

the anticipated (or maximum) amount was disclosed, were oversubscribed. So SPPs are attractive both to the company (which supplies shares to the market often in exchange for much-needed cash) and investors (who give up available cash to increase their holdings).

USE BY MINING COMPANIES

Mining companies are the dominant users of SPPs, with material and energy firms accounting for 32% and 8% respectively (Figure 1). The Prosser Report 2003 expressed concern that mining exploration firms have found it difficult to raise additional capital. For that industry, SPPs are an important avenue for raising risk capital.

ISSUE FEATURES OF SPPS

Offer Price – Under PS 125, SPPs must be offered at a discount not exceeding 20% of average market price (see also ASX Listing Rule 7.1, Exception 15). Table 1 shows the mean (median) discount for SPPs was 11.1% (9.7%).²

Comparison to Brown, Gallery and Goei 2003 indicates the average discount offered for SPPs is between that of rights issues (14.7%) and private placements (1.6%). Unreported analysis revealed that, where there is higher information asymmetry between insiders and outsiders, the SPP firm offers a larger discount, consistent with Hertz and Smith's 1993 argument that any discount of this nature should be regarded as a cost of the issue.

Issue Size – Regulation restricts the annual amount a registered shareholder can purchase under a SPP and thus, for a given number of shareholders, the maximum issue size. Table 1 shows the mean (median) issue size for SPPs was about \$10 million (\$1.5 million) in dollar terms and 7.5% (4%) as a proportion of issued capital. The largest plan raised nearly \$500 million and was offered by AMP in 2003 at the time of its demerger. The smallest amount was a mere \$7,900, so not all plans work! Comparison to the Brown, Gallery and Goei 2003 figures for two other types of SEO, rights issues and private placements, indicates SPPs are smallest relative to market capitalisation.

Unreported analysis revealed changes to regulations have been followed by issues that are on average a larger percentage of issued capital but smaller in aggregate dollar terms.

Time to Issue – A common view is that SPPs offer a cheap and efficient way to raise capital. The main cost saving is not having to prepare complex documentation. Burton, Helliard and Power (2005) provide survey evidence that documentation time is an important determinant of SEO type. We measured time efficiency by the number of days from the announcement of the SPP's details to the date the shares were allotted. Table 1 shows the mean (median) time to allotment was 51 (44) days.

Shareholder Eligibility – Shareholders are entitled to participate in a SPP if they are residents of Australia or New Zealand or reside in other jurisdictions where SPPs are lawful. SPPs are non-renounceable. However, 44% had a record date of more than five days after the SPP detail announcement, allowing qualified investors who wished to participate time to buy shares and register before the cutoff date.

Use of Proceeds – We categorise the stated, intended use of SPP proceeds into the following (in descending order of frequency of usage): to fund a specific project or exploration

activity; to provide additional working capital; to fund an acquisition, investment, joint venture or merger; or to reduce debt or otherwise strengthen the balance sheet. This is consistent with anecdotal evidence that firms issue SPPs for "expansion and survival" (*The Intelligent Investor* 2005, p. 1).

A small proportion of plans stated that the intended use of SPP proceeds was for reasons relating to shareholders: generally, to allow small shareholders to increase their holding prior to the enforced sale of small holdings. This is consistent with the anecdotal evidence that SPPs "provide a means of altering the composition of a company's share register" (Freehills 2004, p. 1).

Underwriter – SPPs do not have to be underwritten (ASX Listing Rule 7.1, Exception 15) and six out of seven were not. Those that were underwritten mostly did not involve a large underwriter. Underwriters most often used by our sample companies were Bell Potter Securities Ltd (8), Intersuisse Corporate Pty Ltd (5) and Taylor Collison Ltd (also 5).

Directors' Participation – Given directors are commonly shareholders, they too are usually entitled to participate in a SPP. While only one in eight plans indicated in the SPP detail announcement that directors intended to participate, one or more directors in fact participated in at least half the plans. This is a minimal figure, because we would have underestimated the participation rate whenever the director changed their shareholding but we found no reference to it.

