

SCM & VSM
Share Selection Strategies

By Steven C. Moxham
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Pt. 1: Stock Characteristics Method (SCM)

Introduction

Hi! First up I'd just like to say that this is amateur research done by an amateur investor so it's for you to determine whether it has any merit, and how much weight you put on it. But on that point I think that the results basically reflect what would one would intuitively expect to see occur in the market.

This is the write up of a study I did in 1997 and I have just updated it to include 1998 and 1999 returns. The two extra years have not changed the initial results of the study.

The point of the study was to find out where you can make the best returns in the sharemarket. I underline "where" because it's an important point. Not every stock in a particular category of stocks is going to be a winner, it just points you in the right direction to where to start looking.

The study was carried out to find out whether certain characteristics of a stock could determine its expected return, and which stocks were likely to deliver consistently high returns. It's not meant to be a one stop method for selecting winning shares but rather just another tool and perhaps a different perspective to use. Fundamentals, technical indicators and qualitative measures are all important tools in selecting winning shares.

Using three simple, distinct, and popular analytic methods for valuing shares I created a strategy called the **Stock Characteristics Method**, or **SCM** for short. Under this method the market is divided into **16** categories and labelled by their particular stock characteristics. I call these **Stock Characteristic Codes**, or **SCC's** for short.

Each SCC is a combination of a stock's *Price to earnings ratio (P/E)*, its *Net tangible asset backing per share (NTA)*, and its *dividend yield*.

In so doing the point was to identify whether these characteristics when combined, would define a particular class of share that yields an expected average return. As you will see there are major differences between each category and its corresponding return.

Each group tends to identify a certain level of risk and proves once again that the greater the risk you take the greater the reward you're likely to receive.

Secondly, it also shows that spectacular returns don't come from following the crowd. Countercyclical investing or picking unpopular and undervalued stocks has typically produced above average returns, but at a cost. Greater risk.

The second part of the study attempts to identify which stocks will be the winners out of the SCC categories.

Terms

As previously mentioned, every stock falls under one of 16 different categories as defined by the screening criteria. They are the P/E ratio, NTA, and dividend yield.

The P/E ratio is simply the companies share price divided by its earnings per share. Earnings per share is simply the companies profit divided by the number of shares on issue.

If a stock has a P/E ratio above the market average P/E ratio, it is given the letter **A**.

If a stock has a P/E ratio below the market average P/E ratio, it is given the letter **B**.

If a stock has a negative P/E ratio (i.e. it makes a loss), it is given the letter **L**.

If a stock has an artificially high P/E ratio because of subnormal profits, it is given the term **A***.

NTA per share is simply the companies Net Tangible Assets divided by the number of shares on issue.

If the share price trades at a premium to its NTA, it is given the letter **P**.

If the share price trades at a discount to its NTA, it is given the letter **D**.

The Dividend yield is simply the dividend per share divided by the stock price.

If a stock has provided a dividend yield in the last 12 months it is given the letter **Y**.

If a stock has provided no dividend yield in the last 12 months it is given the letter **N**.

Price to Sales ratio:

The Price Sales ratio (**P/S**) is simply the market valuation of the stock (stock price multiplied by the number of shares on issue) divided by the sales revenue of its last full year. Stocks were divided up into six categories of P/S ratios that ranged from;

0-0.25, 0.26-0.50, 0.51-1.00, 1.01-2.00, 2.01-5.0, and 5.01+.

Generally, the lower the P/S ratio the better. There are however some exceptions when it comes to companies that have minimal margins by the very nature of their business. Examples of such companies include supermarkets. They will always have very low P/S ratios because of their huge turnover, but it doesn't mean that they're undervalued. Such an example of a formerly listed supermarket company with a low P/S ratio was Progressive Enterprises. Distribution companies also have large turnover and small margins. Renaissance is an example. Colonial Motors is an example of another company that has high turnover but relatively small margins. So the point is that everything must be put into perspective.

Another phenomenon with the P/S ratio is that the bigger the company the smaller the P/S ratio.

Now we have defined our terms we can combine them into our 16 different SCC's as described below:

Stock Characteristic Codes (SCC's)

APY: Above average P/E ratio, Premium to NTA, Yields a dividend
APN: Above average P/E ratio, Premium to NTA, No dividend yield
ADY: Above average P/E ratio, Discount to NTA, Yields a dividend
ADN: Above average P/E ratio, Discount to NTA, No dividend yield
BPY: Below average P/E ratio, Premium to NTA, Yields a dividend
BPN: Below average P/E ratio, Premium to NTA, No dividend yield
BDY: Below average P/E ratio, Discount to NTA, Yields a dividend
BDN: Below average P/E ratio, Discount to NTA, No dividend yield
LPY: Negative P/E ratio, Premium to NTA, Yields a dividend
LPN: Negative P/E ratio, Premium to NTA, No dividend yield
LDY: Negative P/E ratio, Discount to NTA, Yields a dividend
LDN: Negative P/E ratio, Discount to NTA, No dividend yield
A*PY: Artificially high P/E ratio, Premium to NTA, Yields a dividend
A*PN: Artificially high P/E ratio, Premium to NTA, No dividend yield
A*DY: Artificially high P/E ratio, Discount to NTA, Yields a dividend
A*DN: Artificially high P/E ratio, Discount to NTA, No dividend yield

Methodology

Returns are annual from October 1991 through to October 1999 and cover 857 individual stock returns. The annual returns are averaged out over the eight year period. (Year on year)

Returns are capital adjusted for the likes of *share splits*, *capital reductions*, *consolidations*, *capital repayments*, *share cancellations*, and *bonus issues*. In the case of a *cash* or *rights issue* the return is based on taking up the full entitlement of the issue.

All returns are gross in that they are inclusive of *dividend* payments including any *special* or *one-off dividends* and mandatory *share buybacks* made during the year.

In the case of a *merger*, *takeover*, *buyout*, or *delisting* the return may not necessarily be an annual return, so it is calculated up to the time of the extraordinary event.

All market capitalisations have been included.

Some exclusions have been made to stocks with distinguishable valuation characteristics. They include non-producing forestry stocks the likes of Opio Forestry and Nuhaka, and also property investment companies the likes of Shortland Properties etc. They tend to move in cycles and valuations that are relatively predictable, and therefore of no interest to this study.

In calculating the market average P/E ratio for any one year, all P/E ratios above 30 were excluded. This avoids outlier numbers skewing the results. For example, Sky TV had a whopping P/E ratio of 110.5 in 1998! Negative P/E ratios were also excluded from the average.

And on that note it is why I made a separate category for artificially high P/E ratios (A*). The reason for an artificially high P/E ratio is because the company is making sub-normal profits. It could be that they have come out of a loss making situation and back into profit but as yet they haven't fully recovered to normal profits, or they have had a bad year and profits have sunk. Sub-normal profits could also be created by a one-off write down in the value of assets thereby causing a temporary drop in earnings per share.

The term "artificially high" is somewhat subjective so each stock had to be dealt with on a case by case basis. Some stocks had P/E ratios in the 40's but this was the result of being pushed up by exceptional popularity, not because of subnormal profits. Most of the stocks that fit into the A* category have P/E ratios ranging from 20 into the hundreds.

If a stock price was equal to its NTA, it was called at a premium to net assets, not at a discount to net assets.

If an annual stock return for the year was zero percent, it was placed in the "proportion down" column because the opportunity lost (cost) from the income that was tied up in the stock could have been earning interest in the bank. Therefore it was classed as a negative return.

Investment companies were excluded in Price to Sales ratio (P/S) returns because their income is primarily derived from dividends, not actual producing revenue. They therefore have high P/S ratios that don't accurately reflect their valuations, and hence are unuseful.

Companies that have zero revenue have infinite P/S ratios, and therefore were not included in the P/S 5.01+ returns column.

Sources used

Datex Yearbooks; 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, and 1999. Datex website. NBR share tables. Stockwatch online archived news and charting service.

The Study

An explanation of SCC's

What follows is an explanation of the type of companies that fall under each individual SCC category. I'll go through them in order of their proportion in the market from highest to lowest. As can immediately be seen the sharemarket is typically composed of two main groups that make up over 50% of the market; BPY and APY. Out of the sixteen different categories the first five make up 78% of the entire market.

