

## RESEARCH PAPER

 PRODUCTS  
 (OF INTEREST)

## Hybrids - why you are getting overpaid to invest

By Campbell Dawson, Managing Director, Elstree Investment Management

*Hybrids have delivered uncorrelated high returns combined with low volatility over the past five years. This paper explores why, despite some changes in the return equation, their reduced risk and still healthy returns make hybrids one of the most compelling income sub-sectors. It examines in detail some of the benefits of a portfolio of hybrid securities (including the potential for manager alpha) and some of the risks, including the more misunderstood risks and less obvious risks.*

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The hybrid sector has grown significantly over the past five years and can now be considered an important sub-sector within an income portfolio. Expected returns are amongst the highest of the “safe” income sectors. The high retail component of the sector leads to an inefficient market, and there is potential for alpha over a passive holding of all securities in the sector, particularly for sophisticated investors and smaller funds. The sector can deliver low risk, provided an appropriately diversified portfolio is created. Furthermore, returns are uncorrelated with equities and fixed interest so an allocation to hybrids leads to lower portfolio risk, particularly for capital stable type portfolios.

Elstree has developed an extensive database of hybrid market data and has used that to develop the Elstree Hybrid Index. This database and data from sources such as Moody’s and the US Federal Reserve are used to support the conclusions outlined. Hybrids have provided excellent returns for investors over the past five years, particularly when adjusted for risk. Returns of around 9% per annum and standard deviation of 2.4% per annum compare extremely favorably with equity and property trust sectors. Figure 1 details the returns from seven of the main income sectors for 2005/2006. Where there was an appropriate benchmark, it was used. In other cases, data is the return of the median ranked fund from the Morningstar database. The hybrid sector ranks highly in terms of absolute return.

The tripling of the number of securities within the sector since 2001 also means that, in contrast to the early days of the sector, it is now possible to construct well diversified portfolios of hybrid securities and the risk of the sector has fallen substantially.

### The Australian hybrid sector defined

The ASX-listed hybrid sector is comprised of over 130 securities with a total market capitalisation of over \$A20 billion. It has tripled both in market capitalisation and volume over the past five years. All of the securities have debt characteristics such as regular coupons and a principal, but they differ from senior debt in a number of respects. The securities listed on the ASX are mostly

subordinate debt and most have structures that allow the issuer a greater number of options regarding the refinancing or early call than senior debt in the same entity. In addition, some hybrids offer an equity call option. The trade-off for the subordination and more complex structures is a higher coupon. Some of the total return comes in the form of franking credits which, while cash-like in nature, are not reflected in unit prices. In general, the larger capitalisation securities are more liquid and more creditworthy. Elstree’s \$A18 billion, 60 security Index is based on these.

While many investors class hybrids in the equity or alternative asset classes, the sector will behave more like an income sector. Because the level of credit is generally quite high, the sector can be best seen as a slightly more volatile, slightly riskier income sector than the typical Australian bond market. The hybrid sector is far less risky than a typical high yield sector and does not have the price volatility that exists in property type assets, because most of the securities will be repaid at par.

### The return equation

Because hybrids are primarily floating debt instruments, realised returns over the term of the hybrid are equal to the trading margin plus Bank Bill rate. Over the short term, there are fluctuations in prices due to a range of factors, but the drift to par of medium-term debt

Figure 1: Income sector returns – FYE 2005/06

ASSET CLASS	RETURN (%)
CASH	5.8
BONDS (UBS COMPOSITE BOND)	3.4
MORTGAGE TRUSTS (MEDIAN FUND)	5.7
GLOBAL FIXED INTEREST (MEDIAN FUND)	0.8
HEDGE FUND OF FUNDS (MEDIAN FUND)	4.3
AUSTRALIAN HYBRID SECTOR (ELSTREE INDEX)	7.0
HIGH YIELD (MEDIAN FUND)	6.3

Source: UBS, Morningstar, Elstree Investment Management

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ensures investors will soon get the yields they purchased at, provided the security does not default. The yield available on a fully diversified hybrid portfolio is around the 90 Day Bank Bill rate plus 1.25% to 1.5%, or a total expected return of around 7.5%.<sup>1</sup> Given an inflation rate of 2% to 3% per annum, this is a real return of up to 5% per annum, which is an historically attractive. Ellstree’s research shows that given the inefficiency of the market, there is additional scope for active management to add further return. However, for the purposes of this paper, the analysis is limited to sector beta (index returns).