Associated Offerings – SPPs are often adopted around the same time as another equity offering. To illustrate, 37% of plans were around the time of a private placement. In 7% of cases the company also operated a dividend reinvestment plan, mostly before 2000.

Closing Date Extensions – One in five plans extended the closing date at least once. Many extensions were explained by difficulties with the postal system, while others related to additional disclosures the company had made.

CHARACTERISTICS OF SPP-ISSUERS

The corporate finance literature is dominated by two competing explanations for corporate financing decisions: the trade-off and pecking order theories. Both enjoy only limited empirical support.

Trade-off theory asserts a firm's security issuance decision reflects a desire to move its capital structure closer to an optimum, which is determined by a trade-off between the marginal costs and benefits of debt. In contrast, Myers and Majluf (1984) argue the decision reflects a pecking order; that firms finance new investments first with retained earnings, then with safe debt, then with risky debt and finally (and only under duress) with outside equity. The underlying assumption is that asymmetric information problems drive the capital structure decision. The upshot of the lack of consensus in the literature is that numerous factors are believed to affect the financing decision, including firm size, growth and investment opportunities, liquidity, profitability, cash holdings, leverage, dividend behaviour and shareholder structure. We use these factors to develop an empirical model that predicts whether a firm has issued a SPP.

We used two approaches to identify the characteristics that distinguish SPP firms. First, bivariate analysis was applied

separately to a set of firm characteristics, with the results in Table 2. Second, multivariate analysis (using logistic regression) was used to predict whether a firm was more likely to have issued a SPP, with the results in Table 3.

Both approaches involve matching each SPP company with another non-SPP company in the same industry (GICS sector³) and of comparable size (market capitalisation). We note that matching firms by industry and size is not without limitations.

The bivariate analysis (Table 2) points to significant differences between SPP-adopter firms and their matched non-SPP counterparts in terms of their respective liquidity, profitability, cash holdings, dividend behaviour and shareholder structure. Liquidity is only “slightly” different, providing weak support for the pecking order theory; specifically, firms that adopted an SPP had lower liquid reserves.

All measures of profitability and cash holdings are statistically different, also supporting the pecking order theory. That is, SPP adopters were less profitable and had lower cash holdings. Again consistent with the pecking order theory, significantly fewer SPP adopters paid dividends. It is worth noting SPP adopters had a significantly larger proportion of shares being held by shareholders outside the top 20. A wider spread of shareholders would mean they had the potential to raise a greater amount by issuing a SPP.

Table 3 contains results from fitting two logistic regression models. The first model restricts the explanatory variables to those that are most significant in Table 2, while the second includes all of them. The pseudo R², a measure of overall

explanatory power, is 10% and 8% for the two models respectively. These results are stronger than the 5% (and below) reported for UK SEOs by Burton and Power (2003). Three firm characteristics exhibit a high level of significance in both models: liquidity, cash holdings and shareholder structure. Firms adopting SPPs apparently did not have enough liquid reserves and, given the advantage of a wider shareholder spread, they resorted to SPPs to meet their needs. Both models classified about two out of three companies correctly.

