



MAFL Funds : Season 2007

Where Statistics Meets Leather and Grass

24 May 2007

Season 2007, Number 9

In this Edition of the newsletter:

- Wagers and tips for Round 9
- Ranking the Teams
- Update on Sportsbet Markets

A Round of Upsets?

 <p>Fremantle v St Kilda Subiaco 25th May, 6:40pm</p> <p>Head-to-Head Fre \$1.23 / StK \$3.90 (Fremantle 75-81%)</p> <p>Line Betting Fremantle -26.5 pts</p> <p>Heritage Fund Bet -</p> <p>Alpha Fund Bet -</p> <p>Beta Fund Bet -</p> <p>Line Fund Bet -</p> <p> Chi's Tip Fremantle by 16</p> <p> Quila's Tip Fremantle by 17</p>	 <p>Carlton v Adelaide Telstra Dome 26th May, 2:10pm</p> <p>Head-to-Head Car \$3.40 / Ade \$1.28 (Adelaide 71-78%)</p> <p>Line Betting Carlton +22.5 pts</p> <p>Heritage Fund Bet 6.78% (6.15%) on Carlton</p> <p>Alpha Fund Bet -</p> <p>Beta Fund Bet -</p> <p>Line Fund Bet 7.77% (10.46%) on Carlton</p> <p> Chi's Tip Adelaide by 1</p> <p> Quila's Tip Adelaide by 6</p>	 <p>Hawthorn v West Coast Aurora Stadium 26th May, 2:10pm</p> <p>Head-to-Head Haw \$2.25 / WC \$1.60 (West Coast 56-63%)</p> <p>Line Betting Hawthorn +6.5 pts</p> <p>Heritage Fund Bet -</p> <p>Alpha Fund Bet -</p> <p>Beta Fund Bet -</p> <p>Line Fund Bet -</p> <p> Chi's Tip Hawthorn by 12</p> <p> Quila's Tip West Coast by 5</p>	 <p>Brisbane Lions v Collingwood Gabba 26th May, 7:10pm</p> <p>Head-to-Head Bri \$1.78 / Col \$1.96 (Brisbane 49-56%)</p> <p>Line Betting Brisbane -6.5 pts</p> <p>Heritage Fund Bet -</p> <p>Alpha Fund Bet -</p> <p>Beta Fund Bet 1.74% (1.82%) on Brisbane</p> <p>Line Fund Bet -</p> <p> Chi's Tip Brisbane by 10</p> <p> Quila's Tip Brisbane by 7</p>
 <p>Richmond v Essendon MCG 26th May, 7:10pm</p> <p>Head-to-Head Ric \$3.30 / Ess \$1.30 (Essendon 70-77%)</p> <p>Line Betting Richmond +20.5 pts</p> <p>Heritage Fund Bet 7.51% (6.81%) on Richmond</p> <p>Alpha Fund Bet -</p> <p>Beta Fund Bet -</p> <p>Line Fund Bet 7.77% (10.46%) on Richmond</p> <p> Chi's Tip Richmond by 4</p> <p> Quila's Tip Essendon by 16</p>	 <p>Bulldogs v Sydney Manuka Oval 27th May, 1:10pm</p> <p>Head-to-Head Bul \$1.84 / Syd \$1.90* (Bulldogs 47-54%)</p> <p>Line Betting Bulldogs +6.5 pts*</p> <p>Heritage Fund Bet -</p> <p>Alpha Fund Bet -</p> <p>Beta Fund Bet -</p> <p>Line Fund Bet 6.74% (8.96%) on Bulldogs**</p> <p> Chi's Tip Bulldogs by 9</p> <p> Quila's Tip Bulldogs by 7</p>	 <p>Melbourne v Kangaroos MCG 27th May, 2:10pm</p> <p>Head-to-Head Mel \$2.30 / Kan \$1.57 (Kangaroos 57-64%)</p> <p>Line Betting Melbourne +8.5 pts</p> <p>Heritage Fund Bet 2.36% (2.14%) on Melbourne</p> <p>Alpha Fund Bet 2.30% (2.09%) on Melbourne</p> <p>Beta Fund Bet -</p> <p>Line Fund Bet 7.77% (10.46%) on Melb'ne</p> <p> Chi's Tip Melbourne by 7</p> <p> Quila's Tip Kangaroos by 10</p>	 <p>Port Adelaide v Geelong Telstra Dome 27th May, 4:10pm</p> <p>Head-to-Head PA \$1.75 / Gee \$2.00 (Port Adelaide 50-57%)</p> <p>Line Betting Port Adelaide -6.5 pts</p> <p>Heritage Fund Bet -</p> <p>Alpha Fund Bet -</p> <p>Beta Fund Bet -</p> <p>Line Fund Bet -</p> <p> Chi's Tip Port Adelaide by 13</p> <p> Quila's Tip Port Adelaide by 2</p>