### Portfolio construction benefits

Adding a diversified portfolio of hybrids to a portfolio reduces portfolio risk substantially without sacrificing much in return terms. This is attributable to hybrids displaying low correlations (0% to 50%) to other asset classes and demonstrating high return to risk ratios. Figure 2 shows the effect on risk and return of adding 15% hybrids to a typical capital stable portfolio. The simulation uses historical correlations and two sets of return and risk inputs. In the first series (Historic), three-year historical risk and return data is used. Given that the last three years has seen extremely high returns and abnormally low risk, the data used reflects longer-term equity risk premiums and risks (labelled Prospective). The beneficial effect of the addition of the hybrids to the portfolio is clear, even during the past

three years when equity and other growth asset returns dominated asset allocation. Portfolio risk moves substantially to the left indicating lower risk, while return falls only a little using historical data and not at all using prospective returns.

### The hybrid market is inefficient

The hybrid market has the highest retail investor participation of any traded Australian investment market. Retail brokers account for 56% of turnover, compared to less than 30% for the broader ASX equity market and a total absence of retail investors in the Australian bond market. In addition, the complexity of the issues and the reduced level of research compared to the equity and bond market results in increased opportunities to add alpha. Analysis of the Elstree Hybrids Index reveals an extremely wide range of yields for any given credit rating or any given term. There is a yield range of over 2% for BBB rated and BB rated securities and only slightly less for A rated securities. The high degree of dispersion in valuations results in greater volatility of both security and portfolio returns. Ability to generate alpha is only limited by ability to enter and exit securities (in turn affected by size) and by ability to evaluate a fair value for the security. Provided an investor has the ability to enter and exit securities and is a better judge of value than the average (retail) investor, the ability to add alpha is exceptional.

### The risks

Most investors are well aware of the returns of their investments but are far more myopic about the risks. The level of risk in income investments is arguably more important than for equity or other growth investments where there is blue sky upside and investors can afford price falls. Income investors trade off that blue sky for a lower, more certain upside and they get to bear less of the risks. It can be a fine equation if the extra risks and returns are not balanced.

Because hybrids are an income investment, a good treatment of risk is to divide the risks into those that can lose principal and those that can lose some or all of your return. Figure 3 details those risks. Because most hybrids in the sector trade on a daily basis, most of the risks listed show up in the change in prices of securities and return volatility (often called market risk). On this count, the hybrid sector has demonstrated negligible risk with a standard deviation of return of under 1% per annum.<sup>2</sup>

Figure 2: Effect on a cap stable portfolio of a 15% allocation to hybrids

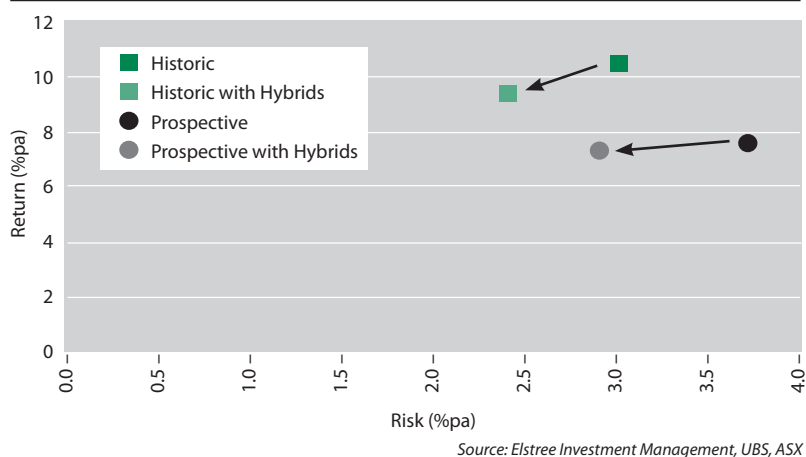


Figure 3: Hybrids – dissecting the risks

RISK	POSSIBLE LOSS (%PA)	AFFECTS
DEFAULT	100	Principal
INTEREST RATE	0	Return
MARGIN	1.4	Return
LIQUIDITY	15 (single security) 5 (portfolio)	Return
EVENT	20 (single security) 2 (portfolio)	Return