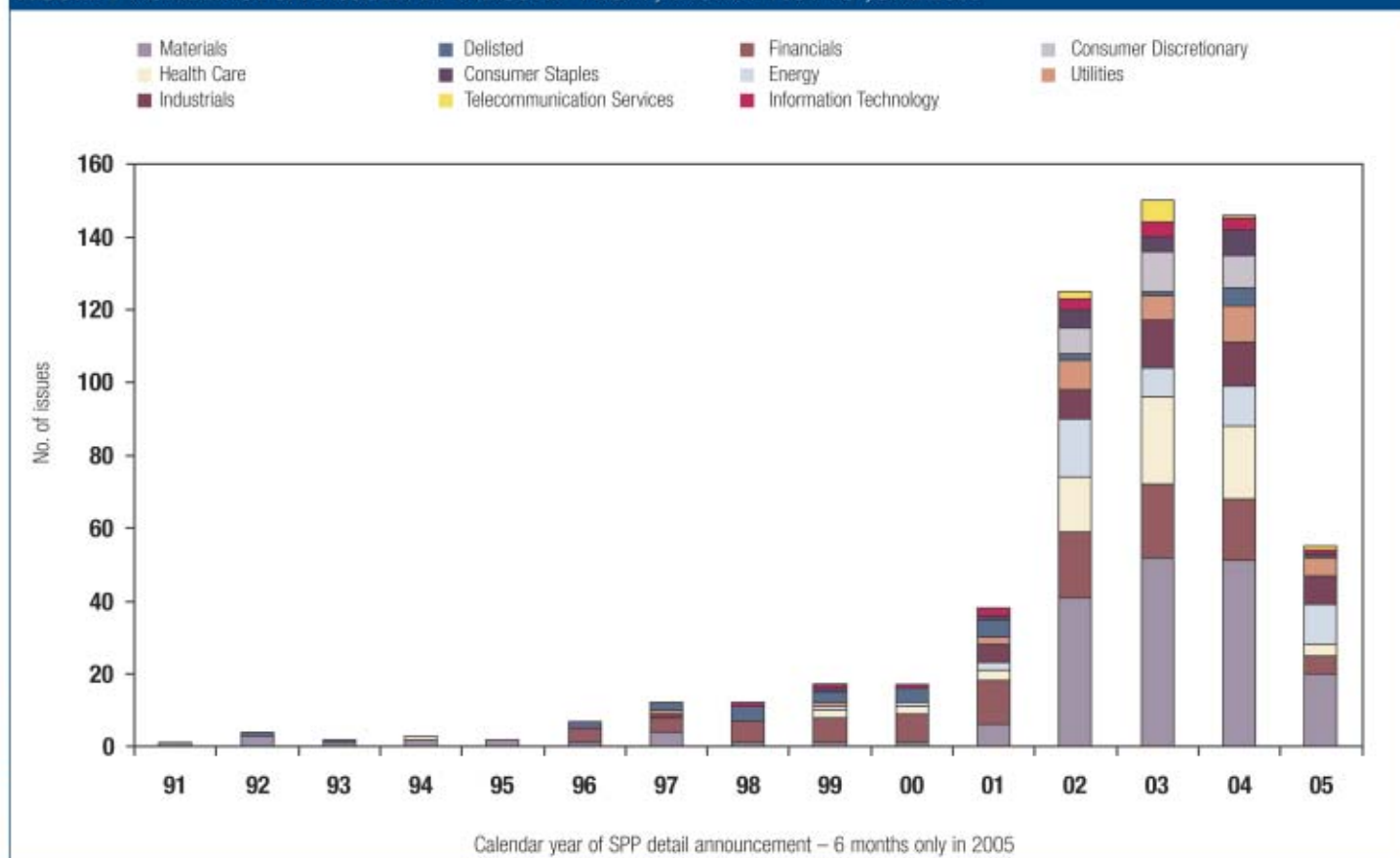
VALUING THE OPTION COMPONENT

The Black and Scholes option valuation model can be used to price the option component (warrant component, in US parlance) of SPPs. We find the option is valuable to SPP participants, with a mean (median) of \$0.17 (\$0.04) per share. The embedded option is also economically significant since the Black and Scholes option value has a mean (median) that is 14% (12%) of the underlying stock price.

SHARE PRICE REACTION WHEN THE SPP DETAIL IS ANNOUNCED

A great deal of research has addressed the share market’s reaction to the many different types of security offering. Often it has been found that the type of security is important. For instance, US studies consistently report a small decline in stock price when an underwritten public offering is announced and a less unfavourable reaction to other types (see Eckbo et al. (2005) for a survey of the literature).

FIGURE 1 NUMBER OF SPPs ISSUED BY INDUSTRY FROM JANUARY 1991 TO JUNE 2005



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However, the market's reaction apparently differs by country. Limited Australian research suggests a less extreme price reaction to SEO announcements than in the US (Dehnert 1992 and 1993). Various theories have been offered to explain why SEOs are on average bad news for shareholders, but they are beyond the scope of this paper.