- **BPY:** Below average P/E ratio, Premium to NTA, Yields a dividend

Proportion of market: **26.9%**

Average P/S ratio: **0.94**

Maximum return: **121.9%**

Minimum return: **(-52.2%)**

Average return: **22.5%**

Standard Deviation: **31%**

Risk Reward ratio: **56**

Median Return: **17.6%**

Average gain: **43.5%**

Average loss: **(-25%)**

Proportion Up: **63.5%**

Proportion Down: **36.5%**

Current examples (Apr 13 2000): Cavalier, Colonial Motor Company, Contact Energy, Dorchester Pacific, Ebos, Hallenstein Glasson, Hellaby, Lyttelton Port Company, Natural Gas Corporation, Northland Port Company, Nufarm, Nuplex, Restaurant Brands, Reid Farmers, Sanford, Steel & Tube, Tourism Holdings

Solid stable stalwarts and cyclical income stocks. Maybe slightly out of favour and possibly undervalued. Have relatively healthy dividend yields that are generally higher than APY stocks because they don't trade on such high multiples of valuation. Lower price/sales ratios than APY stocks. Solid businesses but without the zing or x-factor that would make them an exciting and popular stock to push them into the APY category. Cheaper stocks to buy compared to the higher valuations in the APY category. Usually perceived as staid businesses whose prospects are sound but not spectacular. This accounts for their relatively cheap valuations and solid income from dividend yields. These are the 'cash cows' rather than the growth stocks. Medium to large market capitalisations. Many stocks alternate between the BPY and APY categories.

- **APY:** Above average P/E ratio, Premium to NTA, Yields a dividend

Proportion of market: **25.0%**

Average P/S ratio: **1.74**

Maximum return: **94.8%**

Minimum return: **(-42.8%)**

Average return: **15.7%**

Standard Deviation: **21%**

Risk Reward ratio: **51**

Median Return: **11.3%**

Average gain: **35.3%**

Average loss: **(-18.6%)**

Proportion Up: **61.2%**

Proportion Down: **38.8%**

Current examples (Apr 13 2000): Auckland International Airport, AMP, ANZ Bank, Baycorp, Colonial Insurance, DB Group, Fisher & Paykel, Horizon Energy, Metropolitan Life, Port Tauranga, Telecom, Telstra, The Warehouse Group, Waste Management

Popular and 'blue chip' stocks. Dividend yields less than BPY stocks because they trade at higher P/E ratios. Higher Price/Sales ratios than BPY stocks.

More growth prospects are built into these shares which accounts for their higher valuations. A little bit more exciting with higher profiles.

Many of the managed funds invest in these types of companies which accounts for their returns being around the 12-13% mark. This figure represents the long term average return of the sharemarket. This category includes the largest market capitalisation stocks. APY stocks also have the second lowest volatility and a reasonable risk adjusted return. In other words over the long haul they're a pretty safe bet.

- **BDY:** Below average P/E ratio, Discount to NTA, Yields a dividend

Proportion of market: **9.1%**

Average P/S ratio: **0.67**

Maximum return: **80.2%**

Minimum return: **(-41.6%)**

Average return: **9.3%**

Standard Deviation: **33%**

Risk Reward ratio: **13**

Median Return: **3.4%**

Average gain: **30.5%**

Average loss: **(-25.6%)**

Proportion Up: **59.8%**

Proportion Down: **40.2%**

Current examples (Apr 13 2000): Air New Zealand, Cedenco, Designer Textiles, National Property Trust, Tasman Agriculture, Tranz Rail, Williams & Kettle

Cheap asset heavy industrials. Neglected stocks. Not flavour of the month. Can make some solid gains but can also lose a substantial portion of their value. Appear quite undervalued. Good dividend yields. Fairly low P/S ratios. Most in commodity businesses. Can be prone to take overs. Usually require some sort of external event to release or realise their value. e.g. share buyback, takeover, capital distribution, special dividend, economic recovery etc.

- **LDN:** Negative P/E ratio, Discount to NTA, No dividend yield

Proportion of market: **8.7%**

Average P/S ratio: **0.57**

Maximum return: **185.8%**

Minimum return: **(-36.8%)**

Average return: **43.8%**

Standard Deviation: **60%**

Risk Reward ratio: **65**

Median Return: **24.3%**

Average gain: **78.8%**

Average loss: **(-21.8%)**

Proportion Up: **58.8%**

Proportion Down: **41.2%**

Current examples (Apr 13 2000): Apple Fields, Broadway, Cue Energy, Dairy Brands, Grocorp, N.Z. Oil & Gas, Nuhaka, Opio Forestry, Richina, Trans Tasman Properties, Utilico

Underperforming, out of favour and relatively **unpopular** companies. Somewhat speculative. Less popular than LPN stocks. They tend to have more real assets and more significant businesses than LPN stocks. Their market capitalisations range from small to micro. Many companies bounce up and down between the two categories LDN & LPN. Stocks can wallow in the LDN category for long periods of time. On a return to profitability these stocks can make excellent gains. Their low prices usually make for big capital gains from small price movements.

- **LPN:** Negative P/E ratio, Premium to NTA, No dividend yield

Proportion of market: **8.3%**

Average P/S ratio: **1.11**

Maximum return: **194.1%**

Minimum return: **(-43.7%)**

Average return: **27.4%**

Standard Deviation: **61%**

Risk Reward ratio: **37**

Median Return: **(-0.7%)**

Average gain: **71.2%**

Average loss: **(-25.4%)**

Proportion Up: **47%**

Proportion Down: **53%**

Current examples (Apr 13 2000): Aquaria 21, E-Force, E-Phone, Heritage Gold, IT Capital, Manor Inns, Maxis Corp, Newcall, Pure NZ, Revesco, Roller International, Savoy Equities, Sky TV, Spectrum Resources, Strathmore, Summit Resources

Speculative stocks. Many of them penny stocks that make for big movements in share price and return. Popular amongst traders for their big swings providing the liquidity is there. The majority are small capitalisation stocks that are often bid up to unrealistic valuations. The best opportunity to make a quick buck.

The lack of real assets of some companies in this group tends to allow them to rise and fall sharper and faster than other SCC categories. Perhaps a lack of any real measurements to evaluate their valuation and potential prospects allows the price to skyrocket in a very short space of time. Many oil searching and explorative mineral companies fit under this category.

A good recent example was the now defunct Max Resources. Within five months it went from 6c to 80c on a change of business direction to a 'popular' industry. Organics. A return of over 1200%. However not more than a year later it was trading at 13c and placed into liquidation.

Other recent examples have been the swag of LPN stocks that have reinvented themselves as hi-tech e-commerce companies. The latest buzz word.

The most popular group for backdoor listings on the stockmarket.

The highest "maximum" return of any group but with much more risk and the median return is in fact negative.

The P/S ratio is probably higher than what is shown because this group has the largest number of companies that have little to no revenue, giving them either an infinite P/S ratio or one in the hundreds.

In a falling market LPN stocks fall the hardest and the sharpest.

- **BPN:** Below average P/E ratio, Premium to NTA, No dividend yield

Proportion of market: **4.2%**

Average P/S ratio: **1.34**

Maximum return: **68.2%**

Minimum return: **(-36.4%)**

Average return: **10.3%**

Standard Deviation: **20%**

Risk Reward ratio: **27**

Median Return: **7.8%**

Average gain: **42.8%**

Average loss: **(-30%)**

Proportion Up: **57.9%**

Proportion Down: **42.1%**

Current examples (Apr 13 2000): Tag Pacific

This category is divided between **small recovery stocks** and **overvalued out of favour stocks**. They can be somewhat speculative. They often have quite high P/S ratios which may represent an overvaluation when compared to their prospects and this decreases their average return. This category has the lowest standard deviation of return but it is a low return all the same. Stocks with lower P/S ratios are likely to do better in this category than those with higher P/S ratios.

- **APN:** Above average P/E ratio, Premium to NTA, No dividend yield

Proportion of market: **3.4%**

Average P/S ratio: **1.11**

Maximum return: **63.7%**

Minimum return: **(-3.7%)**

Average return: **26.6%**

Standard Deviation: **53%**

Risk Reward ratio: **41**

Median Return: **30.2%**

Average gain: **51.3%**

Average loss: **(-19.8%)**

Proportion Up: **57.1%**

Proportion Down: **42.9%**

Current examples (Apr 13 2000): Advantage, Eldercare, Pacific Retail Group

These are often stocks that come from making a loss in the LPN category to making a profit and into the APN or A*PN category. As such they make quite good gains. Along this road their valuations are bid up and hence their P/S ratios. These are often small companies with small market capitalisations. They can also be a tad speculative. Alternatively they can be APY stocks that for some reason or another have halted dividend payments. These stocks won't make as big a gain as those that have come from a more speculative background.