* Favouritism changed between Wednesday & Thursday - Bulldogs now at \$1.94, Sydney \$1.80

** Placed at \$1.86

It's raining bets in Round 9

Some weeks, I place the bets and feel a little flat afterwards because, win or lose, the Fund's not going to move much. Other weeks, there's a sharp intake of breath before I resolutely tap the keys and lock in our collective fate, reminding myself that you've gotta risk money to make money.

And then there's this week. The only apt phrase that comes readily to mind is one I recall hearing from someone who'd just gone off-road rallying in a Porsche for the first time: they spoke - part rapturously, part pained - of experiencing "pucker butt". I'll just leave that image with you while you scan the weekend's bets.

Round 9 Wagers

	Team Wagered On	Bet Size (Init) ¹	Bet Size (Cur) ²	Price Obtained	Points Start	Opponent
Heritage	Carlton	6.78%	6.15%	\$3.40	-	Adelaide
	Richmond	7.51%	6.81%	\$3.30	-	Essendon
	Melbourne	2.36%	2.14%	\$2.30	-	Kangaroos
Alpha	Melbourne	2.30%	2.09%	\$2.30	-	Kangaroos
Beta	Brisbane	1.74%	1.82%	\$1.78	-	Collingwood
Line	Carlton	7.77%	10.46%	\$1.90	22.5	Adelaide
	Richmond	7.77%	10.46%	\$1.90	20.5	Essendon
	Bulldogs	6.74%	8.96%	\$1.86	6.5	Sydney
	Melbourne	7.77%	10.46%	\$1.90	8.5	Kangaroos

1 Bets as a proportion of initial (notional) funds

2 Bets as a proportion of current funds

This really is a swing-for-the-fences kind of round, which has the potential to substantially change our net position, for better or for worse. If our footballing guardian angel flits to the Dome, the Gabba, the G (twice) and Manuka during the weekend, sprinkling her fairy dust as she goes, Investors with the Recommended Weightings could be up 11½% by the end of the weekend. If, instead, she parties a little hard on Friday night and spends gametime sleeping off a fairy-sized hangover, these same Investors could have headaches of their own come Sunday afternoon having watched 7¼% of their MAFL investment bleed away. (Note: all percentage amounts, as usual, are in terms of notional initial funds).

So apparently value-laden is the weekend's fare that the Alpha and Beta Funds have, for the first time this year, both found something to throw money at in the same weekend. Their bets of around 2% are pretty small beer though when laid alongside the Heritage Fund and Line Fund pull-the-hundred-dollar-notes-off-the-outside-of-the-roll extravagances.

Even a cursory scan of the bet list makes it obvious that Melbourne's fate this weekend is inextricably linked with our own, as the Heritage, Alpha and Line Funds have all thrown their financial weight behind the Dees this weekend.

Richmond's and Carlton's results are also important since the Heritage and Line Funds have both hitched up to their respective wagons too.

With so much action, and with Line Bets and Head-to-Head bets in the same games, a fully drawn-up Ready Reckoner would run to over 100 lines, so I'm going to try something different this week.

- A record 9 bets on 5 games with around 16½% of (notional initial) Heritage Funds, 2¼% of Alpha Funds, 1¾% of Beta Funds and 30% of Line Funds at risk.