We measured abnormal return by the difference between the stock return and the return on the market over two announcement periods, day -1 to 0 and -1 to 4 (day 0 is the announcement day). We found a mean announcement effect of -0.4% (day -1 to 0) and -2.3% (day -1 to 4). Regression analysis, using factors that others have found to partly explain share price reactions, showed that share price run up, issue discount, industry and firm and issue size had the greatest influence. Sensitivity analysis revealed these results held up for different announcement periods and sub-samples of SPPs.

LONG-RUN INVESTMENT PERFORMANCE AFTER THE ISSUE

Researchers overseas have also reported long-run (up to five years) underperformance following equity issues, whether they are IPOs or SEOs (see survey by Eckbo et al. (2005)). Australian studies have reported similar results.

For instance, Allen and Soucik (1999a), (1999b), found SEO firms' five-year stock returns were significantly lower than those of other firms matched by industry and size. Likewise, Brown, Gallery and Goei (2003) found private placements were followed by significant underperformance for up to five

years, although the underperformance after a rights issue was less significant. Various market mispricing theories have been used to explain the long-run underperformance anomaly. They include managers exploiting "windows of opportunity" by issuing shares at inflated prices when the market "gets it wrong", signalling, and earnings management. Others have argued the long-run underperformance is more apparent than real; that it results from a flawed research design.

Since most SPPs have occurred since 2002, we did not assess long-run performance beyond three years. For holding periods up to three years after the issue, we measured long-run performance by the continuously compounded buy-and-hold abnormal return on the SPP issuer relative to (1) a matched non-SPP-issuing firm and (2) a representative market index. Matching was by size and industry, and in some cases a "good" match was not found. Table 4 shows evidence of issuers experiencing subsequent long-run underperformance. When utilising buy-and-hold abnormal returns with a non-SPP-issuing matched firm benchmark, weak support was found. However, when the buy-and-hold abnormal return was measured relative to the market index, stronger support was found.

CONCLUSION

We report on Australian investors' experience with SPPs. We illustrate their increasing popularity, which has typically resulted from partial "deregulation" of the plan issue process and suggests that the relaxation of the \$5,000 per shareholder

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annual limit to \$10,000 or more may well be desirable. We also summarise some of the plans' more interesting features. A logistic regression model shows their lower level of liquidity and cash holdings and their wider shareholder spread distinguishes companies that issue SPPs. Application of the Black and Scholes option valuation model reveals that the option embedded in a SPP entitlement can be valuable to shareholders and encourages participation in the plan. Finally, share prices fall when the detail of the average SPP is announced, while firms that issue SPPs continue to underperform the market for some years afterwards.

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TABLE 1 CHARACTERISTICS OF AUSTRALIAN SPPs BETWEEN 1991 AND JUNE 2005

Issue characteristics	n	Mean	Median	St. dev.	Min.	Max.
Discount (%)	559	11.12%	9.74%	10.90%	-26.90%	48.53%
Issue size (relative to # issued ords)	575	0.08	0.04	0.10	0.00	0.65
Issue size (\$m)	575	10.35	1.45	39.60	0.01	500
Issue size (funds raised/MktCap)	489	<0.01	<0.01	<0.01	<0.01	<0.01
Time to issue (days)	551	51	44	29	14	415
Uptake rate (%)	373	66%	57%	52%	1%	277%

TABLE 2 DIFFERENCES IN THE CHARACTERISTICS OF FIRMS THAT ADOPTED SPPs AND OTHER FIRMS IN THE SAME INDUSTRY AND OF COMPARABLE SIZE