Source: Elstree Investment Management

### Default risk

Default risk is potentially the largest risk the hybrid investor can face. Unlike all the other risks, it is low frequency and high cost. These kinds of risks are invariably overlooked by some investors or overemphasised by more conservative investors. These are the risks about which investors need to have the most balanced understanding. Since the 19th century, investors have been comfortable in describing credit risk by the use of credit ratings and there have been

two broad classifications: an investment is considered investment grade (rated higher than BBB-/Baa3) or sub-investment grade/high yield (BB+/Ba1 rated or lower). Sub-investment grade runs the gamut from some quite reasonable securities (Coles Myer had a BB+ rated hybrid) to what are quite clearly junk bonds. The hybrid market is largely a BBB/BB market, so it is important to understand the credit risk of this group of bonds.

As a heuristic to simply explain credit risk, this simple distinction is valuable. However, as an attempt to quantify the credit risk or identify whether investors are getting paid appropriately to accept the risk, it is less so. The deficiency arises from two factors:

- There is a non-linear change between the credit risk categories. The difference in historical default by moving from a BBB- credit to a BB credit (two notches) is far less than the move from BB credit to B+ credit (again, two notches); and,
- It does not take into account the time factor. It is logical that large, well run, financially strong companies (that is, those that have good ratings) do not default overnight. They take time to become badly run, or financially weakened or their industry disappears – then they default. The most topical case is US auto industry. US car manufacturers were amongst the largest companies in the world 20 years ago and all had quite good credit ratings. It is not so now, and most of the US auto industry is on the verge of default, but it took a very long time to get there.

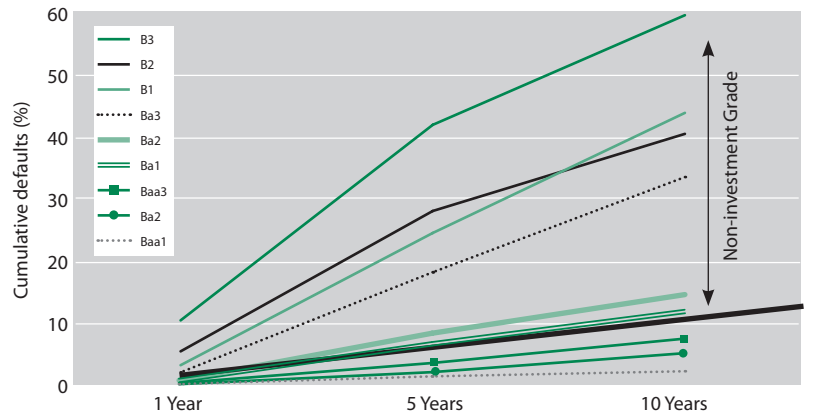
Figure 4 is drawn from 23 years of credit rating data<sup>3</sup> and shows the historic cumulative default rate by rating and term for the credit bands hybrid investors are interested in – the BBB and BB levels (with the B level shown for interest). For example, if you constantly held a portfolio of 10-year B1 securities over that period, you would have been over 40% default. What should be apparent from Figure 4 is that default rates increase as term increases and as ratings decrease. Default rates do not really start to increase until credit ratings drop to BB-/Ba3 and below, rather than at the BBB-/Baa3 investment grade cutoff. If you were Mr Moody starting your business in 2005 rather than in the 19th century, you would probably draw the line at Ba2.

**Investors are overcompensated for default risk**

The consequence is that a 20-year piece of debt from a BBB rated company may well have more embedded credit risk than a short-dated BB piece, even though the rating says the risk of the former is lower.

