

MAFL Funds: Season 2007

Where Statistics Meets Leather and Grass

19 August 2007

Season 2007, Number 20.1

In this Edition of the newsletter:

- Results of wagers and tips for Round
- Monkey Update
- Have We Been Lucky?
- The Alternative Premierships

Hawks Only Losing Favourites



MCG 17th August, 7:40pm

Head-to-Head Col \$1.57 / Mel \$2.30 (Collingwood 57-64%)

Line Betting Collingwood -8½ pts

Heritage Fund Bet

Alpha Fund Bet

Beta Fund Bet

Line Fund Bet

Collingwood 11.15 (81)

def.

Melbourne 9.16 (70)

Line Betting
Collingwood by 2½ pts

St Kilda v Fremanti

Fremantle Telstra Dome 18th August, 2:10pm

Head-to-Head StK \$1.65 / Fre \$2.15 (St Kilda 54-61%)

> Line Betting St Kilda -7½ pts

Heritage Fund Bet

Alpha Fund Bet

Beta Fund Bet

Line Fund Bet LOST 7.78% (6.78%)

St Kilda 19.12 (126) *def.*

Fremantle 14.12 (96)

Line Betting
St Kilda by 22½ pts

¢

Carlton v Essendon MCG 18th August, 2:10pm

Head-to-Head

Car \$2.45 / Ess \$1.50 (Essendon 59-67%)

> Line Betting Carlton +13½ pts

Heritage Fund Bet LOST 7.97% (4.75%)

Alpha Fund Bet LOST 3.11% (2.88%

Beta Fund Bet

Line Fund Bet

Essendon 18.10 (118)

def. **Carlton** 16.12 (108)

Line Betting
Carlton by 3½ pts

Brisbane Lions
v
Sydney

Sydney
Gabba
18th August, 7:10pm

Head-to-HeadBri \$2.05 / Syd \$1.70
(Sydney 51-59%)

Line Betting Brisbane +5½ pts

Heritage Fund Bet

Alpha Fund Bet WON 0.01% (0.01%)

Beta Fund Bet

Line Fund Bet

Brisbane Lions 9.9 (63)

drew with

Sydney 8.15 (63) Line Bettina

Brisbane by 5½ pts



West Coast v Richmond

Subiaco 18th August, 5:40pm

Head-to-Head WC \$1.09 / Ric \$6.50

(West Coast 85-92%)

Line Betting
West Coast -39½ pts

Heritage Fund Bet

Heritage Fund Be

Alpha Fund Bet

Beta Fund Bet

Line Fund Bet

West Coast 18.9 (117)

def.

Richmond 12.14 (86)

Line BettingRichmond by 8½ pts

Hawthorn v Port Adelaide

Aurora Stadium 19th August, 1:10pm

Head-to-Head Haw \$1.55 / PA \$2.35 (Hawthorn 57-65%)

Line Betting Hawthorn -10½ pts

Heritage Fund Bet

Alpha Fund Bet

Beta Fund Bet

Line Fund Bet

Port Adelaide 12.15 (87)

Hawthorn 12.10 (82)

Line BettingPort Adelaide by 15½ pts

Kangaroos v Geelong

19th August, 2:10pm **Head-to-Head**Kan \$3.60 / Gee \$1.26

(Geelong 72-79%)

Line Betting Kangaroos +22½ pts

Heritage Fund Bet

Alpha Fund Bet

Beta Fund Bet

Line Fund Bet

Geelong 17.16 (118) def.

Kangaroos 13.13 (91)

Line Betting
Geelong by 5½ pts

Adelaide v

Bulldogs Football Park 19th August, 4:10pm

Head-to-Head Ade \$1.20 / WB \$4.25 (Adelaide 77-83%)

Line Betting Adelaide -25½ pts

Heritage Fund Bet

Alpha Fund Bet

Beta Fund Bet

Line Fund Bet

Adelaide 15.17 (107)

def.