- **ADY:** Above average P/E ratio, Discount to NTA, Yields a dividend

Proportion of market: **3.1%**

Average P/S ratio: **0.70**

Maximum return: **92.5%**

Minimum return: **(-5%)**

Average return: **39.1%**

Standard Deviation: **48%**

Risk Reward ratio: **71**

Median Return: **34.5%**

Average gain: **61.3%**

Average loss: **(-18.8%)**

Proportion Up: **72.6%**

Proportion Down: **27.4%**

Current examples (Apr 13 2000): Carter Holt Harvey

These are quite often stocks who have found favour from the BDY category. They have become favoured and popular stocks whose immediate prospects appear sound and encouraging. This could account for being the category in which the greatest proportion of stocks experience an increase rather than a decrease in price.

- **BDN:** Below average P/E ratio, Discount to NTA, No dividend yield

Proportion of market: **2.8%**

Average P/S ratio: **0.26**

Maximum return: **163.7%**

Minimum return: **(-8.8%)**

Average return: **51.6%**

Standard Deviation: **93%**

Risk Reward ratio: **50**

Median Return: **28.7%**

Average gain: **74.4%**

Average loss: **(-12.3%)**

Proportion Up: **63.1%**

Proportion Down: **36.9%**

Current examples (Apr 13 2000): Affco, Otter Gold

Sleeping giants. Generally industrial businesses with heavy assets. Out of favour with investors. Unable to extract good margins from their revenue due to their own internal business conditions and/or industry, or from a recessionary environment. This accounts for their very low P/S ratios. If they can overcome these problems or come out of a downturn the share price can really take off.

Some examples of this include PDL and Tourism Holdings. In 1991-92 coming out of a recessionary environment, PDL rose from under \$1 to over \$14 in little more than a year. At the height of the 1998 Asian Crisis, THL was suffering under the decrease in Tourist numbers and hit a low of 70c. This was a very low valuation from an extremely short term looking market. The company was solid and had a good business. If the company was broken up and sold at this point, shareholders stood to receive \$1.60 in net tangible assets per share. The price more than doubled within four months of its lowest point.

- **A*PY:** Artificially high P/E ratio, Premium to NTA, Yields a dividend

Proportion of market: **2.0%**
 Average P/S ratio: **2.4**
 Maximum return: **30.8%**
 Minimum return: **(-6%)**
 Average return: **16.2%**
 Standard Deviation: **24%**
 Risk Reward ratio: **47**
 Median Return: **20.8%**
 Average gain: **28.5%**
 Average loss: **(-13.8%)**
 Proportion Up: **53.3%**
 Proportion Down: **46.7%**

Current examples (Apr 13 2000): Damba, N.Z. Refining

Sub-normal profits. Usually have solid businesses behind them. Room to improve margins. The dividend they pay assures them of a reasonable valuation compared to the A*PN category. These are companies that have either faced a drop in earnings for the year or come back from a loss into a small profit. If the company has made a one-off write down or made provisions for restructuring that has caused bottom line profit to slump but not actual operating profit, the stock price is not likely to decrease much. If it has come from a loss back into profit the stock price is likely to gain significantly, especially if profits continue to increase from its small initial level.

- **A*PN:** Artificially high P/E ratio, Premium to NTA, No dividend yield

Proportion of market: **1.7%**
 Average P/S ratio: **2.69**
 Maximum return: **65.3%**
 Minimum return: **(-1.7%)**
 Average return: **30.4%**
 Standard Deviation: **37%**
 Risk Reward ratio: **69**
 Median Return: **26.9%**
 Average gain: **45.6%**
 Average loss: **(-10.2%)**
 Proportion Up: **76.1%**
 Proportion Down: **23.9%**

Current examples (Apr 13 2000): No examples currently available.

Previous examples: Ascot Management, Carr Business Supplies, Pure NZ

These stocks often come from the LPN category. They can be a little speculative. They often have small market capitalisations. One could say that these stocks are overvalued compared to their earnings. They may be in a popular industry. Their P/S ratios reflect the fact they are small and possibly overvalued companies. This may however reflect investors expectations of their prospects.

- **ADN:** Above average P/E ratio, Discount to NTA, No dividend yield

Proportion of market: **1.6%**

Average P/S ratio: **0.56**

Maximum return: **35.4%**

Minimum return: **5.6%**

Average return: **18.0%**

Standard Deviation: **45%**

Risk Reward ratio: **29**

Median Return: **13.1%**

Average gain: **32.4%**

Average loss: **(-10.6%)**

Proportion Up: **59.5%**

Proportion Down: **40.5%**

Current examples (Apr 13 2000): Kingsgate

Often asset heavy companies. These stocks tend to fluctuate around the same price for long periods of time. Perhaps a little stagnated. This could be the result of a full valuation of the stock or that the profits have stagnated. There could be problems with the business structure in that it can't extract good margins from the business itself. Stocks with lower P/S ratios are going to do better in this category than those with high P/S ratios. Small to medium market capitalisations.

- **A*DN:** Artificially high P/E ratio, Discount to NTA, No dividend yield

Proportion of market: **1.1%**

Average P/S ratio: **0.91**

Maximum return: **63.6%**

Minimum return: **32%**

Average return: **47.8%**

Standard Deviation: **75%**

Risk Reward ratio: **57**

Median Return: **47.8%**

Average gain: **55.3%**

Average loss: **(-14.8%)**

Proportion Up: **83.3%**

Proportion Down: **16.7%**

Current examples (Apr 13 2000): N.Z. Experience

These stocks are the result of sub-normal profits. They often have significant assets but the profit margins don't justify a premium to NTA. If they have come from a loss back into profit from the LDN category and profits continue to rise, they can make significant gains. As they continue to rise they become A*PN stocks. Many of these stocks carry low P/S ratios. In this category the stocks with lower P/S ratios do better than those with higher P/S ratios. Micro to medium market capitalisations. There could be problems with the type of business it's in that causes it to make small margins.

- **LDY:** Negative P/E ratio, Discount to NTA, Yields a dividend

Proportion of market: **0.9%**

Average P/S ratio: **0.27**

Maximum return: **25.6%**

Minimum return: **16.2%**

Average return: **11.1%**

Standard Deviation: **36%**

Risk Reward ratio: **17**

Median Return: **11.1%**

Average gain: **30.4%**

Average loss: **(-19.4%)**

Proportion Up: **60%**

Proportion Down: **40%**

Current examples (Apr 13 2000): Wrightson

Underperforming asset heavy stocks. These stocks can produce some good gains once they recover. The dividend may not last long if the loss making situation extends into the longer term. Generally they have very low P/S ratios. They are often in commodity industries that are subject to cycles. Such influences on their businesses are seen in international commodity prices and the weather. Stocks that fall into this category may find themselves going into a long period of stagnation and decline.

- **A*DY:** Artificially high P/E ratio, Discount to NTA, Yields a dividend

Proportion of market: **0.6%**

Average P/S ratio: **0.43**

Maximum return: **23.5%**

Minimum return: **22.3%**

Average return: **22.9%**

Standard Deviation: **30%**

Risk Reward ratio: **60**

Median Return: **22.9%**

Average gain: **22.3%**

Average loss: **0%**

Proportion Up: **100%**

Proportion Down: **0%**

Current examples (Apr 13 2000): Arthur Barnett, PDL

Solid companies with sub-normal profits, usually due to problems with profit margins. Often have significant assets. The fact that they pay a dividend and have a discount to NTA ensures that these companies have little downside risk. The high figure presented for the proportion of stocks that go up may be innaccurate given the extremely small percentage of the market that this category makes up.

- **LPY:** Negative P/E ratio, Premium to NTA, Yields a dividend

Proportion of market: **0.6%**

Average P/S ratio: **1.04**

Maximum return: **(-33.1%)**

Minimum return: **(-37.7%)**

Average return: **(-17.7%)**

Standard Deviation: **21%**

Risk Reward ratio: **-108**

Median Return: **(-17.7%)**

Average gain: **0%**

Average loss: **(-17.7%)**

Proportion Up: **0%**

Proportion Down: **100%**

Current examples (Apr 13 2000): No examples currently available.

Previous examples: Mainzeal, Zuellig

Underperforming asset heavy industrials. The worst of all categories in terms of return. Despite these figures it is difficult to say whether this is an accurate representation given the extremely small proportion of the market it represents. They have higher P/S ratios than LDY stocks which could account for their lower return.

Rank Comparison

What follows is a ranked comparison of all 16 SCC categories in table format.

Colour Key:

	Best figure
	Above average
	Average

Proportion	
BPY	26.9%
APY	25.0%
BDY	9.1%
LDN	8.7%
LPN	8.3%
BPN	4.2%
APN	3.4%
ADY	3.1%
BDN	2.8%
A*PY	2.0%
A*PN	1.7%
ADN	1.6%
A*DN	1.1%
LDY	0.9%
LPY	0.6%
A*DY	0.6%

This table shows the average percentage SCC make up of the market. The top two categories make up over 50% of the market. On the whole, the top **five** categories make up the most significant part of the market.

