appear greater.

(b) The effect of ignoring dividend differences seems small—only ½% in case (ii), where the share was yielding 4½%.

In general, allowance is made for a dividend difference by adding the dividend difference to the application money. In the case of an issue of:—

1 new share for n old
on payment of k per share
with a dividend difference d per share
the formulae connecting P, the price cum-rights, with p the theoretical price ex-rights are:

(a) ignoring dividend differences

$$p = \frac{nP + k}{n - 1}$$

(b) allowing for the dividend difference

$$p = \frac{nP + k + d}{n + 1}$$

Consequently the adjustment allowing for dividend differences will always exceed the adjustment wherein they are ignored, and the ratio will be

$$1 + \frac{d}{nP + k}$$

The fraction in the expression above is less than $\frac{1}{n}$ × the dividend yield of the share × the fraction of year's dividend which the dividend difference represents. If most of the investments that we consider have dividend yields less than 6% and the dividend difference is normally about six month's dividend, the effect of ignoring dividend differences will be to exaggerate the increase of adjusted earnings per share during the year by less than $\frac{1}{n}$ × 3%. In general, it may well be felt that accuracy of

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BROKERAGE

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nine mining securities were over \$7.00 and only five of the two hundred and twenty industrial securities were over \$7.00. Thus the adoption of the New York commission rates would result in increased charges on transaction in two hundred and sixty-six of the two hundred and seventy-nine stocks listed in the Main Room of the Stock Exchange of Melbourne. This sample is representative of all stocks listed on Australian Stock Exchanges. The situation in New York is different. There the price of shares are, on the average, much higher. IBM recently sold at \$629 and only about one in two hundred of the securities quoted are traded at prices less than \$7.00. Thus the commission charged on round parcels of shares (usually 100) is in fact less than 2% for most companies listed in New York. Few Australian investors would take advantage of these rates, as few can buy shares in, say, Western Mining, at \$33.00 each, in lots of one, two, or more, hundred. And it is only in round parcels of such high priced shares that the New York scale of charges shows substantial reductions of charges over the Australian rates: And further to this the volume discount effect of the Australian rates starts to take effect for orders exceeding \$10,000, and order for as few as 400 Western Mining would be liable for some reduction of commission.

Secondly, the New York rates state that the commission in any event shall not be less than \$6.00 per single transaction. In Australia the minimum is \$2.00.

Not many Australian transactions are so small as to be affected by the \$2.00 minimum. However, the New York minimum is much higher and would affect many more transactions and affect the commission charged on these transactions more substantially.

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this order cannot be attained in investment analysis, because of variation in practice involved in providing the basic figures, and so dividend differences may be ignored in adjusting earnings per share.

A more basic consideration occurs when the issue in question is a bonus one. If we were to take dividend differences into account when adjusting for cash issues, we would be inconsistent if we did not do so for bonus issues, too. We would then treat bonus shares as if they were a cash issue, the application money being the dividend difference between the bonus shares and the old shares. Such a course would be quite justifiable prima facie, but would have some strange effects on the sequence of adjusted earnings per share as the following example illustrates.

Issued capital. \$1,000,000 in one million shares paid to \$1.

Profit. \$300,000 for three consecutive years.

	Case (i)	Case (ii)
Bonus issue.	1 for 1 in year 2	No issue
Dividend—Year 1.	20 cents per share	20c per share
—Year 2.	10 cents per old shares only.	10c per share
—Year 3.	10 cents per share all shares.	20c per share
Share price at time of issue.	\$4.	\$4
Allowing for dividend difference.	$2p = 4.00 + 0.10 = 4.10$	—
	$p = 2.05$	—
	$p/P = 0.5125$	—
Ignoring dividend difference.	$p/P = 0.5000$	—

Year	Earnings per share cents	Adjustment No. div. diff.	Adjustment Div. diff.	Adjust. Earnings per Share No. div. diff. cents	Adjust. Earnings per Share Div. diff. cents	Case (ii) Earnings per share cents
1	30	0.5000	0.5125	15	15.4	15
2	15			15	15	15
3	15			15	15	15

of the company's equity in both cases. The company's profit has not varied at all and it may well be felt that making an adjustment for dividend difference has caused a distortion of earnings per share which is not justified. On the other hand, it must be observed that to make case (ii) strictly comparable with case (i) the dividend had to be dropped in year 2 and restored in year 3, whereas in case (i) an adjusted record of dividend per share might show constant dividends paid throughout. Would it be fair compensation to show a decline of earnings per share in case (i) as occurs when dividend differences are taken into account?

My own feeling is that dividend differences should be ignored in all cases where the difference is one year's dividend or less. There have been special cases where the differences have been much more, e.g., issues some years ago by Broken Hill South and North Broken Hill

As far as the shareholder is concerned, the only difference between cases (i) and (ii) is that in case (i) he ends up holding two share certificates. He receives the same dividend and owns the same proportion

of shares that did not receive dividends for several years. In such cases, I think some allowance for the difference between the new shares and the old would certainly have to be made.