Bulldogs 11.7 (73)

Line Betting

Adelaide by 8½ pts

 Eight bets for 3 winners (2 practically breakeven) and 5 losers

Win Some ...

Statisticians often refer to a phenomenon called "regression to the mean", which describes the tendency for very good results to be followed by less good results and very bad results to be followed by less bad results. It's the reason why your second trip to a fantastic restaurant is rarely as good as your first (and why you should always make a second visit to a restaurant at which your first visit was unsatisfactory).

It's also the phenomenon that MAFL Investors have suffered this week, with last week's highly profitable wagering being followed by a week of unprofitable wagering in which only 3 of 8 bets returned a profit, two of those barely managing to do even that.

In probably the most disappointing result, Carlton let a 29-point lead slip away, conceding the last three goals of the game to lose by 10 points, thereby providing "tank" conspiracists with yet more 'evidence'.

Our two wins were, in truth, relatively lucky outcomes with Brisbane and Port Adelaide both landing goals in the dying seconds of their games, in Brisbane's case to level the scores, and in Port's to snatch an unlikely victory.

In other bets, the Roos were in the hunt for much of the game, before a $3^{\rm rd}$ quarter surge by the Cats snuffed any hopes we had of a return, Freo also were blown away in the $3^{\rm rd}$, and the Bulldogs went within about 5 minutes of securing our Line bet.

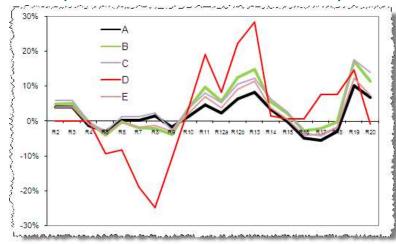
Here's what we have:

Results of Round 20 Wagers

Heritage Fund		ROI	(64.2%)	
	Bet*	Price	Net Return*	
Carlton	7.97%	\$2.45	(8.0%)	Lost by 10 pts
Port Adelaide	2.96%	\$2.35	4.0%	Won by 5 pts
Kangaroos	8.52%	\$3.60	(8.5%)	Lost by 27 pts
Total	19.5%		(12.5%)	
Alpha Fund		ROI	(86.3%)	
	Bet*	Price	Net Return*	
Carlton	3.11%	\$2.45	(3.1%)	Lost by 10 pts
Brisbane Lions	0.48%	\$2.05	0.0%	Drew
Total	3.6%		(3.1%)	
Beta Fund		ROI	2.5%	
	Bet*	Price	Net Return*	
Brisbane Lions	4.38%	\$2.05	0.1%	Drew
Total	4.4%		0.1%	
Line Fund		ROI	(100.0%)	
	Bet*	Price	Net Return*	
Fremantle	7.78%	\$1.90	(7.8%)	Lost by 22½ pts
Bulldogs	7.78%	\$1.90	(7.8%)	Lost by 8½ pts
Total	7.8%		(7.8%)	
Investor Retu	rns			
	Bet*	Net Return*	ROI	
Strategy A	4.67%	(3.28%)	(70.20%)	
Strategy B	6.81%	(5.07%)	(74.45%)	
Strategy C	6.61%	(4.53%)	(68.44%)	
Strategy C+	13.23%	(9.05%)	(68.44%)	
Strategy D	7.78%	(7.78%)	(100.00%)	
Strategy E	5.45%	(4.05%)	(74.45%)	
* all bets and net re	eturns are /	ralculated as a n	ercentage	
of Notional Initial		occidico as a p	er cernage	

For most Investors losses were in the 3-5% range, though Investors in Strategies C+ and D fared a little worse than that. The losses for Strategy D Investors were enough to drive them back into overall loss for the season, albeit narrowly, as the following chart shows.

Cumulative Returns of Major Strategies (all returns are as a % of Total Notional Initial Funds)



In terms of numbers, here's how each of the strategies is currently faring:

Overall Fund Performance									
	Fund Return	Heritage +55.22%	Alpha +4.68%	Beta (-21.60%)	Line (-0.85%)				
Joined [Swapped]	Strategy	Heritage	Alpha	Beta	Line	Overall Return			
		(P	ercentag	e in each Fur	nd)				
Pre-Season	A*	20%	35%	35%	10%	+5.04%			
Pre-Season	В	25%	25%	25%	25%	+9.36%			
Pre-Season	C	30%	30%	30%	10%	+11.41%			
Pre-Season	D	0%	0%	0%	100%	(-0.85%)			
Pre-Season	E	20%	30%	30%	20%	+5.80%			
Round 6	A*	20%	35%	35%	10%	+13.23%			
Pre-Season [Round 7 & 10]	$A \triangleright C \triangleright A$	20%	35%	35%	10%	+9.14%			
Pre-Season [Round 13]	C ► C+	60%	10%	10%	20%	+23.31%			

It's been some time since we looked at the team-by-team, Fund-by-Fund statistics. Firstly, here are the Heritage and Alpha Fund statistics:

HERITAGE FUND							ALPHA FUND						
	Bets	Win	Loss %	Outlayed	ROI	% RONF		Bets	Win	Loss 9	6 Outlayed	ROI	% RONE
Adelaide	2	2	0	11.6%	174.5%	20.2%	Adelaide	0	0	0	0.0%	0.0%	0.0%
Brisbane Lions	2	1	1	6.7%	26.3%	2.2%	Brisbane Lions	1	1	0	0.5%	2.5%	0.0%
Carlton	12	3	9	68.4%	(34.7%)	(22.1%)	Carlton	1	0	1	3.1%	(100.0%)	(3.1%)
Collingwood	2	1	1	10.9%	27.6%	4.0%	Collingwood	1	1	0	2.5%	40.0%	1.0%
Essendon	4	2	2	24.9%	7.8%	2.0%	Essendon	0	0	0	0.0%	0.0%	0.0%
Fremantle	2	0	2	4.7%	(100.0%)	(3.4%)	Fremantle	1	1	0	2.7%	86.0%	2.3%
Geelong	0	0	0	0.0%	0.0%	0.0%	Geelong	0	0	0	0.0%	0.0%	0.0%
Hawthorn	5	3	2	24.0%	58.2%	13.3%	Hawthorn	1	1	0	1.7%	120.0%	2.0%
Kangaroos	6	3	3	35.9%	10.6%	2.2%	Kangaroos	0	0	0	0.0%	0.0%	0.0%
Melbourne	6	2	4	35.1%	(7.3%)	(3.8%)	Melbourne	1	0	1	2.3%	(100.0%)	(2.3%)
Port Adelaide	1	1	0	3.0%	135.0%	4.0%	Port Adelaide	0	0	0	0.0%	0.0%	0.0%
Richmond	7	2	5	59.3%	81.6%	44.5%	Richmond	0	0	0	0.0%	0.0%	0.0%
St Kilda	2	1	1	10.8%	(5.6%)	(0.6%)	St Kilda	0	0	0	0.0%	0.0%	0.0%
Sydney	0	0	0	0.0%	0.0%	0.0%	Sydney	1	1	0	7.3%	65.0%	4.8%
Vest Coast	0	0	0	0.0%	0.0%	0.0%	Vest Coast	0	0	0	0.0%	0.0%	0.0%
Vestern Bulldogs	3	1	2	25.5%	(23.6%)	(6.0%)	Vestern Bulldogs	0	0	0	0.0%	0.0%	0.0%
Total	54	22	32	320.9%	17.2%	55.2%	Total	7	5	2	20.1%	22.6%	4.7%

As you can see, Carlton are the only team with a significantly negative RONF in the Heritage Fund on the back of 12 bets for only 3 wins. In contrast, Richmond (of course), Adelaide and Hawthorn have been the major contributors to the Heritage Fund's success. All up the Heritage Fund has made 54 bets for 22 winners (41%), with an ROI of 17.2%, turning Notional Initial Funds (NIF) 3 times in the process.

The Alpha Fund has only wagered on 7 teams, and on just two of them – Carlton and Melbourne – has it been unsuccessful. It's made 7 bets for 5 wins (71%), with a 22.6% ROI and an NIF turn of just 0.2.

Next, let's take a look at the Beta Fund and Line Fund statistics:

BETA FUND							LINE FUND						
	Bets	Win	Loss %	Outlayed	ROI	% RONF		Bets	Win	Loss %	Outlayed	ROI	% RONF
Adelaide	1	1	0	3.2%	148.0%	4.8%	Adelaide	1	1	0	7.8%	90.0%	7.0%
Brisbane Lions	3	2	1	8.1%	0.1%	(0.0%)	Brisbane Lions	1	0	1	7.0%	(100.0%)	(7.0%)
Carlton	0	0	0	0.0%	0.0%	0.0%	Carlton	5	3	2	34.0%	13.5%	4.6%
Collingwood	2	1	1	5.4%	(32.1%)	(1.9%)	Collingwood	3	2	1	21.5%	35.6%	8.1%
Essendon	1	1	0	5.9%	55.0%	3.3%	Essendon	3	0	3	15.8%	(100.0%)	(15.8%)
Fremantle	2	0	2	8.3%	(100.0%)	(8.3%)	Fremantle	3	0	3	21.5%	(100.0%)	(21.5%)
Geelong	0	0	0	0.0%	0.0%	0.0%	Geelong	0	0	0	0.0%	0.0%	0.0%
Hawthorn	1	1	0	2.0%	80.0%	1.6%	Hawthorn	3	1	2	23.3%	(35.1%)	(8.6%)
Kangaroos	0	0	0	0.0%	0.0%	0.0%	Kangaroos	3	3	0	23.3%	90.0%	21.0%
Melbourne	1	0	1	4.1%	(100.0%)	(4.1%)	Melbourne	5	4	1	38.9%	55.6%	20.2%
Port Adelaide	1	0	1	8.3%	(100.0%)	(8.3%)	Port Adelaide	0	0	0	0.0%	0.0%	0.0%
Richmond	1	0	1	6.0%	(100.0%)	(6.0%)	Richmond	3	2	1	23.3%	26.5%	6.2%
St Kilda	1	0	1	0.9%	(100.0%)	(0.9%)	St Kilda	3	1	2	21.5%	(28.1%)	(6.7%)
Sydney	1	0	1	1.7%	(100.0%)	(1.7%)	Sydney	1	1	0	5.6%	82.0%	4.6%
Vest Coast	0	0	0	0.0%	0.0%	0.0%	Vest Coast	2	1	1	13.4%	10.4%	1.4%
Vestern Bulldogs	0	0	0	0.0%	0.0%	0.0%	Vestern Bulldogs	2	0	2	14.5%	(100.0%)	(14.5%)
Total	15	6	9	54.0%	(43.0%)	(21.6%)	Total	38	19	19	271.4%	0.0%	(0.8%)

The Beta Fund owes it losses mostly to Fremantle, Port Adelaide, Richmond and Melbourne, and its (limited) successes to Adelaide, Essendon and Hawthorn. It has made 15 bets for 6 winners (40%), recording a negative 43% ROI and turning NIF 0.54 times.

Success for the Line Fund has come largely from the Roos, Melbourne, with Essendon, Freo and the Bulldogs inflicting the largest losses. This Fund has made 38 bets for 19 winners (50%), has a roughly breakeven ROI and a NIF turn of 2.71.

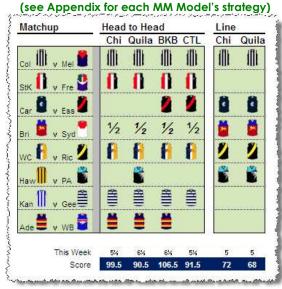
Not So Hard To Tip After All

What appeared to be a tough round to tip turned out to be one of the season's easiest, with our regular tipsters averaging 5.58 tips from 8.

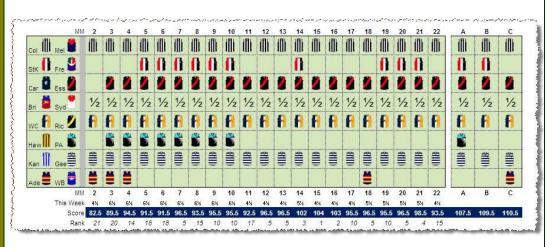
Amongst our leading tipsters, BKB tipped $6\frac{1}{2}$, Chi scored $5\frac{1}{2}$, and MM15 and MM16 managed only $4\frac{1}{2}$.

Here's the detail:

Tips from all the Tipping Models



 BKB kicks 3 clear of the field; Chi gains on MM16.



All of which leaves the cumulative results looking like this:

Cumulative Tipping Results

		9	والمساحي والمساورة ومهووسي
	Cum	% Correct	Av Pred Er
ВКВ	106.5	66.6%	28.02
MM15	103.5	64.7%	-
MM16	102.5	64.1%	-
MM14	101.5	63.4%	-
CTM	99.5	62.2%	29.53
MM21	98.5	61.6%	-
MM7	96.5	60.3%	-
MM12	96.5	60.3%	-
MM13	96.5	60.3%	-
MM18	96.5	60.3%	-
MM20	96.5	60.3%	-
MM9	95.5	59.7%	-
MM10	95.5	59.7%	-
MM17	95.5	59.7%	-
MM19	95.5	59.7%	-
MM4	94.5	59.1%	-
MM8	93.5	58.4%	-
MM8	93.5	58.4%	-
MM22	93.5	58.4%	-
MM11	92.5	57.8%	-
NIT	92.5	57.8%	-
CTL	91.5	57.2%	-
MM6	91.5	57.2%	-
MM5	91.5	57.2%	-
QTM	90.5	56.6%	31.14
ММЗ	89.5	55.9%	-
MM2	82.5	51.6%	-

So, BKB now leads the field by 3 tips and is looking hard to catch; Chi also trails MM16 by just 3 tips.

Before we jump to the Monkey Update, I just want to make you aware of one more extraordinary aspect of the Geelong season: their Line Betting results.

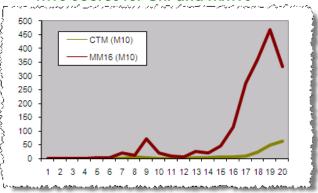
	Total Wins	Give Start	Win - Giving	Get Start	Win - Getting
Adelaide	10	14	5	6	5
Brisbane Lions	11	9	6	11	5
Carlton	9	1	1	19	8
Collingwood	11	11	5	9	6
Essendon	7	7	1	13	6
Fremantle	8	10	5	10	3
Geelong	16	18	15	2	1
Hawthorn	11	10	5	10	6
Kangaroos	13	5	4	15	9
Melbourne	8	4	1	16	7
Port Adelaide	10	14	7	6	3
Richmond	8	1	0	19	8
St Kilda	10	9	3	11	7
Sydney	9	16	8	4	1
West Coast	9	17	7	3	2
Western Bulldogs	10	14	8	6	2
•	160	160	81	160	79

The table at left shows that Geelong have given start in 18 of the 20 rounds so far this season and in 15 of those 18 games it has managed to cover the spread. Not even the bookies, it seems, can accurately estimate Geelong's dominance.

Monkey Update

Chi's $5\frac{1}{2}$ from 8 was enough to kick his M10 score up to a season-high 64, while MM16's $4\frac{1}{2}$ from 8 dropped its M10 score back to 335.





Have We Been Lucky?

Statisticians are always asking themselves 'How likely is it that what I've seen is just due to chance?'. This can make them frustratingly difficult to impress, but it also makes them less likely to wrongly attribute superior ability to that which has been achieved through sheer luck.

This same question is what motivates the M10 score – the more monkeys you need tipping at random to make the probability 10% that one or more of them will match or better a specified tipping performance, the less likely it seems that the performance is due to chance. Note that you can never absolutely rule out chance, you can only assess it to be an extremely implausible explanation.

So, it's time to ask the question: Could our head-to-head betting results be attributed to pure chance?

For this purpose I'm going to combine our Heritage, Alpha and Beta Fund results, and I'm going to focus on ROI as the measure of success. To date this year, the combined ROI on our Heritage, Alpha and Beta Fund wagers is 5.88%.

Now, a tough question: what does 'chance' wagering look like? This is a seriously deep question, and one to which I think there's no obvious answer. For now, I'm going to define two bettors who are about as random as I can imagine:

Bettor #1: Bets \$1 on every game on a randomly selected team

Bettor #2: Bets a random amount between \$0 and \$1 (uniformly distributed) on every game on a randomly selected team

How then, we ask, would bettors of type #1 and type #2 have fared this season? To determine this we simulate their betting strategy, running 1,000s of replicates of the season. In each replicate, for each game we randomly select a team and, for Bettor #2, randomly select an amount to wager. Then we tot up the wins and losses across the replicated season, calculate the ROI, and then do it all again for another replicate.

After doing this we find the following:

Bettor #1 has a season-average ROI of (4.88%), a worst-case ROI of (35.96%), a best-case ROI of 29.36%, and beats our 5.88% ROI 9.95% of the time.

Bettor #2 has a season-average ROI of (4.96%), a worst-case ROI of (40.97%), a best-case ROI of 34.80%, and beats our 5.88% ROI 13.85% of the time.

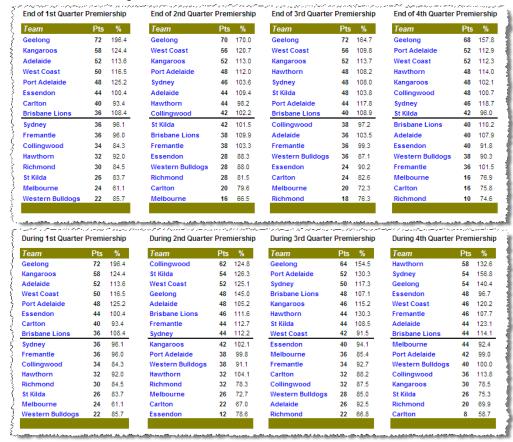
So, if you think the two Bettor profiles here are reasonable benchmarks, then there's only a 10 to 14% probability that our results are due to chance.

You could, of course, argue that these two bettor types are just too dumb to serve as reasonable proxies for 'chance' behaviour. We don't, for example, wager on every game, so why should our benchmark bettors be forced to bet on every game? Any change we make though to try and make the random bettors wagering look a bit more like ours changes them from being random bettors, I'd argue. So for now I'm happy to treat Bettor #1 and Bettor #2 as reasonable benchmarks.

The Alternative Premierships

Geelong has now secured all four of the End of Quarter Premierships and two of the During the Quarter Premierships.

Meantime, Collingwood has virtually ensured that they'll win the During the 2nd Quarter Premiership, and Hawthorn has strong claims for the During the 4th Quarter Premiership.



This weekend, winning teams led at the end of:

- Five of seven 1st quarters (as there was no winner in the Lions/Swans game)
- Five of seven 2nd quarters
- Six of seven 3rd quarters

Also, the winning teams won:

- Five of seven 1st quarters
- Four of seven 2nd quarters
- Four of seven 3rd quarters
- Four of seven 4th quarters

Tony

19 August 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:

Notional Initial Funds = Actual Funds Invested

For Investors who join the Fund post Round 1:

Notional Initial Funds = Actual Funds Invested / 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).