Proportion	
P	72.1%
Y	68.2%
B	43.0%
A	33.1%
N	31.8%
D	27.9%
L	18.5%
A*	5.4%

The table on the left shows the percentage makeup of the market that consists of the three different screening criteria; P/E ratio, NTA, and div yield. A, B, L, & A* make up 100%, P & D make up 100%, and Y & N make up 100%. The top four on the table also make up the top two proportion SCC categories APY and BPY.

Proportion	
0.51-1.0	25.3%
0.26-0.50	21.2%
1.01-2.0	18.6%
2.01-5.0	15.5%
0-0.25	14.7%
5.01+	4.7%

This table shows the percentage of the market that come under the different P/S ratio categories. Over 50% of the market have a P/S ratio below 1.0.

● **Maximum and Minimum Returns**

	Max	Min	
LPN	194.1%	32.0%	A*DN
LDN	185.8%	22.3%	A*DY
BDN	163.7%	16.2%	LDY
BPY	121.9%	5.6%	ADN
APY	94.8%	(-1.7%)	BDN
ADY	92.5%	(-3.7%)	A*PY
BDY	80.2%	(-5%)	BPY
BPN	68.2%	(-6%)	ADY
A*PN	65.3%	(-8.8%)	LPN
APN	63.7%	(-36.4%)	APY
A*DN	63.6%	(-36.8%)	BDY
ADN	35.4%	(-37.7%)	LPY
A*PY	30.8%	(-41.6%)	LDN
LDY	25.6%	(-42.8%)	BPN
A*DY	23.5%	(-43.7%)	APN
LPY	(-33.1%)	(-52.2%)	A*PN
	79.8%	(-15%)	

This table shows the **average maximum** and **minimum** return. Note that these figures are not the **absolute** maximum and minimum returns from the eight year sample period. There only seems to be a loose correlation between having an above average max. return and a below average min. return. Indeed some of the SCC's with an above average max. return also feature with an above average min. return. e.g. **LPN, BDN, BPY, & ADY**. Some of the stocks mentioned also feature prominently with above average **returns** and **gains**, but with above average **volatility**.

	Max	Min	
N	337.8%	(-27%)	A*
D	284.0%	(-48.9%)	A
P	250.2%	(-54.1%)	L
L	248.3%	(-54.9%)	N
B	242.4%	(-58.9%)	D
Y	149.6%	(-62.8%)	P
A	133.8%	(-63%)	B
A*	81.4%	(-65.7%)	Y
	215.9%	(-54.2%)	

This table shows the **max.** and **min.** returns for our three screening criteria. The top two maximum returns in the SCC categories can be composed with the top four max. and min. returns from this table. e.g. LPN and LDN. One step down and BDN can be included. Separately, L, D, and N occupy the top 3 average **returns**, average **gains**, and **volatility** of return.

	Max	Min	
0-0.25	193.2%	(-33.3%)	5.01+
0.26-0.50	183.0%	(-44.3%)	2.01-5.0
0.51-1.0	162.3%	(-46.4%)	1.01-2.0
1.01-2.0	117.0%	(-47.8%)	0.51-1.0
2.01-5.0	93.0%	(-47.8%)	0.26-0.50
5.01+	43.6%	(-49%)	0-0.25
	132.0%	(-44.8%)	

The table on the left shows the **max.** and **min.** returns for different P/S ratio categories. There is a perfect correlation between max. and min. return. The higher the max. return the lower the P/S ratio. The greater the min. return the lower the P/S ratio. This shows that the lower the P/S ratio the greater the volatility. See the std. deviation table to confirm this.

- Average Return, Standard Deviation & the Risk/Reward ratio

Avg Return	
BDN	51.6%
A*DN	47.8%
LDN	43.8%
ADY	39.1%
A*PN	30.4%
LPN	27.4%
APN	26.6%
A*DY	22.9%
BPY	22.5%
ADN	18.0%
A*PY	16.2%
APY	15.7%
LDY	11.1%
BPN	10.3%
BDY	9.3%
LPY	(-17.7%)
Average	23.4%

This table shows the **average return** of the different SCC categories. Six out of the top seven returns paid no dividend, and four out of the top seven returns were discounted to NTA. A*PN was the only category of the top seven to have a standard deviation better than the average. All of the top seven average returns had above average **gains**, and all except LPN had above average **median** returns. BDN, LDN, ADY, LPN, and APN all featured with above average **maximum returns**. BDN, A*DN, ADY, A*PN, and APN all featured with better than average **minimum returns**.

With a bigger and more complete study its possible that the categories ADN and BDY could rise on the average return table.

Avg Return	
N	36.8%
L	35.4%
D	33.0%
B	24.2%
A*	22.6%
P	19.6%
A	18.5%
Y	18.1%
	26.0%

This table shows the **average return** of the individual screening criteria. Its interesting to note that the best average returns have come from what would mostly be considered unpopular criteria to select stocks. The top three criteria when combined compose the LDN category which features at number 3 in our **average returns** column, and number 1 in the **average gains** column. Looking at the bottom three criteria A, P, and Y, if combined these create the APY category which features 5th from the bottom of average return.

Avg Return	
0-0.25	33.1%
0.26-0.50	23.5%
0.51-1.0	23.7%
1.01-2.0	18.6%
2.01-5.0	15.4%
5.01+	0.8%
	19.2%

This table shows the average return for various P/S ratio categories. The top 3 average returns also feature as the top 3 maximum gains, the top 3 average gains, and with above average median returns. The 0.51-1.0 category is the only one of the top 3 to have a standard deviation better than average. It has also the best risk/reward ratio.

	Std Dev
BPN	20%
APY	21%
LPY	21%
A*PY	24%
A*DY	30%
BPY	31%
BDY	33%
LDY	36%
A*PN	37%
ADN	45%
ADY	48%
APN	53%
LDN	60%
LPN	61%
A*DN	75%
BDN	93%
Average	43%

The **Standard Deviation** measures the volatility of the average return. The higher the standard deviation, the more volatile the return. This chart shows the standard deviation of the average return for each SCC in order of lowest to highest. There appears to be a correlation that exists between the standard deviation and the average return. With the exception of A*PN, none of the top average returns have better than average standard deviations and vice versa. This proves that volatility comes with the more speculative and risky stocks, but its those risky stocks that produce the greatest returns. The median returns column attempts to look through this volatility to give another indication of the likely return. The volatility of LDN, LPN, and BDN could be accounted for by their low share prices that make big gains on small price movements. Although LPY is tied for second with the lowest standard deviation, its average return is in fact negative which therefore makes its figure of no use.

	Std Dev
A	24%
Y	25%
P	28%
B	35%
A*	38%
D	46%
N	52%
L	58%
	38%

This table shows the standard deviations for the various individual screening criteria. It is logical that above average P/E ratios [A] would have the lowest volatility given that they primarily represent solid, safe, and secure investments. None of the lowest standard deviations produce the highest average returns or average gains. Once again this proves that with higher returns comes greater volatility, and hence greater risk.

	Std Dev
5.01+	20%
2.01-5.0	27%
1.01-2.0	28%
0.51-1.0	33%
0.26-0.50	35%
0-0.25	59%
	34%

This table shows the standard deviations of various P/S ratio categories. As shown by the P/S max/min return relationship and proved by the table at left, the smaller the P/S ratio the greater the volatility. This perfect correlation between volatility and P/S ratios extends over into returns. The lower the P/S ratio the greater the volatility and the higher the return. This holds perfect for the **average gains** column and almost the **average returns** column. (The 0.51-1.0 category just pips the 0.26-0.50 category by 0.2%)

	R/R ratio
ADY	71
A*PN	69
LDN	65
A*DY	60
A*DN	57
BPY	56
APY	51
BDN	50
A*PY	47
APN	41
LPN	37
ADN	29
BPN	27
LDY	17
BDY	13
LPY	-108
Average	36

The **risk/reward ratio** represents the **risk-adjusted return**. It is also known as the Sharpe ratio. To arrive at this figure, simply take the average return, subtract the risk free rate of interest, and divide by the standard deviation of the average return. I have applied a risk free rate of 5% to the figures at left. The higher the Risk Reward ratio the better. It shows the highest return that uses the least amount of risk to obtain it. i.e. The most efficient use of risk for the return. If you remove the -108 figure from the average, both APN and LPN lose their above average status. Interestingly most of the top R/R ratios have the highest volatility yet because of their stellar returns this risk is subjugated and justified. ADY, A*PN, LDN, A*DN, and BDN feature with both above average returns and above average Risk/Reward ratios. APN and LPN are also included in that distinction if you include the -108 figure in calculating the R/R average.