Round 9 Ready Reckoner

(all returns are as a % of Notional Initial Funds)

- Carlton, Richmond and Melbourne – pick any 2 for a profit on Strategy A, B, C or E

Strategy A

	Win	Lose by < Spread	Lose by > Spread
Carlton	+3.95%	-0.66%	-2.13%
Richmond	+4.15%	-0.80%	-2.28%
Melbourne	+2.36%	-0.58%	-2.05%
Brisbane	+0.48%		-0.61%
Bulldogs		+0.58%	-0.67%

Strategy B

	Win	Lose by < Spread	Lose by > Spread
Carlton	+5.82%	+0.05%	-3.64%
Richmond	+6.07%	-0.13%	-3.82%
Melbourne	+3.26%	+0.58%	-3.11%
Brisbane	+0.34%		-0.44%
Bulldogs		+1.45%	-1.69%

Strategy C

	Win	Lose by < Spread	Lose by > Spread
Carlton	+5.58%	-1.33%	-2.81%
Richmond	+5.88%	-1.55%	-3.03%
Melbourne	+2.52%	-0.70%	-2.18%
Brisbane	+0.41%		-0.52%
Bulldogs		+0.58%	-0.67%

Strategy D

	Win	Lose by < Spread	Lose by > Spread
Carlton	+6.99%	+6.99%	-7.77%
Richmond	+6.99%	+6.99%	-7.77%
Melbourne	+6.99%	+6.99%	-7.77%
Brisbane	+0.00%		+0.00%
Bulldogs		+5.80%	-6.74%

Strategy E

	Win	Lose by < Spread	Lose by > Spread
Carlton	+4.65%	+0.04%	-2.91%
Richmond	+4.85%	-0.10%	-3.06%
Melbourne	+2.91%	+0.24%	-2.72%
Brisbane	+0.41%		-0.52%
Bulldogs		+1.16%	-1.35%

So, how to read this. Well, take the first line of the Strategy A block. It tells us that:

- if Carlton win, Investors with Strategy A will be better off by 3.95% of Notional Initial Funds
- if Carlton lose but by fewer than 23 points, these Investors will be 0.66% worse off (since the Line Bet will offset some of the loss on the Head-to-Head bet)
- if Carlton lose by 23 points or more, these Investors will be 2.13% worse off.

Each line in the block is read in the same way and the aggregate result for the weekend is just the sum of the results for the individual games.

With this table you can quickly see that, for those Investors with Strategy A, outright victories by any two of Carlton, Richmond and Melbourne will be enough for overall profitability for the weekend. Other combinations are no doubt profitable too, but I'll leave the identification of these as an exercise for those with an especially deep interest.

You Say The Hawks, And I Say The Eagles ...

Even more disagreement amongst our tipsters this weekend, with the Fremantle v St Kilda and Port Adelaide v Geelong games generating the highest levels of dissent, both producing 6-5 outcomes. Two other games, Brisbane v Collingwood and the Bulldogs v Sydney, have strong minority support including, in both cases, the Sportsbet bookie. Overall the Tipsters' Agreement Index comes in at just under 76%, which is as low as it's been for a while.

Tips from all the Tipping Models (see Appendix for each Model's strategy)

Tipping								
	Fre v StK	Bri v Col	Car v Ade	Haw v WC	Ric v Ess	Mel v Kan	PA v Gee	WB v Syd
CTM	Fre by 17	Bri by 10	Ade by 1	Haw by 12	Ric by 4	Mel by 7	PA by 13	WB by 9
QTM	Fre by 16	Bri by 7	Ade by 6	WC by 5	Ess by 16	Kan by 10	PA by 2	WB by 7
BKB	Fre by 26.5	Bri by 6.5	Ade by 22.5	WC by 6.5	Ess by 20.5	Kan by 8.5	PA by 6.5	Sydney by 6.5
CTL	St Kilda	Collingwood	Adelaide	West Coast	Essendon	Kangaroos	Port Adelaide	Western Bulldogs
MM2	St Kilda	Collingwood	Adelaide	West Coast	Essendon	Kangaroos	Geelong	Western Bulldogs
MM4	St Kilda	Collingwood	Adelaide	West Coast	Essendon	Kangaroos	Geelong	Western Bulldogs
MM6	St Kilda	Collingwood	Adelaide	West Coast	Essendon	Kangaroos	Geelong	Western Bulldogs
MM8	St Kilda	Collingwood	Adelaide	West Coast	Essendon	Kangaroos	Port Adelaide	Western Bulldogs
MM11	Fremantle	Collingwood	Adelaide	West Coast	Essendon	Kangaroos	Port Adelaide	Western Bulldogs
MM16	Fremantle	Collingwood	Adelaide	West Coast	Essendon	Kangaroos	Geelong	Sydney
MM22	St Kilda	Collingwood	Adelaide	West Coast	Richmond	Kangaroos	Geelong	Sydney
NIT	St Kilda (6-5)	Collingwood (8-3)	Adelaide (11-0)	West Coast (10-1)	Essendon (9-2)	Kangaroos (10-1)	Port Adelaide (6-5)	Western Bulldogs (8-3)

