

1.0 Executive Summary

In this report, the characteristics and types of industries which the business entity known as Singapore National Printers Corporation (SNP) were discussed. It showed the brief history of SNP's start-up as well as its current ownership structure.

Recent events occurring within and outside of SNP were also mentioned and one of the more note-worthy event was the launch of "myepb.com". The progressive expansion of its e-commerce and on-line services are fast gaining popularity and this might help SNP acquire a competitive advantage over its rivals and increase its value.

The financial performance of SNP was looked into and also an estimation of its shares' value was done up using the Dividend Valuation Model, Operating Cash Flow Model, Free Cash Flow To Equity Model, Earnings Capitalisation Model and the Net Tangible Asset Backing Model. Through these models' calculations, certain recommendations as to the purchase or sales of SNP's shares are given. Some models will give deviations between real share prices and the estimations. Reasons for these were provided.

2.0 Singapore National Printers (SNP) Group

SNP operates primarily in the printing and publishing industries, however over the years it has grown to provide services other than just these two. Through the 16 subsidiaries and associated firms (Refer to Appendix 1), the SNP Group has dabbled into areas of E-commerce, advertising and some ventures with other companies like JCDecaux Singapore Pte Ltd. The diversification of businesses helped enhance its operations and made it one of the more prominent business groups on the island.

Its main competitors come in the form of three firms, Takara Printing Co. Ltd; Teckwah Co. Ltd and Craftprint Pte Ltd.

2.1 History of SNP

The group started out as a humble company, the Singapore National Printers Pte Ltd. It was incorporated on 26 March 1973 and total staff strength was 75. This figure rose to 214 when it took over the operations of the then Government Printing Office slightly more than 3 months later.

SNP was listed on Sesdaq on 18 February 1987 and was subsequently promoted to the main board on the Stock Exchange of Singapore.

As at 31 December 1999, the group's Total Assets amounted to \$147,584,000 and its Capital and Reserves showed \$32,009,000 while its Profit After Tax was recorded at \$2,309,000.

In the area of printing, SNP also branched out into the Asia Pacific region. It has offices in Australia, Thailand and Malaysia. SNP can be said to be Singapore's biggest printing powerhouse.

2.2 The Ownership Structure

TOP TWENTY SHAREHOLDERS	NO. OF SHARES	%
Singapore Technologies Information Systems And Services Pte Ltd	27,930,000	48.77
Wing Tai Holdings Limited	11,400,000	19.91
DBS Nominees Private Limited	3,203,531	5.59
United Overseas Banks Nominees Private Limited	1,640,250	2.86
Overseas-Chinese Bank Nominees Private Limited	1,069,750	1.87
Overseas Union Bank Nominees Private Limited	716,500	1.25
Citibank Nominees Singapore Private Limited	583,500	1.02
Seah Boon Hwa	250,000	0.44
Raffles Nominees Pte Ltd	220,000	0.38
Keppel Bank Nominees Private Limited	219,750	0.38
Citibanks Consumer Nominees Pte Ltd	210,500	0.37
First Capital Investment Ltd	179,000	0.31
Low Hua Kin @ Loo Wah Kim	160,000	0.28
Phillip Securities Pte Ltd	130,750	0.23
Kay Hian Private Limited	123,000	0.21
Mah Kai Leong	116,500	0.20
Lum Choong Wah	105,500	0.19
Latip Ng	100,000	0.18
Goi Investments Holdings (HK) Ltd	90,000	0.16
Koo Tse Chia	89,500	0.16
Total	48,538,031	84.76

2.3 Overall Financial Performance Of The Group

The group was able to find its “silver lining” in 1999 as performance from all business segments improved. The SNP group turned around with an after tax profit of approximately S\$2.3 million as compared to 1998’s after tax loss of S\$9.1 million (excluding extraordinary items). Overall, printing accounted for 71% of 1999 revenues; publishing, 18%; creative communication, 6%; corporate, 5% and e-commerce, nominal.