	R/R ratio
N	81.2
D	60.9
A	56
B	55
L	52.41
Y	52.4
P	52.1
A*	46
	54.5

This table shows the risk adjusted return for the individual screening criteria. Even though "N" stocks have the second highest volatility, they still come out with the greatest risk adjusted return. They also take the coveted title of greatest average return and greatest maximum return.

	R/R ratio
0.51-1.0	57
0.26-0.50	53
1.01-2.0	49
0-0.25	48
2.01-5.0	39
5.01+	-21
	37.5

This table shows the risk adjusted return for various P/S categories. Because of the negative figure in this bunch, most of the categories have better than average risk/reward ratios. However by removing the -21 figure, only 0.51-1.0 and 0.26-0.50 are better than average. Again the P/S ratios with some of the highest volatilities made big enough gains to propel them to the top of the R/R ratio list. In other words, their returns justify the greater risk.

	Med Ret
A*DN	47.8%
ADY	34.5%
APN	30.2%
BDN	28.7%
A*PN	28.9%
LDN	24.3%
A*DY	22.9%
A*PY	20.8%
BPY	17.6%
ADN	13.1%
APY	11.3%
LDY	11.1%
BPN	7.8%
BDY	3.4%
LPN	(-0.7%)
LPY	(-17.7%)
Average	17.6%

The table on the left shows the median return of the individual SCC categories. All categories who featured with better than average "**average returns**" also feature with better than average "**median returns**". All that is except one - LPN. LPN has the third highest **volatility**, the sixth worst **risk adjusted return**, and the second worst rate of stocks in the "**up**" proportion. All this could account for its median return being negative, and dramatically different from its average return. It reinforces their status as "speculative stocks". However all stocks with better than average **median returns** also had better than average **gains**.

	Med Ret
A*	20.4%
D	17.3%
B	14.3%
N	13.8%
P	12.3%
Y	11.96%
A	11.95%
L	10.9%
	14.1%

This table shows the median return of our individual screening criteria. Of the top three median returns, only "D" stocks have an **average return** better than the market average. It is also the only one to have a better than average **R/R ratio** despite having higher **volatility** than the other two. It also has a better than average **gain**.

	Med Ret
0-0.25	17.3%
0.51-1.0	15.5%
1.01-2.0	13.1%
0.26-0.50	12.8%
2.01-5.0	10.6%
5.01+	(-6.3%)
	10.5%

This table shows the median return for various P/S ratio categories. The **0-0.25** category has the highest **median return** as well as the highest **maximum return**, **average return**, and **average gain**. If the negative result is removed from the average, only the top two categories 0-0.25 and 0.51-1.0 would be better than the average.

	Avg Gain	Avg Loss	
LDN	78.8%	0.0%	A*DY
BDN	74.4%	(-10.2%)	A*PN
LPN	71.2%	(-10.6%)	ADN
ADY	61.3%	(-12.3%)	BDN
A*DN	55.3%	(-13.8%)	A*PY
APN	51.3%	(-14.8%)	A*DN
A*PN	45.6%	(-17.7%)	LPY
BPY	43.5%	(-18.6%)	APY
BPN	42.8%	(-18.8%)	ADY
APY	35.3%	(-19.4%)	LDY
ADN	32.4%	(-19.8%)	APN
BDY	30.5%	(-21.8%)	LDN
LDY	30.4%	(-25%)	BPY
A*PY	28.5%	(-25.4%)	LPN
A*DY	22.3%	(-25.6%)	BDY
LPY	0.0%	(-30%)	BPN
	44.0%	(-17.7%)	

This table shows the average gain and the average loss of individual SCC categories. The gains column only includes positive returns, and the loss column only includes negative returns. All SCC categories with above average gains also feature with above average "average returns".

	Avg Gain	Avg Loss	
L	77.7%	(-19.9%)	A
N	72.3%	(-22.9%)	P
D	65.9%	(-23.8%)	Y
B	48.4%	(-24.2%)	A*
P	44.8%	(-24.2%)	N
A*	44.7%	(-25.3%)	B
A	40.9%	(-25.8%)	D
Y	40.2%	(-26.4%)	L
	54.4%	(-24.1%)	

This table shows the average gain and average loss of the individual screening criteria. "L" stocks make the biggest gains. If you combine the top 3 gains criteria to make LDN, you'll also find that this SCC makes the highest average gain. However "L" stocks also make the greatest losses. Criteria such as "A" "P" and "Y" may not make the huge gains, but they make up for it with the lowest losses. "A" stocks also have the lowest volatility.

	Avg Gain	Avg Loss	
0-0.25	59.1%	(-20.1%)	2.01-5.0
0.26-0.50	51.3%	(-21.1%)	5.01+
0.51-1.0	46.9%	(-22.8%)	0.51-1.0
1.01-2.0	41.5%	(-24.5%)	0-0.25
2.01-5.0	40.3%	(-25.2%)	0.26-0.50
5.01+	33.3%	(-25.2%)	1.01-2.0
	45.4%	(-23.2%)	

This table shows the average gain and average loss for various P/S ratio categories. The gains column is perfectly correlated with the P/S ratio. All of the better than average gains have better than average average returns, maximums, R/R ratios, medians, and up proportions.

	Up	Down	
A*DY	100.0%	0.0%	A*DY
A*DN	83.3%	16.7%	A*DN
A*PN	76.1%	23.9%	A*PN
ADY	72.6%	27.4%	ADY
BPY	63.5%	36.5%	BPY
BDN	63.1%	36.9%	BDN
APY	61.2%	38.8%	APY
LDY	60.0%	40.0%	LDY
BDY	59.8%	40.2%	BDY
ADN	59.5%	40.5%	ADN
LDN	58.8%	41.2%	LDN
BPN	57.9%	42.1%	BPN
APN	57.1%	42.9%	APN
A*PY	53.3%	46.7%	A*PY
LPN	47.0%	53.0%	LPN
LPY	0.0%	100.0%	LPY
	60.8%	39.2%	

This table shows the percentage proportion of stocks that went up, and the percentage proportion of stocks that went down in each SCC category. The top three spots in the up/down columns belong to A* stocks. All of the better than average up/down proportions have better than average risk adjusted returns. Of the stocks that have a better than average chance of increasing in value, A*DN, A*PN, ADY, and BDN have better than average returns and average gains.

	Up	Down	
A*	68.4%	31.6%	A*
B	62.4%	37.6%	B
Y	62.3%	37.7%	Y
D	61.7%	38.3%	D
A	60.7%	39.3%	A
P	59.5%	40.5%	P
N	55.9%	44.1%	N
L	51.5%	48.5%	L
	60.3%	39.7%	

This table shows the percentage of stocks that went up and the percentage of stocks that went down for the individual screening criteria. "A*" stocks once again show the greatest likelihood of increasing in value. "L" stocks show the greatest likelihood of decreasing in value. If you combine the bottom three results on the table you get "LPN". This is the second worst SCC for increasing in value.

	Up	Down	
1.01-2.0	64.3%	35.7%	1.01-2.0
0.51-1.0	63.2%	36.8%	0.51-1.0
2.01-5.0	60.7%	39.3%	2.01-5.0
0.26-0.50	60.1%	39.9%	0.26-0.50
0-0.25	57.9%	42.1%	0-0.25
5.01+	36.9%	63.1%	5.01+
	57.2%	42.8%	

This table shows the percentage proportion of stocks that went up and the percentage proportion of stocks that went down for various P/S categories.

Distribution of P/S categories across SCC categories

SCC	0-0.25	0.26-0.50	0.51-1.0	1.01-2.0	2.01-5.0	5.01+
APY	6.7%	11.9%	26.4%	23.9%	26.3%	4.8%
APN	6.3%	31.3%	26.0%	15.6%	20.8%	0.0%
ADY	11.9%	14.7%	36.7%	8.8%	21.5%	6.4%
ADN	29.2%	16.7%	8.3%	4.2%	25.0%	16.6%
BPY	7.0%	28.6%	34.5%	19.3%	10.0%	0.6%
BPN	9.0%	10.8%	22.3%	34.0%	21.5%	2.4%
BDY	33.2%	31.0%	15.0%	10.7%	8.8%	1.3%
BDN	45.0%	6.7%	16.7%	12.5%	4.2%	14.9%
LPY	12.5%	0.0%	37.5%	50.0%	0.0%	0.0%
LPN	19.2%	26.8%	15.4%	15.0%	9.6%	14.0%
LDY	50.0%	40.0%	10.0%	0.0%	0.0%	0.0%
LDN	29.9%	26.1%	18.6%	13.4%	5.8%	6.1%
A*PY	4.2%	23.3%	10.0%	18.1%	22.2%	22.2%
A*PN	0.0%	12.5%	25.0%	14.6%	16.7%	31.2%
A*DY	12.5%	62.5%	25.0%	0.0%	0.0%	0.0%
A*DN	25.0%	25.0%	8.33%	8.33%	25.0%	8.33%

What this table shows is the percentage proportion of P/S categories in each SCC category. It does not show percentage returns. However as a general rule the greater the proportion of low P/S ratios in the SCC category the higher the average return of that SCC category.