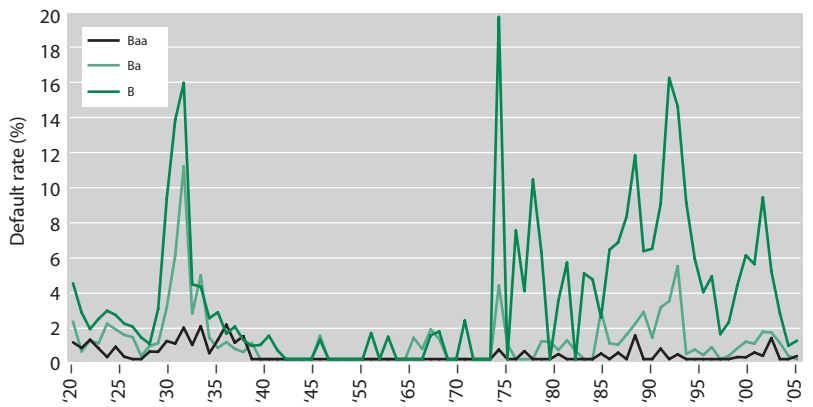
Because credit risk is a spectrum rather than the binomial distinction implied by the investment/non-investment definitions, the appropriate way to treat credit risk is to use historical data to calculate expected default costs of securities. Obviously, investors need a yield increment that provides enough compensation

Figure 4: Cumulative defaults by credit rating



Source: Moody's Investor Service

Figure 5: Hybrid default rates



Source: Moody's Investor Service

for the inevitable defaults. The default cost of the hybrid sector is around 0.3% per annum – that is, if you held enough hybrids for long enough, you would suffer losses of around that amount. This is indicative of a BBB market with a three-year maturity. Against this, investors are receiving a margin over risk free investments of around 1.25% to 1.5% per annum, which means investors are getting compensated well in excess of the risks they bear. There is no other asset class that provides guaranteed excess returns over risk free rates (and if you think equity does, ask investors in the US, Japan or Europe about the last seven years).

For an historical perspective, Figure 5 shows default rates since 1920. Typically, for BBB and BB credits, there is a default spike every decade and then not much happens. It gets a lot more exciting for B rated credits. Fortunately for the local hybrid market, there are not too many B rated credits around (yet).

Figure 6 (overpage) shows the default experience of BBB and BB companies during the 2001-2003 Tech Wreck recession, the worst default experience since the 1930's recession. The conclusion that can be made is that default for the BBB/BB levels of credit is remote, provided (and these are very important caveats) there is an appropriate level of diversification within the portfolio. Appropriate diversification is not four

securities, it is more like 25 securities – and, the term is relatively short for the more risky credits. A five-year BB- security is exponentially more risky than a 18-month BB+ security.

**Event risk**

Event risk is the risk that prices fall due to an event, which is usually a surprise piece of information about a company or a sector, or a regulatory or tax change. Compared to a very high credit market, there is increased event risk in hybrids. There should be one to two events each year. By definition, event risk only

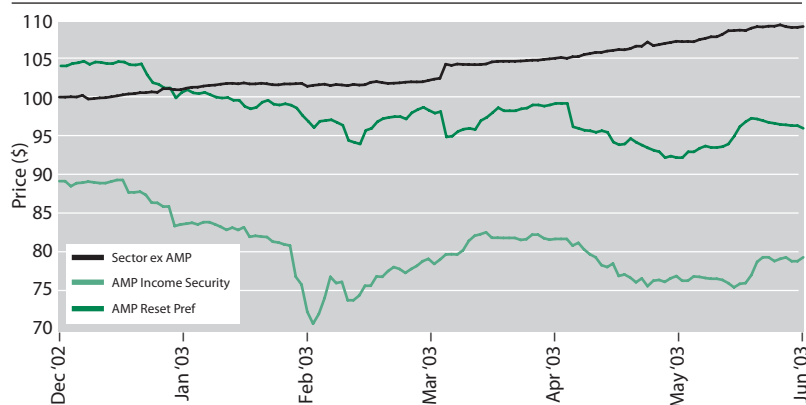
affects individual companies or industries. Appropriate diversification reduces the portfolio effect to relatively minor levels. The best example in the hybrid market is the 2003 AMP meltdown when falling equity markets in the UK produced a rather drastic fall in the AMP share price (-70%). Figure 7 below details the price performance of the two AMP hybrid securities on issue at the time, versus the hybrid sector index excluding the AMP securities. The AMP Income Security (rated BBB-) fell below \$A75, the Reset Preference Share which was rated one notch lower fell too, but there was no noticeable effect on the index ex AMP. Returns over the period would have been entirely dependent on the extent to which a portfolio was diversified. A hybrid event is usually accompanied by an equity event at the same time. There is a relationship between equity prices and hybrid prices in a crisis, but Ellstreet's research indicates beta is around 10% for BB rated companies in a crisis. It is higher for lower credit securities.