Line Betting										
	Chi	Quila	St Kilda	Brisbane	Carlton	Hawthorn	Richmond	Melbourne	Port Adelaide	Western Bulldogs
Chi	St Kilda	Brisbane	Carlton	Hawthorn	Richmond	Melbourne	Port Adelaide	Western Bulldogs		
Quila	St Kilda	Brisbane	Carlton	Hawthorn	Richmond	Kangaroos	Geelong	Western Bulldogs		

- Chi and MM16 differ on 6 tips, Chi and Quila differ on 3

Chi and MM16 differ on an extraordinary six of the week's eight tips, with Chi opting for only four favourites to MM16's six. Chi and Quila's tips are also, for them, remarkably different, with different tips in three of the games. (It could easily have been four as Quila was, earlier in the week, seriously contemplating - well as seriously as a her happy-go-lucky, let's all go roll in something disgusting and then run around like a lunatic approach to life can accommodate - tipping the Cats over Port Adelaide.)

What's particularly striking is the size of the differences between their tips as measured by the difference between their tipped margins: 17 points in the case of the Hawks v Eagles clash, 20 points for the Tigers v Dons game, and 17 points for the Dees v Roos matchup. Normally - as you can see for the games on which they agree - these differences are in single digits, often the singlet of digits.

Anyway, another round to shake up the tipster league table.

Here's the current situation:

Round by Round and Cumulative Tipping Results

Round by Round								
	R1	R2	R3	R4	R5	R6	R7	R8
CTM	4	5	5	4	4	5	6	8
QTM	3	5	5	2	4	5	5	7
BKB	4	4	6	5	6	5	6	7
CTL	4	4	4	3	4	5	3	5
MM2	3	4	4	4	2	4	4	4
MM4	3	4	6	5	4	6	5	4
MM6	4	5	6	3	4	5	3	5
MM8	2	5	6	4	5	6	4	5
MM11	2	4	6	3	4	6	4	5
MM16	5	5	6	5	5	5	7	4
MM22	4	5	6	3	5	4	6	4
NIT	3	5	7	3	3	5	4	5

Cumulative								
	R1	R2	R3	R4	R5	R6	R7	R8
CTM	4	9	14	18	22	27	33	41
QTM	3	8	13	15	19	24	29	36
BKB	4	8	14	19	25	30	36	43
CTL	4	8	12	15	19	24	27	32
MM2	3	7	11	15	17	21	25	29
MM4	3	7	13	18	22	28	33	37
MM6	4	9	15	18	22	27	30	35
MM8	2	7	13	17	22	28	32	37
MM11	2	6	12	15	19	25	29	34
MM16	5	10	16	21	26	31	38	42
MM22	4	9	15	18	23	27	33	37
NIT	3	8	15	18	21	26	30	35

Line Betting										
	Chi	Quila	St Kilda	Brisbane	Carlton	Hawthorn	Richmond	Melbourne	Port Adelaide	Western Bulldogs
Chi	3	7	2	2	4	7	4	3		
Quila	2	7	2	3	4	7	3	3		

Ranking the Teams

The ability to rank sporting teams based on their head-to-head performance across an unbalanced schedule (ie one in which not every team has played every other team, ideally once at home and once away) has been the subject of an extraordinary amount of apparently scholarly research, most of it from the US where the aim has been variously to rank-order college or professional basketball, football, baseball or hockey teams. Indeed, the two US Division 1-A college football teams that are selected to play-off for what's called the Bowl Championship Series are, in part, determined from the rankings generated by a number of statistical algorithms.

I've selected three such algorithms that have appeared in the literature, which I intend to use on a regular basis throughout the remainder of the season to rank the 16 AFL teams. I'll spare you the intricate details of how each algorithm works technically, but here's a thumbnail of the three algorithms:

Bradley-Terry Model - this is the oldest algorithm of the lot, with origins going back to the early 1950s. It calculates a team's ranking based on that team's game-by-game results, the quality of the opposition they've faced and whether they've played at home or away. The home advantage is considered to be the same for all teams. This model struggles a bit when there's an undefeated or an unvictorious (it's the best antonym I can come up with) team, so it's not very happy with Melbourne and Richmond at this point. Nevertheless it is still cranking out rankings.

Mease Model - this much more recent algorithm, published in a journal article in 2003, uses a penalised maximum likelihood approach (I can't spare you **all** the technical details) to rank the teams. It also calculates a team's rankings based on that team's game-by-game results and the quality of the opposition they've faced, but makes no allowance for any home and away effect.

Batchelder-Bershad-Simpson Model - generally abbreviated to the 'BBS model' to the undying gratitude of journal typesetters the world over, this algorithm was first canvassed in 1979 and then progressively improved upon over the next 13 years, drawing heavily on the writings of Elo, he of chess-player rating fame. The BBS model bases a team's ratings on its aggregate win-loss record (not, though, as Bradley-Terry and Mease do, on its game-by-game record) and the quality of the opposition it has faced in achieving that win-loss record. It too ignores the notion of a home ground advantage. The BBS is by far the simplest ratings model to use, requiring only an Excel spreadsheet and a modicum of patience (which, I've found, is generally required for any Microsoft application).

You might notice that none of these Models uses the margins of victory in any way. That's quite deliberate, as a common belief amongst ranking-model practitioners (there's a group whose Chrissie party you'd want to miss) is that incorporating victory margins, in whatever fashion, tends to produce "unintuitive" results. Indeed, so unintuitive were such results that the people in charge of the Bowl Championship Series that I mentioned earlier forbade the providers of computer ranking models from using margin of victory to come up with their rankings commencing with season 2002. We might revisit this issue some other week, but let's go with the accepted wisdom for now. (For the record: every bone of my statistical body tells me that a 1 point loss on the siren to the Eagles at home is somehow quantitatively different from a Richmondesque 157 point flogging at Kardinia).

Based on the first 8 rounds of the season and, for the Bradley-Terry Model, my interpretation of "home" and "away", here's what these various ranking models produce:

Rankings Produced by the Mease, BBS and Bradley-Terry Models

	Ladder Position	Mease Penalised ML	Batchelder-Bershad-Simpson	Bradley Terry (with home team adj)
Adelaide	4	6	5	6
Brisbane Lions	12	10	10	11
Carlton	14	14	14	14
Collingwood	7	3	4	3
Essendon	10	9	9	7
Fremantle	13	13	13	13
Geelong	3	8	8	9
Hawthorn	5	7	7	8
Kangaroos	6	4	3	4
Melbourne	15	15	16	16
Port Adelaide	2	2	2	2
Richmond	16	16	15	15
St. Kilda	11	12	12	12
Sydney	9	11	11	10
West Coast	1	1	1	1
Western Bulldogs	8	5	6	5

A few things about these rankings are interesting:

- For the most part the rankings are quite close to ladder position (for anyone watching, the Spearman rank correlation coefficients between ladder position and the rankings produced by the three measures are 0.89, 0.91 and 0.86 respectively).
- Collingwood is universally ranked higher than its ladder position by the Models. This reflects the fact that some of Collingwood's wins have come against highly-rated opposition in Adelaide and the Roos (and, to a lesser extent, Essendon) and all their losses have been at the hands of also highly-rated West Coast, Port Adelaide and the Bulldogs.
- Conversely, Geelong is universally ranked lower than its ladder position by the Models. Four of their wins are against Carlton, Melbourne, Richmond and Fremantle - hardly a who's who of premiership contenders - and one of their losses was against the relatively lowly-ranked Hawks.
- The Bradley-Terry Model looks a little more favourably upon Essendon's away win against Adelaide and also looks a little more kindly upon away losses to Carlton, Collingwood, the Roos and the Hawks. Ranking them seventh seems a bit too kind though.

All in all, quite sensible stuff. I'm looking forward to watching these rankings move from week to week.

Update on TAB Sportsbet Prices

At this stage of the season, with over one third of the regular season games now over, you don't expect to see huge movements in the Final 8 and Flag markets, but the Sportsbet's bookie is nothing if not surprising and this week he's reacted fairly dramatically to a few results.

TAB Sportsbet Prices : 22nd May 2007

	Bookmaker's Prices (22nd May)		Bookmaker's Prices (15th May)	
	Final 8	Flag	Final 8	Flag
West Coast	1.01	3.10 S	1.01	3.50
Adelaide	1.05 S	6.50 S	1.12	7.00
Geelong	1.07 S	6.50	1.12	6.50
Port Adelaide	1.12 L	12.00 L	1.08	10.00
Sydney	1.25 S	9.00 S	1.28	11.00
Western Bulldogs	1.28 S	11.00 S	1.33	13.00
Fremantle	1.50 L	17.00 L	1.28	12.00
Collingwood	1.65 L	17.00 L	1.55	14.00
St Kilda	1.85 L	18.00 L	1.42	9.00
Hawthorn	2.25 S	31.00 S	2.45	51.00
Kangaroos	2.35 S	31.00 S	2.60	35.00
Essendon	2.60 S	26.00 S	4.00	81.00
Brisbane	3.25 L	71.00 L	2.40	41.00
Carlton	21.00 L	301.00 L	13.00	151.00
Melbourne	26.00	301.00 S	26.00	501.00
Richmond	61.00 L	2001.00 L	41.00	1001.00

S Odds have shortened
L Odds have lengthened

- 11 teams under \$2.50 for the Final 8, and four under \$10 for the Flag

Clearly, he particularly didn't like what he saw in the defeats of Fremantle, St Kilda and Brisbane, as reflected in his lifting of their respective prices in both key markets.

On the flip side, Essendon's win over Brisbane has caused a fairly significant reevaluation of the Dons' chances, resulting in their shortening to \$2.60 to make the Final 8 and to \$26 to win the Flag.

Meantime Melbourne, somewhat curiously, were unchanged in Final 8 betting and shortened in Flag betting, despite a 77-point loss to the Eagles. I guess people were expecting worse. Anyway, the effective difference between a price of \$501 and \$301 is about as close to zero as doesn't matter.

Richmond finally look a bit of value at \$2,001 for the Flag.

And, speaking of Richmond, the spoon race is now, it appears, a race in three, with Richmond heavily favoured despite having 14 more point-scoring opportunities this season. They're at \$1.33, which makes them roughly the same price to secure the spoon as the Bulldogs, currently 8th, are to make the Final 8.

Next line on spoon betting is Melbourne at \$4.00, then Carlton at \$8.00, whose narrowish loss to the Roos last weekend kept the three-peat dream alive but saw them drift a little in the betting. After that, the shortest price is \$101, a price which is approximately the bookie equivalent of "go on, make my day".

Time for these spoon don't-wannabes to do so something about it and make our day.

Tony

24 May 2007

Appendix

Tipping Model Strategies

Strategy Name	Basis for Tips
Chi Tipping Model (CTM)	Complex statistical model incorporating a range of factors.
Quila Tipping Model (QTM)	Uses an approach similar to that used for the CTM.
Bookies Know Best (BKB)	For each game, tips the TAB Sportsbet favourite. In the case of equal favourites, it tips the true home team or, if there's no true home team, tips the team with the higher ladder position (ties are broken using percentage then for-and-against margin).
Consult The Ladder (CTL)	Tips the team with the higher ladder position (ties are broken using percentage then for-and-against margin). For the first round of the season, use the ladder position at the end of the previous regular season.
Momentum Matters (MMx)	A series of strategies that involve building competition ladders based only on the results of the most recent x rounds of regular season games (drawing on games from the previous season if required). The MM2 strategy considers only the last 2 regular season rounds, the MM4 strategy only the last 4 rounds, and so on. Once a ladder has been built for a strategy, the selected team is that with the superior ladder position (as per CTL above). This year we'll track the performance of MM2, MM4, MM6, MM8, MM11, MM16 and MM22.
No Independent Thought (NIT)	Tips the team that is most popular amongst all other strategies.

Notional Initial Funds

For reasons that are somewhat technical (I'm happy to provide details to anyone who's interested but, broadly, it allows me to describe bets in terms of a common percentage for all Investors and still maintain the same share price for all Investors), I need to calculate what I call "Notional Initial Funds". It's calculated separately for each Fund.

For original Investors, the definition is straightforward:

$$\text{Notional Initial Funds} = \text{Actual Funds Invested}$$

For Investors who join the Fund post Round 1:

$$\text{Notional Initial Funds} = \text{Actual Funds Invested} / \text{Share Price at the time of investing}$$

(in other words, it's the notional amount that would need to have been invested at the start of the season in order to have returned an amount equal to the amount actually invested).

24 May 2007