The end of 1999 saw shareholders’ funds had rose by 2% to S\$60.6 million over the last 12 months. The return was 4% as compared with a loss of 15% in 1998. Also, Earnings Per Share worked out to be 4 cents in 1999 against the pale Loss Per Share of 16 cents in 1998.

Turnover of the Group was calculated to be S\$96.1 million, an increase of 16% over that in the previous year. Sales of Printing saw an increase that was more than double the Group's growth rate: sales were up 32.4% in 1999, from S\$51.22 million to S\$67.80 million. Not all segments of SNP experienced an increase in sales in 1999: sales of Creative Communication fell 26.7% to S\$5.89 million. SNP also experienced decreases in sales in Publishing (down 4.5% to S\$17.43 million). Sales in its printing subsidiaries, including that of the newly acquired SNP Sirivatana, grew by 32%.

Operating profit before adding in its share of profits of its associates was S\$2.6 million as compared to an operating loss of S\$10 million in 1998. The group’s expenditure, with the exclusion of SNP Sirivatana, dropped by 11%. A result of paying close attention over of operating costs.

The Group’s share of associated companies’ pre tax profits was S\$988,000 as compared to a loss of S\$154,000 in the previous year.

3.0 Description Of SNP's Industry

SNP is classified under the Printers sub-industry, which is a sub sector of the Printing and Publishing industry. The printing and publishing industry in Singapore has developed into a high value-added knowledge-intensive one, based on computer derived information technology. In Singapore, under Sections 14, 15 and 16 of the Newspaper and Printing Presses Act (Chapter 206), a permit is required for any materials (includes newsletters, magazines, periodicals, annual reports etc) printed, sold, published or distributed.

The Company had its beginnings 129 years ago in 1867 when the Government Printing Office produced the Gazettes and other official publications for the government. In 1973, Singapore National Printers Ltd was incorporated to take the role of the Government Printer. From then, it operated on a commercial basis.

Today, SNP is one of the leading media groups in Singapore and has evolved from a national printer to a diversified group of companies that together provide a wide range of services and products unique to the industry.

3.1 Prospects

Singapore is actively promoting the Internet as a medium for interacting, learning, and doing business in the global economy. The evolution of such technology will bring forth fresh challenges and opportunities for the printing industry, e.g. Internet publishing.

However, in spite of competition from the Internet, demand of traditional form of print media like books, newspapers and magazines is also predicted to increase. This is because books and magazines can be read anywhere, unlike a computer screen, which can only be accessed at certain places e.g. at home. Furthermore, as the economy improves, there will be more jobs, and when consumers have increased spending power, they are likely to read more thus driving demand for print media up.

In conclusion, the growth of the print industry is very dependent on a country's economic growth. In 1999, 61.4 percent of the company's total sales are in Singapore, which is equivalent to 59.06 million Singapore Dollars. Since the local economy is on the upswing, it is predicted that there is opportunity for growth for the next few years.

4.0 Current Issues

4.1 Information Technology

Following a blaze of technological innovations, the multimedia technology revolution is now sweeping the world and is currently growing at an exponential rate worldwide. The global market place is flooded with computer applications incorporating information in the form of text, sound and images. This new ability to view and manipulate information presents exciting opportunities for companies to explore.

Singapore's IT 2000 plan to become an intelligent island exploiting the uses of IT in business, government offices, schools, and homes by the turn of the century reaffirms the key role that electronics and multimedia will play in shaping the nation's competitive edge in future. These stages a borderless society with Singapore positioned as an information gateway for companies with global operations.

4.1.1 Impact On SNP

Through restructuring, SNP had converted SNP Multimedia into SNP eTech on 1 January 2000. This was to facilitate a change in its original positioning as a content provider of electronic educational materials to a new Internet and E-commerce system integrator. Its technical competence in Internet and E-commerce was proven with the launch of eGazette and myepb.com.