**Figure 6:** Default experience of BBB and BB rated companies 2001-2003

YEAR	# RATED ISSUERS	# INVESTMENT GRADE DEFAULTS	# BB/Ba DEFAULTS	DEFAULTS ALL RATED BONDS (%)
2005	4923	2	0	0.65
2004	4722	0	1	0.72
2003	4633	0	5	1.66
2002	4747	16	8	2.97
2001	5027	10	NAv	2.20
1991-2000	c5000	5	NAv	0.80

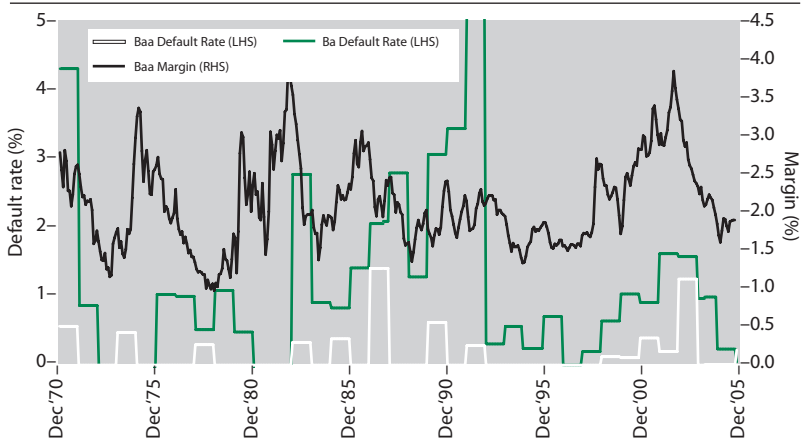
Source: Moody's Default Studies 2002-2006

**Figure 7:** Event risk – example of AMP hybrid securities



Source: Ellstreet Investment Management, ASX

**Figure 8:** Baa margins and default rates vs Ba default rates



Source: US Federal Reserve, Moody's

**Interest rate and margin risk**

The hybrid market is largely a floating rate market. With interest rate duration of 0.6 years, upwards movements in interest rates produce immediate increases in returns. A substantial fall in bond rates would result in lower returns than a typical Australian bond fund, which generally has a longer duration.

The hybrid sector has a greater exposure to changes in margins. While there are a number of securities which have a life of 10 years or more and are susceptible to increases in trading margins, the average life or margin term is 3.0 years. A two standard deviation increase in margin (that is, not very likely) would result in around a 1.4% drop in value for the sector.

There are a number of market commentators predicting that margins will increase. This may be driven more by hope and memory of margins that existed four years ago, than by detailed analysis. Margin volatility is typically related to credit rating and deterioration in credit fundamentals beyond a certain level. Investment grade securities typically trade with relatively narrow margins for seven or eight years out of ten and only widen considerably when the once-in-a-decade recession hits. As credit quality decreases, margin volatility increases. This can be seen in Figure 8 which details the margin on Baa rated corporates since 1970 and the historic default rate of Baa and Ba securities. It clearly shows the reduction in Baa margins after 2000 as the US economy stabilised, companies paid off debt and issued equity, and interest rates remained low.

However, it becomes clear that at the big picture level, there has to be a substantial level of Baa and Ba defaults before margins will move by more than 1%. Based on the factors that drive default levels and the quantitative models, Ellstreet cannot see either defaults rising above certain levels or margins in the US increasing substantially. There is little prospect of a US recession, monetary policy is not overly tight for long enough, monetary growth is still reasonable, and flows into high yield funds in the US are not yet at disastrous

levels. If that is the case, there is little likelihood of substantial increases in margins in Australia.

### Liquidity risk – don't be a forced seller

Liquidity risk is the most intriguing and potentially most costly of the risks facing hybrid investors. Depending on the investor's size, it may also be the most rewarding, as some securities become extremely cheap in times of liquidity crisis. The hybrid market is the most retail dominated investment market in Australia. While around 40% to 50% of new issues end up with wholesale investors, 84% of transactions in the secondary market involve retail investors and they are the ones setting prices and determining trading volumes. Figure 9 details the proportion of trades executed by retail brokers for each security in the hybrid sector.