Limitations

There are certain limitations on the accuracy of this study.

The sample size of 8 years is probably not significant enough to get a highly accurate result. If the study were to be more accurate a sample size of 30 years would be required.

The annual returns are only taken from one month in the year. To get a more accurate result one would need to take annual returns from month to month. This would avoid any timing bias.

Many publications vary in the way they calculate P/E ratios and there are sometimes inadvertent mistakes, consequently P/E ratios vary wildly from publication to publication. Some exclude unusual items from the profit and this effects either an increase or a decrease in the reported earnings per share, and therefore the P/E ratio. This study has used the NBR share tables.

Conclusion

This study bears out two important investment principles.

One, the greater the risk the greater the return. Two, Countercyclical investing pays dividends by not following the crowd. The 'down 'n' outs' provide the greatest potential for gain but one has to be more selective in their picks.

In terms of return the best SCC categories to focus in on are **LDN**, **BDN**, **A*DN**, **APN**, **A*PN**, **LPN**, & **ADY**. Out of these categories **LPN** and **LDN** make up the most significant percentage of the market. One must accept greater volatility with many of these categories but the risk/reward ratio says that much of this risk is justified because of the higher returns.

Having narrowed it down and defined a few select categories one must then apply a normal subjective analysis to the companies within the category and look at the businesses in terms of achievable margins, commodity verses monopoly, whether its undervalued or overvalued, its prospects, balance sheet etc etc.

In terms of which individual screening criteria make the **highest** returns, "**L**", "**N**", & "**D**" are best. They often represent 'unpopular' and 'undervalued' stocks. The direct opposite criteria "**A**", "**P**", and "**Y**" make the **least** returns and often represent 'popular' and fully valued stocks.

In terms of P/S ratios it seems quite clear that you should pick stocks with a P/S ratio **below 1.0**. The highest return comes from the **0-0.25** P/S ratio category.

Pt. 2: Volume Spike Method (VSM)

What's a Volume Spike?

A volume spike (VS) is an abnormally large trading volume on any one day. It usually represents anywhere from 10 to 30 times normal daily trading volume and sometimes 3-4% of a company's market capitalisation.

How does it work?

It works by following the '**smart money**'. The VSM won't work all the time but it works well enough to be a profitable strategy.

Between the VS and the event that causes the stock price to rise there is often a three to four month gap. The VS tends to attract the attention of traders and investors, and the price generally inches up just after the VS but dies back down until news is imminent from the company. More 'smart money' raises the stock price just prior to the announcement and then on the announcement the price often takes off.

Volume is perhaps the best indicator of a stock's future price movements. It makes logical and intuitive sense that this should be the case especially when price is governed by supply and demand. A rising share price together with rising volume is often a good indicator of the direction of the stock price but this can be driven by hype and false propaganda. The VS differs in that a major transaction has occurred that often represents a major change in the company.

Things to look for

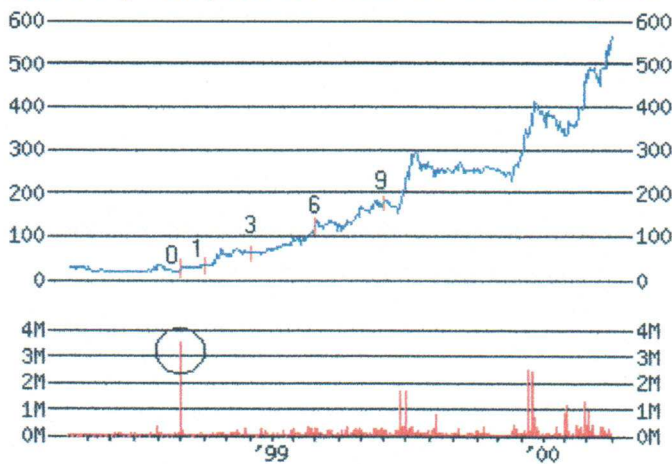
There are times when the VSM works best. Look for a period of stagnation in both price and volume. The more unusual and out of the ordinary the VS is, the more likely it represents major changes to come. What it represents is '**smart money**' positioning itself in the company. The more erratic a share price and its volume the less likely the VS will work. A VS must be put into perspective and you must apply a subjective analysis to the company when deciphering what the VS might mean. With an undervalued company a VS could be observed as a positive sign that things may be about to turn around, or that a new shareholder is positioning to take over the company. When a VS occurs in a small speculative company, especially LPN stocks, it is an excellent indicator that 'things are up' and that big changes may be about to follow. Sometimes a stock might have a big VS after a **steep** and **rapid** incline and this may be a good signal to exit the stock. Prior to the incline there were likely large VS's at much cheaper levels and the VS at the top may be the original investors making a quick exit. Again you must look at the context and put it into perspective. Is it overvalued or undervalued? The VSM works best when a stock is **undervalued**.

Does it work in other markets?

I haven't looked in depth at other markets for either the SCM or VSM strategies, however I have provided an example of the SCM and VSM strategies working in tandem in the Australian market. The example is Sausage Software (SAS) and I have provided a chart of this stock highlighting its VS and SCC.

Advantage Group

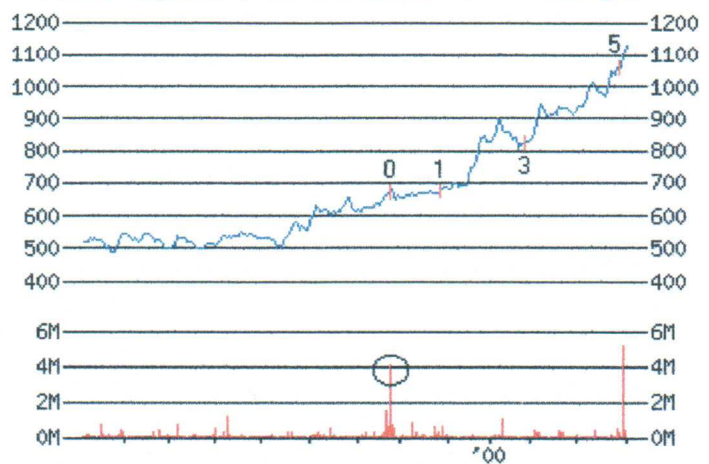
Capital-adjusted price and volume for the last 2 years



SCC at VS: **LPN** **Date of VS:** Early September 1998
 1 month return: 90% 6 month return: 525%
 3 month return: 200% 9 month return: 900%

Baycorp Holdings

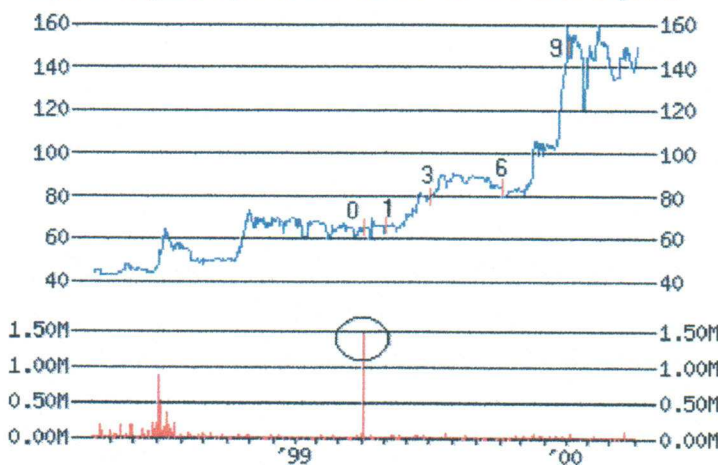
Capital-adjusted price and volume for the last year



SCC at VS: **APY** **Date of VS:** Late October 1999
 1 month return: [-1%] 5 month return: 57%
 3 month return: 21%