4.2 E-Commerce

The usage of the Internet has been growing at a phenomenal rate in recent years. The number of Internet users worldwide is estimated at 45 million and is rising at a rate of one million users every month. In Singapore, the government is actively promoting it as a medium for interacting, learning, and doing business in the global economy. This has prompted many companies to move in the direction of E-commerce.

4.2.1 Impact On SNP

E-commerce is a new horizon for SNP. It believes that the wealth of content and information technology capability within the organisation will provide a competitive advantage in the longer term.

SNP's on-line book retailing portal, myepb.com was launched late last year as part of SNP's venture into E-commerce. The sales generated by myepb.com have helped the group improve its first half turnover by 7% over the last half year from S\$41.2 million to S\$44.2 million. As SNP continue to revamp its web site and providing more value-added services such as discussion boards and on-line auctions, SNP should be able to stay competitive in this area.

4.3 E-Education

Multimedia is now used extensively in education to enhance the learning process. In Singapore, the government aims to integrate IT into the school environment to create more effective teaching strategies. Various multimedia projects have been introduced in recent years, and schools are provided with a wide range of multimedia educational courseware.

4.3.1 Impact On SNP

In 28 June 2000, SNP has acquired a 40 percent stake in Julia Gabriel Communications Pte Ltd, signalling its strategic investment in the education service business. Through its investment, SNP will be able to tap into the vast pool of Julia Gabriel's custom-designed intellectual resources to develop its multimedia educational products for both the local and overseas markets.

4.4 Liberalisation

In the year 2000, MOE began its liberalisation of the textbook market. The aim was to move toward a more open and competitive environment, so as to facilitate the development and upgrading of local textbook publishers. This would provide Singapore with better quality and competitively priced textbook.

Under the liberalisation package, the new challenge faced by the publishers will be to qualify their titles for the list of textbook approved by MOE. Subsequently, publishers will have to promote their own products to schools for adoption. Marketing and sale will consequently become a key factor in determining the success of their textbook business.

4.4.1 Impact On SNP

The liberalisation of the textbook market had led to the restructuring of the Group's publishing business, which was implemented in the second half of 1998. Under the new structure, SNP Publishing becomes the holding company for the Group's publishing business. It manages centralised functions in marketing and sales, production planning and execution as well as logistics for the entire publishing group, which were previously handled separately by the respective subsidiaries. This new structure will allow SNP to maximise its market flexibility, facilitate centralised sales strategies and generate better economies of scale for production.

5.0 Dupont ROE

5.1 Profit Margin

As can be seen from Appendix 3 , Income Revenue (Net Sales) continues to rise over the years from 1994 to 1996. This growth was mainly contributed by the operations overseas. However, from the period 1997 to 1998, SNP Group suffered a decline in the revenue. This was caused by the loss of cessation of book retailing which was not compensated elsewhere in the group in 1997 followed by a fall in the printing subsidiaries, particularly in SNP Ausprint, and a downsizing of their operation in the early part of 1998. For 1999, there was a tremendous improvement in the overall financial performance of SNP. This improvement in performance was contributed from all segments and the associates. Among all efforts carried out by the Group to strengthen the growth in income revenue, below are some of the brief accounts of what are some of the innovative services introduced by SNP (Singapore) in 1998 to 1999,

1998	<ul style="list-style-type: none"> ↪ Launch its new Multimedia product, "Cyberscholar", to assist primary school students in learning English, Chinese and Mathematics. ↪ Launch E-Gazette, the online government Gazette.
1999	<ul style="list-style-type: none"> ↪ Setting up of a wholly -owned subsidiary, "myepb.com Pte Ltd, which operates as a cyberstore and a chain of physical bookstores in retailing of books and related products.