Firm characteristics		n	SPP issuing firms		Matched non-issuing firms		Difference tests	
			Mean	Median	Mean	Median	t-test	Wilcoxon
Size	Ln MktCap	429	22.06	21.58	22.06	21.57	0.29	-0.47
	Ln TotAss	429	17.47	16.78	17.55	16.98	-1.29	-0.91
Growth and investment	Book-to-Mkt	429	0.10	0.01	0.07	0.01	1.35	1.30
	CapEx/TotAss	429	0.10	0.04	0.09	0.04	1.47	2.21**
Liquidity	CurrAss/CurrLiab	429	5.45	1.89	7.85	1.72	-2.99***	-1.11
Profitability	FreeCF/TotAss	429	0.06	0.09	0.11	0.12	-2.49**	-2.12**
	EBITDA/TotAss	429	-0.15	-0.05	-0.08	0.00	-3.59***	-4.24***
Cash holdings	Net cash	429	-0.11	-0.05	-0.03	-0.01	-5.78***	-5.29***
	Cash burn	386	-0.04	0.00	0.00	0.00	-2.87***	-2.17**
Leverage	TotDebt/TotAss	428	0.15	0.03	0.15	0.04	-0.19	0.30
	TotDebt/(TotDebt + MktCap)	429	0.00	0.00	0.01	0.00	-0.84	-0.03
Dividend behaviour		429	0.34		0.40		-2.74***	-2.72***
Shareholder structure		403	0.49	0.50	0.37	0.37	9.55***	8.49***
Overseas exchange		429	0.86		0.87		-0.65	-0.66

*, **, *** indicates significance at the 10%, 5% and 1% level on a two-tailed test.

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Notes

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² For consistency, we calculated the discount as the offer price relative to the average closing market price prevailing on the five days before the SPP detail announcement.

Companies can calculate the discount in various ways, which is why the minimum and maximum discounts appear to be outside the allowable limits according to our calculations.

³ Global Industry Classification Standard sector.

TABLE 3 LOGISTIC REGRESSION RESULTS DISTINGUISHING BETWEEN FIRMS THAT ADOPTED SPPs AND OTHER FIRMS IN THE SAME INDUSTRY AND OF COMPARABLE SIZE

Firm characteristic		Exp. Sign	Model 1		Model 2	
Intercept			-1.38	***	-1.10	***
Growth & investment	Book-to-Market	+			0.52	*
	CapEx/TotAss	+	0.59			
Liquidity	CurrAss/CurrLiab	-	-0.02	***	-0.02	***
Profitability	FreeCF/TotAss	?			-0.29	
	EBITDA/TotAss	?	0.46			
Cash holdings	Net cash	?	-2.02	***		
	Cash burn	?			-0.79	**
Leverage	TotDebt/TotAss	?			-0.14	
	TotDebt/(TotDebt + MktCap)	?	-7.76			
Dividend behaviour		-	0.18		-0.09	
Shareholder structure		+	3.18	***	3.11	***
Overseas exchange		-	0.01		-0.07	
N			806		736	
Chi-square			89.17	***	74.59	***
Max. log. like. function			-505.62		-467.79	
Pseudo R ²			9.50%		8.30%	
Classificatory power			65.26%		63.86%	

*, **, *** indicates significance at the 10%, 5% and 1% level on a two-tailed test.

TABLE 4 LONG-RUN SHARE MARKET PERFORMANCE OF FIRMS THAT ADOPTED SPPs RELATIVE TO TWO BENCHMARKS: FIRMS IN THE SAME INDUSTRY AND OF COMPARABLE SIZE; AND THE MARKET AS A WHOLE

Subsequent holding period	Matched non-SPP-issuing firm			Market index		
	n	Mean	Median	n	Mean	Median
1 month	307	-2.46%	-1.66%	375	-4.52%	-3.49%
		-2.40**	-2.30**		-6.72***	-6.29***
1 year	251	-6.19%	-2.08%	329	-22.89%	-23.29%
		-1.60	-1.21		-8.91***	-8.18***
2 year	128	-8.75%	-5.65%	199	-37.58%	-41.30%
		-1.05	-0.87		-8.41***	-7.33***
3 year	50	-25.40%	-8.46%	89	-52.49%	-35.56%
		-1.99**	-1.69*		-7.73***	-6.43***

*, **, *** indicates significance at the 10%, 5% and 1% level on a two-tailed t-test (z-score for median).