

# [Method of calculating shareholder value analysis finance essay](https://assignbuster.com/method-of-calculating-shareholder-value-analysis-finance-essay/)

This study illustrates the theory, model and method of calculating Shareholder Value Analysis using Alfred Rappaports SVA model. The literature review is the critical relevant work on capital structure. The literature review is focused bonds as a debt instrument.

## SHAREHOLDER VALUE ANALYSIS (SVA)

## AstraZeneca Plc.

Alfred Rappaport in 1986 coined the term Shareholder Value Analysis. The concept of shareholder value analysis revolves around another concept called Value based management. The procedure for calculating Shareholder Value Analysis is to calculate the present value of the estimated cash flows with the cost of capital. As per Rappaport :

Corporate Value = Shareholder value + Debt

Shareholder value= Corporate Value- Debt

To calculate the shareholder value, the corporate value needs to be calculated first. Corporate value of an entity can be calculated:

Present value of cashflows during forecast period

## +

present value of cashflows beyond forecast period

To make the answers more precise and reliable, market value of marketable securities and other investments should be included

The process of calculating SVA can be graphically depicted as in Figure 1

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Figure : Faisal Ahhamad

Seven value drivers of shareholder value as described by Rappaport are given below:-

Sales growth: Sales is a percentage, based on the trends of previous years, by which sales are expected to increase every year .

In the case of AstraZeneca, the sales growth calculated on the basis of the past 5 years from 2006-2010, comes out to be 7%. Thus sales are expected to grow by 7% during the planning horizon.

Operating profit margin: Operating margin is the percentage of the selling price which denotes profit. Thus profit margin denotes the percentage of revenues left after deducting all essential costs and overheads.

Profit margin for AstraZeneca based on the trend of previous 5 years is 31%. Thus 31% of sales represents profit of the company.

Tax: Tax rate is the percentage of your profits which is deducted as tax. HM Revenue and customs shows the tax rate for the year 2011 to be 28%. Based on the average of past trend, I calculated the same figure, ie. 28%.

Incremental working capital investment: Incremental working capital represents the increase in the working capital based on the change in the sales. It is represented as percentage of change in sales. For Astra Zeneca the rate of incremental working capital investment is 102% of sales.

Incremental Capital Investment: Incremental Capital Investment represents the increase in the fixed assets of the company based on the increase in sales. The ICI is represented as a percentage of sales. For Astra Zeneca the ICI percentage was calculated based on the trend of previous five years. The value of ICI is 1. 12 of sales.

Required Rate of Return: Required Rate of Return calculated for AstraZeneca is 7. 15%. It is the Weighted Average Cost of Capital for AstraZeneca. It is based on the AstraZeneca’s beta as per the London Business School Risk Management Service Book which was . 57 and the current Risk free rate 4. 25%. The current Market premium has been taken to be 6% from Glen Arnold. The Require rate of return was calculated using CAPM.

Planning Horizon: Planning horizon for the calculation has been taken to be 6 years.

The SVA calculated for AstraZeneca = £37. 902 Billion.

The real market capitalisation on the day of calculation was £40. 643 Billion

The market is overvalued as the SVA of the company is coming to £37. 902 Billion.

## Critique of the SVA model

Shareholder value model like any other model has been criticized for various reasons. SVA is a relatively simple model yet precise in its approach. The major criticism for SVA is that it takes assumptions regarding the trends. For say it assumes that the sales would increase at a constant rate for all years in planning horizon. More over it neglects ICI and IWCI when the values are negative. Therefore the calculation of the SVA cannot be said to be entirely correct.

## Literature Review of Capital Structure

## Focussing on Bonds as a source of finance

Capital structure in the simplest terms can be described as a combination of various sources of finance that an enterprise uses for acquiring capital. Firms can acquire capital in various forms such as equity and debt. As these can be used in various proportions thus several various combinations or capital structures can exist. Capital structure as an area of academic study gained attention with the work of Modigliani & Miller (1958) which concluded that capital structure was irrelevant to the value of a company. This conclusion was constructed on some key assumptions such as a perfect market with perfect knowledge, no taxes and no costs of transaction and that individuals had the capability to borrow at the same rate as big corporations, thus it assumed a high level of uniformity(see Arnold, 2005: pp. 958). In 1963 Modigliani and Miller reviewed the conclusion and altered the no-tax assumption, thus changing the conclusion altogether. The new MM theorem suggested that when taxes were taken into consideration, the shareholder value maximization objective would be served with the highest level of gearing. This theorem served as the starting point for most post- 1960 work on capital structure.

MM theorem was followed by two more central theories of capital structure known as the Pecking order theory and static trade off theory of capital structure. The earliest version of the Static theory of capital structure is attributed to Kraus and Litzenberger(1973). It suggests that companies choose their gearing levels based on the balance between costs of bankruptcy and the tax benefits derived from such gearing. Thus this theory suggested an optimal level of gearing where transactional and bankruptcy costs would be traded off by tax benefits and no more. Pecking order theory, propounded by Myers and Majluf (1984), on the other hand suggests that companies have a tendency to choose internally generated funds before exercising any other options of financing, followed by external debt leaving equity to be their last resort. Research by Almeida and Campello (2010) suggests a negative relationship between existence of internal funds and tendency to use external funding from debt. The actual prevalence of any of these theories in the real world is still a matter of debate and being tested constantly (Frank and Goyal, 2005; Jong et al, 2011)

While the debate about a suitable level of gearing continues, one fact that has gained acceptance that gearing can increase shareholder value and if appropriately used can be a worthy financial tool for companies. This has provided companies with more options to acquire the necessary capital. Debt as an option is now being used by more and more companies as a means of raising finance through public and private placements (Buckley et al, 1998). Companies can acquire debt through various kinds of publicly traded bond instruments or from institutional lenders through term loans and private placements (Berk and DeMarzo, 2011). With the increasing number of options to raise capital, the dilemma of the firm is no more between equity and debt alone but also between what form of debt to use.

Issuing of public debt involves high costs, especially fixed costs. Such costs are called floatation costs and are a major factor considered when deciding to raise debt from public (Blackwell and Kidwell, 1998). Smaller firms therefore find the it beyond their resources to carry out such an expensive issue. Thus bigger firms have the size and resources to raise public debt(Krishnaswami et al, 1999; Dennis and Mihov, 2003).

Lack of appropriate information is also another major factor considered by investors. Thus any firm information about which is not readily available or verifiable would be subject to suspicion by the investors (Jensen and Meckling, 1976). Taking into consideration the perceived risk when lending to such a firm, the investors would desire a higher rate of return, unless and until they have greater control of and better supervision of the activities of the business. As individual debt holders from the public cannot exercise such close control, they prefer to settle for higher returns. To avoid paying higher interests some companies prefer to borrow from institutional lenders as they have the capability to closely supervise the activities of the firm. Institutional lenders such as banks achieve this by imposing Restrictive Covenants (Diamond, 1984). Such restrictive covenants cannot be imposed by individual owners of public debt instruments.

Several different researches have shown that smaller firms, when opting for external debt financing prefer to opt for loans rather than bonds while bigger firms tend to use bonds as the preferred debt instrument(e. g. Krishnaswami et al, 1999; Dennis and Mihov, 2003). Dennis and Mihov(2003) suggest that larger companies with a highly debt geared capital structure may use their leveraging as an indicator of credibility and reputation, thus using it to raise debt from public. This statement is countered by Chemmanur and Fulghieri’s earlier(1994) statement that high leveraging may be seen as a sign of financial distress and debt renegotiations may become a complication in case debt is raised through public sources.

Rao and Edmunds (2001) with regard to restrictive covenants and floating interest rates, state that firms do their shareholders a “ Disservice” by taking private placed debt which comes along with floating interest rates and restrictive covenants. The floating interest rates make the future cash-flows of the firm unstable and the restrictive covenants restrict the growth of the firm, and thus shareholder value, by tying the hands of the management and owners. Smith and Warner(1979) suggest that restrictive covenants involved in privately raised debt may not be worth cost as it the restrictions imposed may discourage management from entering into projects which could have been potentially profitable. Such restrictive covenants and floating rates are usually part and parcel of institutional loans and privately raised debt. Rao and Edmunds(2001) favour bonds which give the firms freedom to operate in favour of the shareholders and to expect stability in their cashflows due to stable interest rates. Bonds are a preferable form of raising debt publicly as it allows the firm to retain greater flexibility in operations and may turn out to be cheaper than traditional bank or institutional loans.

Absolute lack of restrictive covenants can also be abused by the bond issuer at times. Certain situations are discussed as below:-

Myers (1977) suggests underinvestment is a major issue for levered high growth business as being highly levered, management in such businesses may let go of positive NPV projects assuming that the returns would not suffice for distribution between the bondholders and stockholders. Myers(1977) further suggests that this problem can be taken care of with dividend covenants which cap the maximum amount of dividend distributable by a company to ensure that free cash flows are not distributed to shareholders, rather they are invested in worthy projects. As levered firms might have a higher tendency to let go of positive NPV projects, putting debt restrictions or debt covenants would help ensure that the firm does not take on more than a certain extent of debt and thus there will be no conflict of interests.

Nash et al(2003) describe another situation, where covenants can be of benefit for bond holders, in which the bond issuer can dilute the claim of the bond holders by issuing another taking on more debt and issuing another claim of a higher priority. Under such circumstances the bond holders would be bearing more risk but would still get the interest rate fixed before more debt was acquired by the bond issuer. Certain covenants, which restrict acquisition of more debt or restrict issuing of claims which hold priority over the previous bond holders, can help reduce chances of such claim dilution. Fama and Miller(1972) call such rules as “ me-first” rules.

Nash et al(2003) further describes certain situations where the restrictive covenants would turn out to be detrimental for the bond holders themselves. One major drawback of restrictive covenants is the reduction in the flexibility of the management and stockholders. Thus due to restrictive covenants the management and stock holders might decide not to invest in high return projects just to avoid any risk. Such circumstances would lead to sacrifice of growth and thus the firm’s survival may itself be at stake.

Another situation describe by Nash et al(2003) is the scenario where the bond issuing firm may be facing financial distress. Due to lack of operational flexibility and financially restrictive covenants the firm would not be able to generate ample cash flow or arrange external funding and thus would face bankruptcy.

Nash et al(2003) and others have suggested certain ways around to cope with the drawbacks of restrictive covenants and to use them constructively.

The first such option is the convertibility option. The bond holders should have the option to convert bonds into shares. Mayers(1998) contended that it would allow a level of flexibility to the management of the firm while discouraging the management to transfer any value from the debt holders to the shareholders as such transferred value would be recaptured on conversion of bonds to shares.

Next option is to secure the debt with assets. Securing the bonds with tangible assets would provide a sense of security to the bondholders as they would have knowledge of their claim to a specific asset in case of default.

Debt priority is another option given by Nash et al(2003) and supported by Fama and Millers(1972) as per their “ Me first” rules. This arrangement would ensure that there is an existing agreement among all claimholders that the bond holders have priority over other claimants and that during the tenure of the bonds no new claimants would be given priority over them.

In the end it can be concluded that bonds have certain advantages over other forms of debt like institutional loans and private placements . Such advantages should be capitalised on when considering the option of increasing the debt gearing in the capital structure. That would ensure availability of cheaper finance, increased flexibility and increase in shareholder value.