5.2 Total Asset Turnover

Total Assets continues to grow at a steadily rate from 1994 to 1996. Except for the years 1997 and 1998 where SNP Group experienced a dropped in the Total Asset Turnover. This was due to the economic crisis between the year 1997 and 1998. The overall efficiency of any firm can be detected by the magnitude of its net asset turnover. The table below shows how SNP has tried to improve its Total Asset Turnover:

1996	<ul style="list-style-type: none"> ✎ SNP incorporated a new wholly-owned subsidiary, SNP Multimedia Pte Ltd, to focus on the content provision business using multimedia and information technology.
1997	<ul style="list-style-type: none"> ✎ SNP liase with Cambridge University Asia Pacific Training Services (CUAPTS) to develop the project “Cambridge On-line”; a revisional resource specially designed to help GCE “O” Level candidates prepare for their examination.

5.3 Comparison Of SNP Against Teckwah Co.

Based on 1999’s financial performance, Teckwah had a more attractive ROE figure than SNP. It showed a higher net profit margin than SNP, however, its total asset turnover lost out to SNP by approximately S\$26 million. The acquisition of Sirivatana Palace Press Company Limited and a stake of 25% in JCDecaux Singapore Pte Ltd had added to SNP’s total assets. This inevitably will raised its financial leverage over Teckwah in 1999.

An increase in sales has led to the turnover of SNP to be greater than its rival, Teckwah. This showed an improvement of business operations in SNP, hence SNP is preferred over Teckwah.

6.0 Valuation Of SNP's Shares

The following models are used to estimate the value of the firm's common stock.

- ↪ Dividend Valuation Model
- ↪ Operating Cash Flow Model
- ↪ Free Cash Flow To Equity Model
- ↪ Earnings Capitalisation Model
- ↪ Net Tangible Asset Backing Model

To start estimate the value of the stock, it is essential to first estimate the dividend growth rate and the investors' required rate of return then followed by the application of the valuation models.

6.1 Growth Rate Estimate

Based on the historical data gathered from SNP's annual report, the annual compound growth rate for UOB is as follows:

Growth Rate	1994 – 1999	1997 – 1999	Implication
Dividend Per Share	-12.94%	-10.56%	Improving
OCF	39.79%	61.39%	Volatile
FCFE	42.36%	65.71%	Volatile
EPS	-14.97%	210.10%	Volatile

From the above figures, it is forecasted that SNP will increase its dividend payouts and is expected to experience growth for the next few years. Past OCF, FCFE and EPS information proved to be relatively unstable to be employed for forecasting, hence a series of other alternative methods of estimations were formed.

Assumption: SNP will maintain a constant debt/equity ratio as it finances assets growth.

Using 1999 data, the implied sustainable growth rate of SNP is:

$$\begin{aligned}
 g &= RR \times ROE \\
 &= 0.6250 \times 0.0381 \\
 &= 0.0238125 \text{ (2.38\% approx.)}
 \end{aligned}$$

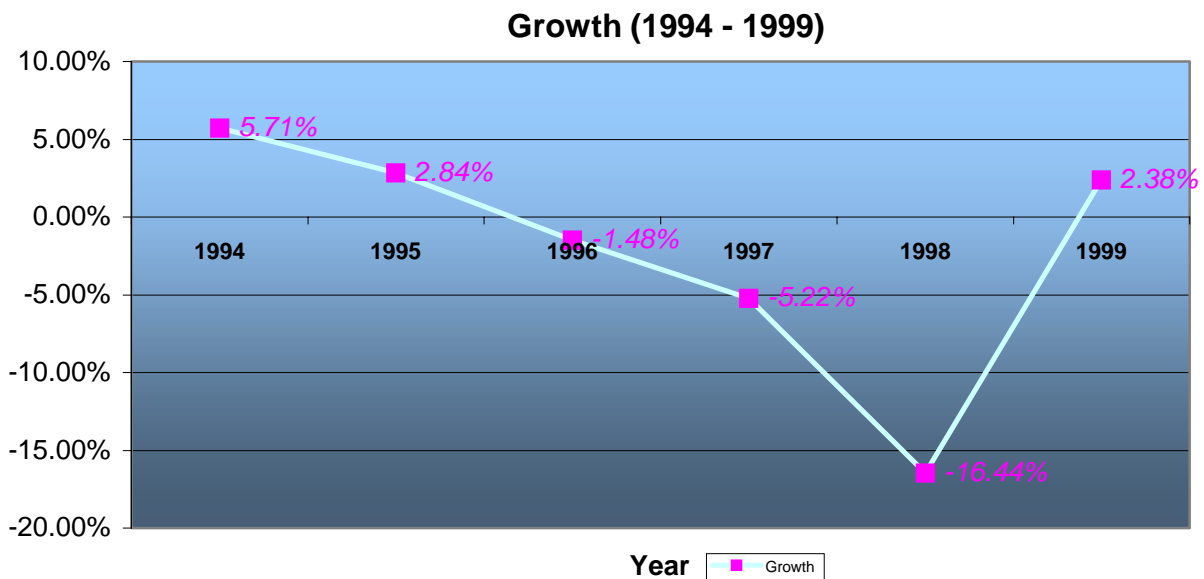
Next, this growth rate of 2.38% is modified as the possible influences of the economic trends are taken into consideration:

The highest growth rate for the past six years is 5.71% and lowest at -16.44% (Refer to Appendix 2)

An estimate of \dot{g} is done by :

$$\begin{aligned}
 \dot{g} &= (\text{Historical Highest Growth Rate} + \text{the Implied Sustainable Growth Rate})/2 \\
 &= (5.71\% + 2.38\%)/2 \\
 &= 4.045\%
 \end{aligned}$$

For simplicity, an estimate \dot{g} of 4% is used.



Expectation

Due to the recovering economies in South East Asia and the vast expansion of the ecommerce trend, SNP will be expected to grow at an approximation of 4% (as estimated previously). This level of growth is predicted to stay constant for two years and drop by 0.5% every year thereafter. It will steady at 1% in 2007 (Year 8) and assume a perpetual growth rate at that level.

Reasons for the drop by 0.5% every year and a perpetual growth rate at 1% is due to the application of the prudence concept and the provision for uncertainties in the future.

Thus the following expectation of growth rate will be applied to OCF, FCFE and EPS:

Constant Growth	Declining Growth
2000 (4%)	2002 (3.5%)
2001 (4%)	2003 (3%)
	2004 (2.5%)
	2005 (2%)
	2006 (1.5%)
	2007 (1%)

6.2 Required Rate Of Return

The required rate of return for SNP is estimated by using The Capital Asset Pricing Model (CAPM) (Refer to Appendix 4)

The 2-year fixed deposit rate of DBS as at September 2000 was 2.56%. The Straits Times Index (STI) was used to calculate the annual expected return for a market proxy.

From the calculation, the estimated required rate of return is 16.26%.

6.3 Dividend Valuation Model

Assumptions:

- ↪ The value of a share of common stock is the present value of all future dividends
- ↪ The calculations is on the basis of an infinite time period

For the past six years (1994 – 1999), SNP paid an average dividend of \$0.02 per share. Hence, based on historical data, it is expected that SNP will continue to upkeep its dividend policy and pay \$0.02 per share for the coming years. The required rate of return is 16.26%.

Dividend Valuation Model (DDM)							
Year	Growth rate	Value	P.V at 16.26%	Year	Growth rate	Value	P.V at 16.26%
2000	4.00%	\$0.02	\$0.02	2002	3.50%	\$0.02	\$0.02
2001	4.00%	\$0.02	\$0.02	2003	3.00%	\$0.02	\$0.01
				2004	2.50%	\$0.02	\$0.01
				2005	2.00%	\$0.02	\$0.01
				2006	1.50%	\$0.02	\$0.01
				2007	1.00%	\$0.02	\$0.01
Total			\$0.04	Total			\$0.07

$$\begin{aligned} \text{Constant growth period value} &= \$0.02 / (0.1626 - 0.01) \\ &= \$0.14 \end{aligned}$$

Thus the value of the firm is:

	SGD\$
Present Value of high growth dividend	0.04
Present Value of declining growth dividend	0.07
Present Value of constant growth dividend	0.05
Total Present Dividend /Per share value	0.16

Comments:

As at mid 2000, the share price of SNP is about \$0.80. The estimated value based on the DDM of \$0.16 is significantly lower than the market price. Accordingly, it showed that the shares are overvalued and therefore it is recommended that the shares should not be bought.

6.4 Operating Cash Flow Model

Assumptions:

- ↪ The required rate of return on the investment (WACC) is greater than the expected growth rate (g).
- ↪ Assumes that the value of a share of is the present value of all future dividends.
- ↪ The calculation falls on an infinite time frame.

Analysis from historical data shows that OCF series has a relatively volatile history with a growth rate of 39.79% during 1994 – 1999 and 61.39% during 1997 – 1999. Hence, such volatility makes it unsuitable to use the more conservative 4% growth rate.

1999 OCF is \$ 57,564,831 million. This value is expected to grow at 4% per annum for the next 2 years. Then it is expected to settle down to a steady declining period to a perpetual growth rate of 1% per annum. The WACC is estimated at 11.69%. (Appendix 8)

The specific estimate of annual OCF in SGD\$ is as follows:

Operating Cash Flow Model (OCF)							
Year	Growth rate	Value	P.V at 11.69%	Year	Growth rate	Value	P.V at 11.69%
2000	4.00%	\$59,867,424.24	\$53,601,806.68	2002	3.50%	\$64,441,295.45	\$46,252,032.99
2001	4.00%	\$62,262,121.21	\$49,911,614.95	2003	3.00%	\$66,374,534.32	\$42,653,719.27
				2004	2.50%	\$68,033,897.67	\$39,144,398.72
				2005	2.00%	\$69,394,575.63	\$35,748,568.27
				2006	1.50%	\$70,435,494.26	\$32,487,294.85
				2007	1.00%	\$71,139,849.20	\$29,378,105.00
Total			\$103,513,421.63	Total			\$225,664,119.12

$$\begin{aligned} \text{Constant growth period value} &= \$ 71,851,247.69 / (0.1169 - 0.01) \\ &= \$ 672,135,151.50 \end{aligned}$$

Thus the value of the firm is:

	SGD\$
Present Value of high growth cash flows	\$103,513,421.63
Present value of declining growth cash flows	\$225,664,119.12
Present value of constant growth cash flows	\$ 277,587,761.89
Total present OCF	\$ 606,765,302.63
Minus: Value of Debt	\$213,765,512
Value of Equity	\$392,999,790.63
Number of Common Shares	157,204,250
Per share value	\$2.50

Comments:

As at mid 2000, the share price of SNP is about \$0.80. The estimated value based on the OCF of \$2.50 is significantly higher than the market price. This implies that the stock is undervalued and thus one should buy the stock.

6.5 Free Cash Flow To Equity Model (FCFE)

Assumption:

- ↪ The required rate on the investment (r) is greater than the expected growth rate (g)
- ↪ Assumes that the value of a share of common stock is the present value of all future dividends.
- ↪ The calculation is on the basis of an infinite time period.

Analysis of historical data shows that the FCFE series has had a volatile history with a growth rate exceeding 40% during 1994 – 1999 and above 60% during 1997 – 1999. Such volatility makes it inappropriate to use the more conservative 4 percent growth rate.

1999 FCFE is \$56,285,722 million. This value is expected to grow at 4% for the next two years. After which, it is expected to settle down to a gradual transition period to a perpetual growth rate of 1% per annum. The expected cost of equity is 16.26%.

Free Cash Flow To Equity Model (FCFE)							
Year	Growth Rate	Value	P.V at 16.26%	Year	Growth Rate	Value	P.V at 16.26%
2000	4.00%	\$58,537,150.88	\$50,348,226.52	2002	3.50%	\$63,009,389.21	\$40,092,492.82
2001	4.00%	\$60,878,636.92	\$45,037,068.43	2003	3.00%	\$64,899,670.88	\$35,518,358.11
				2004	2.50%	\$66,522,162.66	\$31,313,336.41
				2005	2.00%	\$67,852,605.91	\$27,471,483.49
				2006	1.50%	\$68,870,395.00	\$23,982,847.80
				2007	1.00%	\$69,559,098.95	\$20,834,098.93
Total			\$95,385,294.95	Total			\$179,212,617.55

$$\begin{aligned} \text{Constant growth period value} &= \$70,254,689.93 / 0.1626 - 0.01 \\ &= \$460,384,599.84 \end{aligned}$$

Thus the value of the firm is:

	SGD\$
Present Value of high growth cash flows	\$95,385,294.95
Present value of declining growth cash flows	\$179,212,617.55
Present value of constant growth cash flows	\$137,851,475.28
Total present value of FCFE	\$ 412,449,387.78
Number of Common Shares	157,204,250
Per share value	\$2.62

Comments:

As at mid 2000, the share price of SNP is about \$0.80. The estimated value based on the FCFE of \$2.62 is significantly higher than the market price. This implies that the stock is undervalued and thus one should buy the stock.

6.6 Earnings Capital Model

Assumptions:

- ↪ The required rate on the investment (r) is greater than the expected growth rate (g)
- ↪ Assumes that the value of a share of common stock is the present value of all future dividends.
- ↪ The calculation is on the basis of an infinite time period.

Historical data shows that the EPS series has had a volatile history with a negative growth rate of 14.94% during 1994 – 1999 and above 200% during 1997 – 1999. Such volatility makes more sense to use the more conservative 4 percent growth rate.

1999 EPS is \$0.04. This value is expected to grow at 4% for the next 2 years. After which, it is expected to settle down to a gradual transition period to a perpetual growth rate of 1% per annum. The expected cost of equity is 16.26%.

$$\begin{aligned} \text{ECM} &= \text{EPS} \times \text{P/E Ratio} \\ &= 0.04 \times \frac{1-0.5}{0.1626-0.1} \\ &= 0.3195 \end{aligned}$$

Comments:

As at mid 2000, the share price of SNP is about \$0.80. The estimated value based on the EPS of \$0.31 is significantly lower than the market price. This implies that the stock is overvalued and thus one should not buy the stock.

6.7 Net Tangible Asset Backing Model

According to SNP's 1999 annual report, the net tangible asset per share is \$0.98 per share.

Comments:

As at mid 2000, the share price of SNP is about \$0.80. The estimated value based on the Net Tangible Asset Backing Model of \$0.98 is slightly higher than the market price. This implies that the stock is undervalued and thus one should buy the stock.

7.0 Reasons For Possible Deviations

There are several possible reasons for discrepancies between actual price of SNP shares and the report's valuations. Although this is the case, it must be noted that great care was taken to ensure the accuracy of the valuations.

REASONS:

1. The valuations are based on historical data while superceding events might have taken place, therefore caused a relatively significant deviation.
2. The expectations of investors might have somehow changed, hence affecting the volatility share prices. As some methods of calculations are based on individuals' expectations of risks, growth and required rate of return.
3. The type of market also plays a part. How fast the market can absorb the information and react to the price changes can be a possible reason for deviations.

8.0 Conclusion

All valuations showed that SNP is actually making progress and has performed relatively well. The recent Asian crisis had many corporations affected and SNP was not spared either. Its performance dipped but was quick to bounce back and make good headway. The diversification of businesses also helped to improve profitability while negotiating a lower risk level. However in order to enhance its bottomline, it should seek to expand into other types of ventures and improve its online services to the general public. With more aggressive marketing and long-sightedness, the top management can contribute to the appreciation of SNP's market worth.