Dorchester Pacific

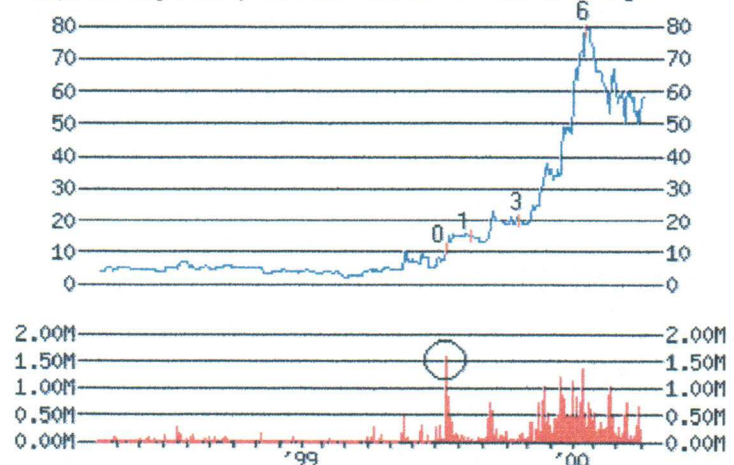
Capital-adjusted price and volume for the last 2 years



SCC at VS: **BPY** **Date of VS:** Early March 1999
 1 month return: 3% 6 month return: 29%
 3 month return: 23% 9 month return: 131%

E-Phone

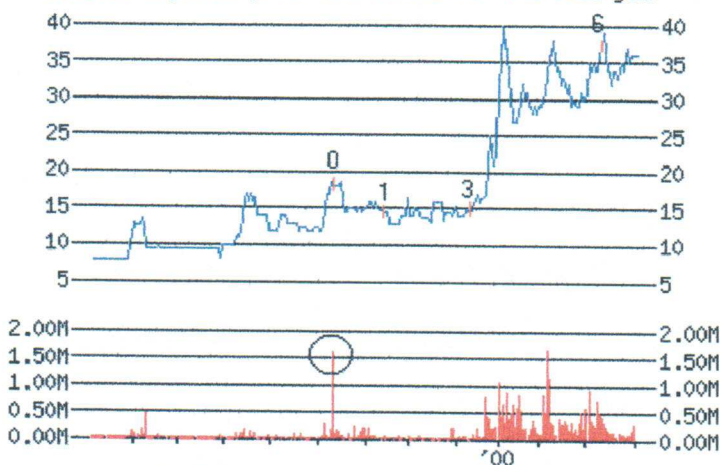
Capital-adjusted price and volume for the last 2 years



SCC at VS: **LPN** **Date of VS:** Mid July 1999
 1 month return: 36% 6 month return: 618%
 3 month return: 82%

Frontier Petroleum

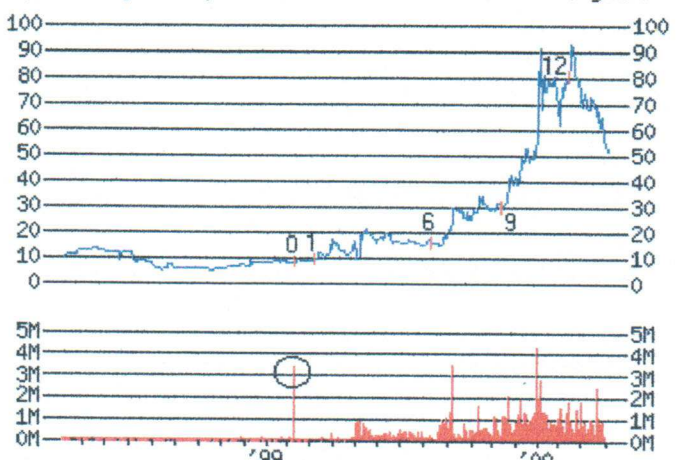
Capital-adjusted price and volume for the last year



SCC at VS: **LPN** **Date of VS:** Early September 1999
 1 month return: [-22%] 6 month return: 106%
 3 month return: [-22%]

IT Capital

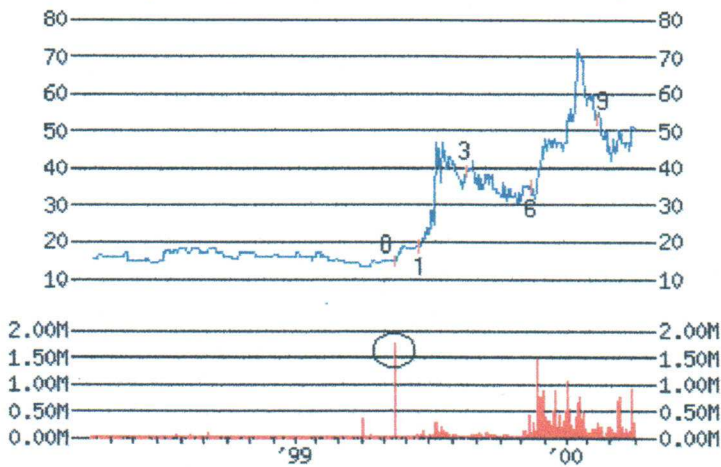
Capital-adjusted price and volume for the last 2 years



SCC at VS: **LPN** **Date of VS:** Early February 1999
 1 month return: 6% 9 month return: 233%
 6 month return: 78% 12 month return: 800%

Newcall

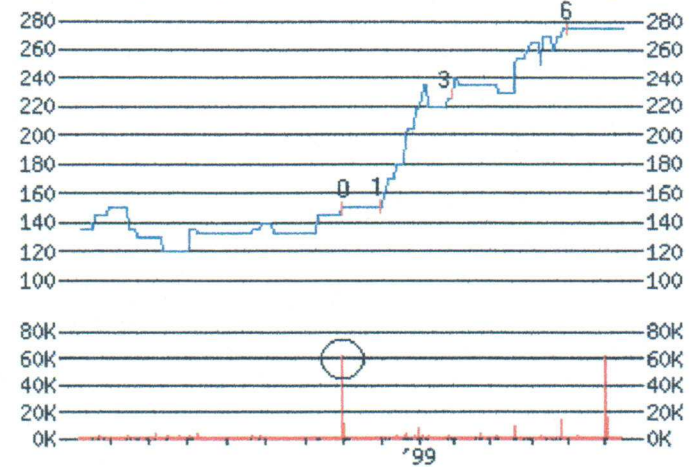
Capital-adjusted price and volume for the last 2 years



SCC at VS: **LPN** **Date of VS:** Mid May 1999
 1 month return: 27% 6 month return: 133%
 3 month return: 160% 9 month return: 260%

New Zealand Light Leathers

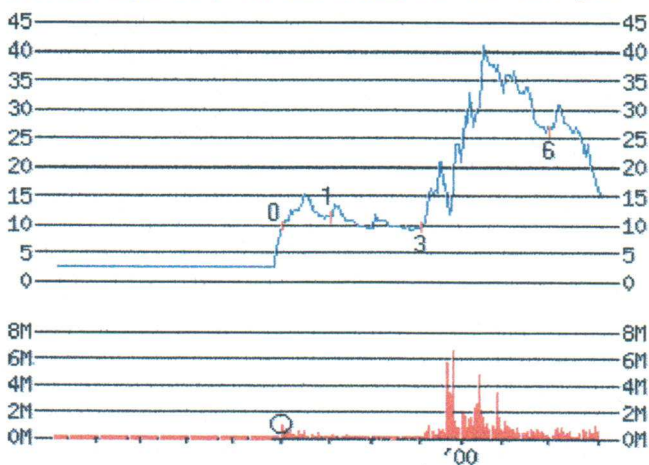
Capital-adjusted price and volume for the last 2 years



SCC at VS: **BDY** **Date of VS:** Late October 1998
 1 month return: 0% 6 month return: 83%
 3 month return: 57%

Spectrum Resources

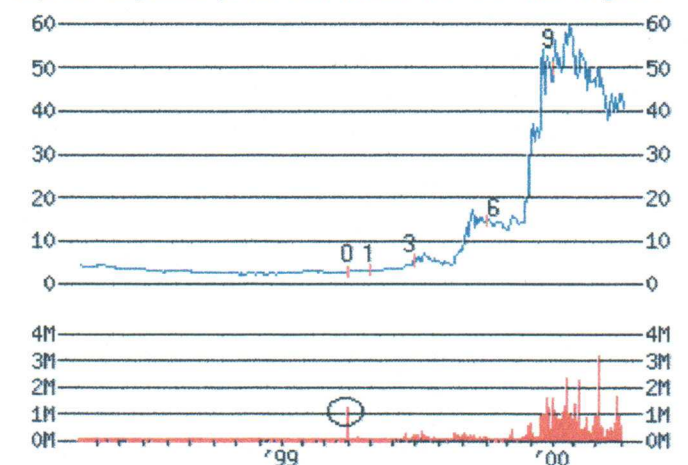
Capital-adjusted price and volume for the last year



SCC at VS: **LPN** **Date of VS:** Early September 1999
 1 month return: 20% 6 month return: 160%
 3 month return: (-10%)

Strathmore

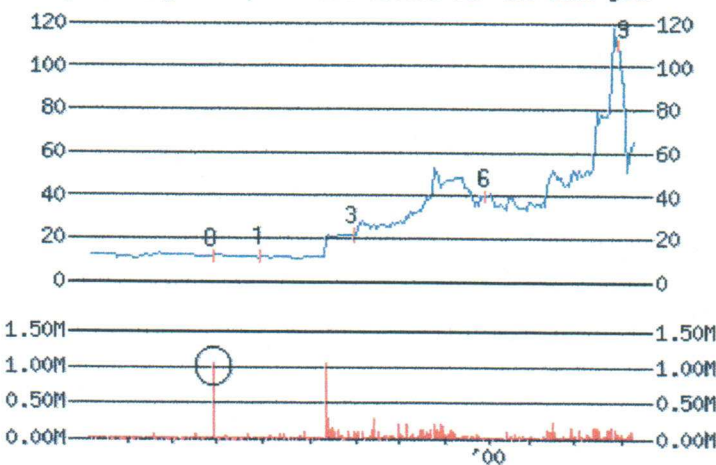
Capital-adjusted price and volume for the last 2 years



SCC at VS: **LDN** **Date of VS:** Late March 1999
 1 month return: 17% 6 month return: 400%
 3 month return: 67% 9 month return: 1567%

Tag Pacific

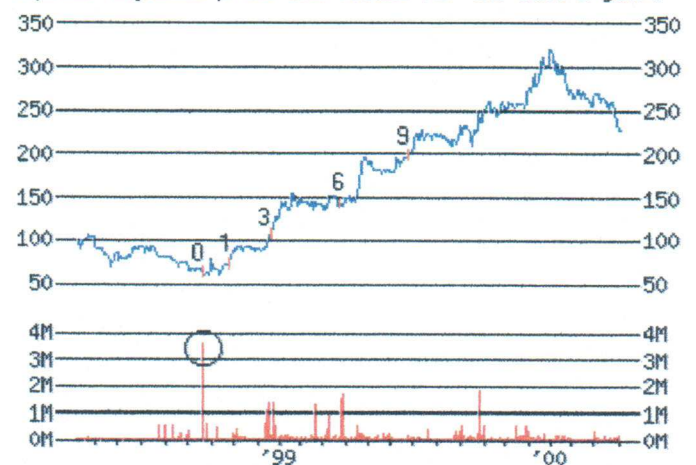
Capital-adjusted price and volume for the last year



SCC at VS: **BDN** **Date of VS:** Late June 1999
 1 month return: 0% 6 month return: 233%
 3 month return: 83% 9 month return: 817%

Tourism Holdings

Capital-adjusted price and volume for the last 2 years



SCC at VS: **A*DN** **Date of VS:** Mid September 1998
 1 month return: 15% 6 month return: 123%
 3 month return: 69% 9 month return: 208%

Sausage Software



The VS highlighted may look small now but at the time it was a significant development on the chart. The reason it looks small now is because the latter volumes have dwarfed the original spike and changed the perspective. The same can be seen to occur on the Spectrum Resources chart on the previous page.

You can see the long period of stagnation in SAS as the price and volume remained relatively static. A few months after these volume spikes the price began its steady incline. Note also that SAS was in the LPN "Speculative stocks" category at the time of the VS.

1991-1999 SCM Analysis

	Proportion	Max	Min	Avg Return	Std Dev	R/R ratio	Med Ret	Avg Gain	Avg Loss	Up	Down
APY	25.0%	94.8%	(-42.8%)	15.7%	21%	51	11.3%	35.3%	(-18.6%)	61.2%	38.8%
APN	3.4%	63.7%	(-3.7%)	26.6%	53%	41	30.2%	51.3%	(-19.8%)	57.1%	42.9%
ADY	3.1%	92.5%	(-5%)	39.1%	48%	71	34.5%	61.3%	(-18.8%)	72.6%	27.4%
ADN	1.6%	35.4%	5.6%	18.0%	45%	29	13.1%	32.4%	(-10.6%)	59.5%	40.5%
BPY	26.9%	121.9%	(-52.2%)	22.5%	31%	56	17.6%	43.5%	(-25%)	63.5%	36.5%
BPN	4.2%	68.2%	(-36.4%)	10.3%	20%	27	7.8%	42.8%	(-30%)	57.9%	42.1%
BDY	9.1%	80.2%	(-41.6%)	9.3%	33%	13	3.4%	30.5%	(-25.6%)	59.8%	40.2%
BDN	2.8%	163.7%	(-8.8%)	51.6%	93%	50	28.7%	74.4%	(-12.3%)	63.1%	36.9%
LPY	0.6%	(-33.1%)	(-37.7%)	(-17.7%)	21%	-108	(-17.7%)	0.0%	(-17.7%)	0.0%	100.0%
LPN	8.3%	194.1%	(-43.7%)	27.4%	61%	37	(-0.7%)	71.2%	(-25.4%)	47.0%	53.0%
LDY	0.9%	25.6%	16.2%	11.1%	36%	17	11.1%	30.4%	(-19.4%)	60.0%	40.0%
LDN	8.7%	185.8%	(-36.8%)	43.8%	60%	65	24.3%	78.8%	(-21.8%)	58.8%	41.2%
A*PY	2.0%	30.8%	(-6%)	16.2%	24%	47	20.8%	28.5%	(-13.8%)	53.3%	46.7%
A*PN	1.7%	65.3%	(-1.7%)	30.4%	37%	69	26.9%	45.6%	(-10.2%)	76.1%	23.9%
A*DY	0.6%	23.5%	22.3%	22.9%	30%	60	22.9%	22.3%	0.0%	100.0%	0.0%
A*DN	1.1%	63.6%	32.0%	47.8%	75%	57	47.8%	55.3%	(-14.8%)	83.3%	16.7%
Averages		79.8%	(-15%)	23.4%	43%	36	17.6%	44.0%	(-17.7%)	60.8%	39.2%

	Proportion	Max	Min	Avg Return	Std Dev	R/R ratio	Med Ret	Avg Gain	Avg Loss	Up	Down
A	33.1%	133.8%	(-46.9%)	18.5%	0.24	56	11.95%	40.9%	(-19.9%)	60.7%	39.3%
A*	5.4%	81.4%	(-27%)	22.6%	0.38	46	20.4%	44.7%	(-24.2%)	68.4%	31.6%
B	43.0%	242.4%	(-63%)	24.2%	0.35	55	14.3%	48.4%	(-25.3%)	62.4%	37.6%
L	18.5%	248.3%	(-54.1%)	35.4%	0.58	52.41	10.9%	77.7%	(-26.4%)	51.5%	48.5%
P	72.1%	250.2%	(-62.8%)	19.6%	0.28	52.1	12.3%	44.8%	(-22.9%)	59.5%	40.5%
D	27.9%	284.0%	(-58.9%)	33.0%	0.46	60.9	17.3%	65.9%	(-25.8%)	61.7%	38.3%
Y	68.2%	149.6%	(-65.7%)	18.1%	0.25	52.4	11.96%	40.2%	(-23.8%)	62.3%	37.7%
N	31.8%	337.8%	(-54.9%)	36.8%	0.52	61.2	13.8%	72.6%	(-24.2%)	55.9%	44.1%
Averages		215.9%	(-54.2%)	26.0%	0.38	54.5	14.1%	54.4%	(-24.1%)	60.3%	39.7%

	Proportion	Max	Min	Avg Return	Std Dev	R/R ratio	Med Ret	Avg Gain	Avg Loss	Up	Down
0-0.25	14.7%	193.2%	(-49%)	33.1%	0.59	48	17.3%	59.1%	(-24.5%)	57.9%	42.1%
0.26-0.50	21.2%	183.0%	(-47.8%)	23.5%	0.35	53	12.6%	51.3%	(-25.2%)	60.1%	39.9%
0.51-1.0	25.3%	162.3%	(-47.8%)	23.7%	0.33	57	15.5%	46.9%	(-22.8%)	63.2%	36.8%
1.01-2.0	18.6%	117.0%	(-46.4%)	18.6%	0.28	49	13.1%	41.5%	(-25.2%)	64.3%	35.7%
2.01-5.0	15.5%	93.0%	(-44.3%)	15.4%	0.27	39	10.6%	40.3%	(-20.1%)	60.7%	39.3%
5.01+	4.7%	43.6%	(-33.3%)	0.8%	0.2	-21	(-6.3%)	33.3%	(-21.1%)	36.9%	63.1%
Averages		132.0%	(-44.8%)	19.2%	0.34	37.5	10.5%	45.4%	(-23.2%)	57.2%	42.8%