Sales planning is the foundation for periodic planning in an organisation because practically all other enterprise planning is built on it. Production budget is formulated on the basis of sales budget. In fact “… the production budget represents the conversion of planned sales volume to planned production volume as a basis for planning (and budgeting) the various aspects of the manufacturing function – plant capacity requirements, raw material requirements, timing of purchases, labour requirements and costs and factory overhead”¹. In the modern competitive world, goods are produced in advance of orders so that goods are made available to customers immediately in order to reduce their lead time. The sales planning assumes importance because it is undesirable to carry/ keep the stock of finished goods. It is said that it is better to keep stock of raw materials as compared to work-in-progress and finished goods. Initially, a business must attain break-even-point. In the long run, however, the sales must be sufficient to justify the claim of interested parties, especially the owners/ shareholders who have invested money in the business.

A business is expected to generate surplus (profits) for: (i) reasonable dividend to shareholders, and (ii) creation of reserves for future growth. Profit is the excess of sales over variable cost and fixed cost. The profits of a corporate entity are ascertained as per the provision of section 205 of the Companies Act 1956. The provisions of section state that, in addition to usual charges, distributable profits must be ascertained after the charge of: (i) depreciation as per section 350; (ii) managerial remuneration as per the provisions of section 198 and 349; and (iii) income tax/ provision for income tax.

In spite of all constraints, a business must aim to
achieve sales which at least earn post tax profits equal to the sum of followings:

A) Creation of reserves
B) Dividend payable (both Preference and Equity)
C) Corporate tax on dividend

A) Creation of Reserves:
Reserves are built to improve/strengthen the financial soundness of the company. The requirement for creation of reserves may be voluntary or legal. Under companies (transfer of profits to reserves) Rules 1975 framed under section 205 2(A), a company is required to transfer, a certain percentage of profits to reserves if the rate of dividend exceed 10%. The percentages are linked to the rates of dividend proposed by the directors which are as:

Rate of proposed dividend Percentage of profits to (on paid up capital) be transferred to reserves
a) Exceeding 10% but not more than 12 ½% 2 ½%
b) Exceeding 12 ½% but not more than 15% 5%
c) Exceeding 15% but not more than 20% 7 ½%
d) Exceeding 20% 10%
However, for future growth/ expansion and contingencies normally companies voluntarily plough back larger amount of profits than legally required.

B. Dividend Payable:
Dividend refers to that part of company’s profit which is distributed to shareholders. In other words, dividend is the reward on shareholders investment in the company. Under normal situations, the dividend is paid out of revenue profits.

Dividend payable may be: (i) Preference Dividend, (ii) Equity Dividend, or (iii) Both.

The rate of preference dividend is pre-determined. Since the rate of dividend and amount of preference capital is known, the total amount of such dividend can be calculated.

The reasonable rate of dividend that must be paid to equity owners, can be decided on the basis of: (a) past rate of dividend, (b) expectation of shareholders, (c) rate of dividend of competing units, (d) availability of profits, (e) liquidity position of the company.

C) Corporate Tax on Dividends:
Earlier, the dividends received were taxable in the hands of shareholders. But now, the company is required to pay tax on dividends distributed to both preference and equity shareholders. Presently, the rate of corporate tax on dividends is 10%. This tax on dividends is payable from the year 1998. From the company point of view, it is also an appropriation of profits.

The present article attempts to build a model/formula (not available in the existing literature) which facilitate to plan sales which are enough to give at least profit for: (i) creation of reserves, (ii) payment of dividend, (iii) payment of tax on dividends.

The Model
The amount of profits to be transferred to reserves depends upon: (a) the rate of equity dividend, (b) the profits of the particular year. The rate of equity dividend in turn depends upon the availability of profits. Further, corporate tax on dividends depend upon the amount of total dividend (preference dividend plus equity dividend). All these distributable profits must be post tax profits. In other words, the net profit is also subject to the provisions of income tax at specified rate.