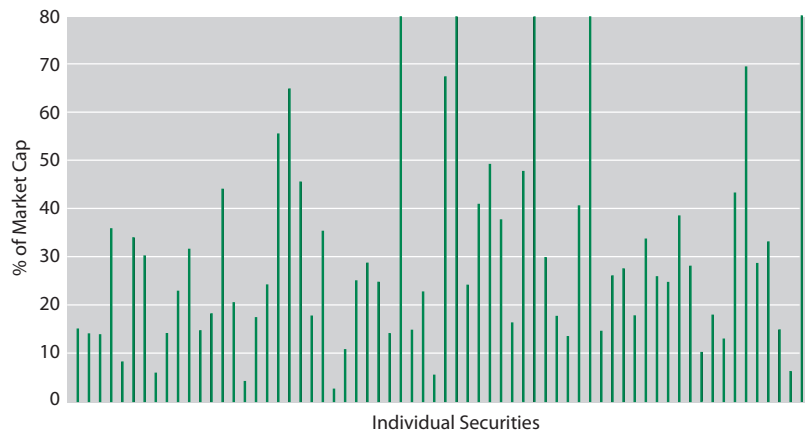
The turnover of most hybrids is around 30% per annum, providing sufficient scope for sensible acquisition and disposal of most positions a smaller hybrid investor may have in the ordinary course. This is clearly the area where larger hybrid investors are disadvantaged. Some fund managers are now buying up to 40% of individual issues, which means their positions are un-exitable if there is an issuer crisis or a redemption run on the fund manager. However, most investors' alternative to investment in a large fund (that is, a portfolio of hybrids) is almost always lacking in diversification and is subject to much higher default and event risk. The lack of turnover and high transaction costs means that it has little potential to outperform a passive holding. This is exacerbated by a characteristic of most markets – liquidity dries up in times of crisis. The high retail content of hybrids magnifies this and results in some of the over-reactions seen occasionally, such as the AMP event risk mentioned earlier. In that case, the AMP Income Security fell to levels that indicated that the market thought there was a reasonable chance of default. If that was the case, the more lowly rated AMP Reset Preference Share should have been trading at even lower prices, while in fact it traded some \$20 higher. Elstree's research indicates that hybrids overreact by over 5% in times of mild company or market stress and by a much higher degree when things get really rocky. Selling in such times is extremely return depletive.

### Conclusion

Although the hybrid sector has more risks, and more complex risks, than other non-equity income sectors such as bonds or mortgage trusts, the return outcomes more than compensate for the increased risk. However, the nature of the risks requires a well diversified portfolio, an understanding of the nature and status of those risks, and efficient execution so that not too much of the extra return is diluted by market impact.

Income investors should have an allocation to this developing sector to capture the increased return and lower volatility resulting from the addition of hybrids to a portfolio. Using a professionally managed fund

Figure 9: Hybrids – trades by retail brokers



Source: Elstree Yearbook 2005/6

of diversified hybrids can offer investors the returns discussed, while avoiding the potential problems of an undiversified, unmanaged passive holdings strategy. Hybrids can be an important part of the overall income component of a portfolio and will increasingly be so in the future as the risks associated with these types of funds become more widely understood. ■

### ENDNOTES

1. *Elstree Hybrid Yearbook 2005/06*.
2. *Elstree Hybrid Yearbook 2005/06*. For 2005/2006, this is about 30% of bond market volatility.
3. *Moody's Special Comment*, January 2006.

### ABOUT THE AUTHOR

Campbell Dawson is Managing Director of Ellstree Investment Management. He has over 23 years experience in the financial services industry including six years experience as an institutional fixed interest group head and one year as Head of Treasury at an Australian Bank. Between 1993 and 2000, Campbell was Head of Fixed Interest at GIO where he was directly responsible for managing over \$A6 billion of fixed interest assets. In addition to investment management, Campbell has extensive experience in debt workouts, structured finance, asset/liability management, securitisation and corporate treasury issues.

Elstree Investment Management is a boutique investment manager concentrating on hybrids and other fixed interest securities, with \$A75m under management. It was founded in 2003 by principals Dawson, Norman Derham and John Abbott and has been managing hybrid funds for institutional and high net worth clients since. The Elstree Wholesale Trust was ranked the number one hybrid fund by Morningstar for the 12 months ending 30 June 2006.