The following formula is proposed to compute the sales.

\[
\text{Sales(Units)} = \frac{1}{F+\frac{(P_d+E_d)+(P_d+E_d)R td}{(1- Tr)(1-R_t)}} \quad \text{(1)}
\]
\[
\text{Or}
\]
\[
\text{Sales(Units)} = \frac{1}{F+\frac{T d+T d-R td}{(1-Tr)(1-R_t)}} \quad \text{(1)}
\]
\[
\text{Sales(Value)} = \frac{1}{F+\frac{T d+T d-R td}{(1-Tr)(1-R_t)}} \times S \quad \text{(2)}
\]

Here
\[
F=\text{Fixed cost}
\]
\[
T_r=\text{Income tax rate}
\]
\[
P_d=\text{Preference dividend}
\]
\[
E_d=\text{Equity dividend}
\]
\[
T_d=\text{Total dividend}
\]
\[
R_t=\text{Rate of transfer to reserve/s}
\]
\[
R td=\text{Rate of tax on dividends}
\]
\[
S=\text{Selling price per unit}
\]
\[
V=\text{Variable cost per unit}
\]

The above formula can be tested/ proved and verified
with the help of a hypothetical example. Suppose the following particulars of a company are available for the year 2001-2002, it has to plan its sales (in units as well as in rupees) necessary to maintain/pay equity dividend @ 25%. 13% preference share capital Rs.2,00,000  
Equity share capital Rs.4,00,000  
Fixed cost Rs.1,20,000  
Selling price(per unit) Rs.15  
Variable cost (per unit) Rs.7  
Income tax rate 30%  
Corporate tax on dividends rate 10%  
As per rules, 10% transfer to reserve is required against the proposed dividend rate of 25% on equity share capital. By using the proposed model/formula, the required sales can easily be calculated, as given hereunder:

### Verification:

<p>| | | | |</p>
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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Sales (Units) =</td>
<td>$1</td>
<td>F+</td>
<td>(Pd+Ed)+(Pd+Ed) x Rtd</td>
</tr>
<tr>
<td></td>
<td>$S-V</td>
<td>(1-Tr) (1-Rt)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$1</td>
<td>$1,20,000+</td>
<td>(26000+1,00,000)+(26000 +1,00,000) x 10%</td>
</tr>
<tr>
<td></td>
<td>$15-7</td>
<td>$1,26,000 + 12,600</td>
<td>(1-30%) (1-10%)</td>
</tr>
<tr>
<td></td>
<td>$8</td>
<td>$1,20,000 + 1,38,600X</td>
<td>100 X 70</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>120,000+2,20,000</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>X3,40,000 = 42500 units</td>
<td></td>
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</tbody>
</table>

Sales (in Rs.) = 42,500 X15 + Rs. 6.37,500

### C. Distribution of profits:

<p>| | | |</p>
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<thead>
<tr>
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<tbody>
<tr>
<td>Profit after tax</td>
<td>= Rs.1,54,000</td>
<td></td>
</tr>
<tr>
<td>Less transfer to reserves</td>
<td>= Rs.15,400</td>
<td></td>
</tr>
<tr>
<td>Less preference divided</td>
<td>= Rs.26,000</td>
<td></td>
</tr>
<tr>
<td>(Rs.2,00,000 x 13%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less equity dividend</td>
<td>= Rs.1,12,600</td>
<td></td>
</tr>
<tr>
<td>(Rs.4,00,000 x 25%)</td>
<td>+</td>
<td>Rs.1,00,000</td>
</tr>
<tr>
<td>Less corporate tax on dividends</td>
<td>= Rs.12,600</td>
<td>(Rs.26,000 + Rs.1,00,000) x 10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

The above computations clearly depict that the sales figure arrived at through the proposed formula is correct. After deducting variable cost of Rs.2,97,500 and fixed cost of Rs.1,20,000 from sales of Rs.6,37,500, the net profit of Rs.2,20,000 is obtained. This profit is sufficient to give a return @ 25% on equity share capital after meeting legal requirement of: (i) transfer of profits to reserves @ 10% and (ii) payment of corporate tax on dividend @ 10%. Even if the company management plans to create a larger reserve out of profits, this formula can be easily take care of it.

A business is established with a primary motive to earn profits. The major source of profit is sales. In other words, profit shall be earned only if sales are affected. It is necessary to project the expected volume of sales which shall generate sufficient profits to give a fair return to its shareholders/owners. After planning the sales, the top management can fix the targets for different territories/salesman. The proposed formula takes into account the interdependence of rate of transfer to reserve, corporate tax or dividends and availability of profits. The formula shall facilitate to know the minimum volume of sales in order to ensure a specified rate of return to shareholders.

### References:
