Round 1 Results Collingwood v Fremantle Pt Adelaide v Geelong Carlton v Richmond (Football Park, 20th March 2008) (M.C.G, 20th March 2008) (M.C.G, 22nd March 2008) Sportsbet Sportsbet \$1.65 \$2.15 \$2.25 \$1.60 Sportsbet \$1.68 \$2.10 53% - 61% 39% - 47% 38% - 44% 56% - 63% 52% - 60% 40% - 48% Carlton -61/2 pts (\$1.90 / \$1.90) Port Adelaide +9½ pts (\$1.90 / \$1.90) Collingwood -61/2 pts (\$1.90 / \$1.90) Heritage Heritage Heritage Alpha Alpha Alpha Beta Beta Beta Chi Chi Chi Line Line Line Port Adelaide by 9 Collingwood by 24 Port Adelaide by 3 Quila Quila Quila Coliingwood by 17 Carlton by 4 Shadow Carlton Shadow Geelong Shadow Collingwood CTL Carlton CTL Geelong CTL Collingwood Richmond (41-2) Geelong (40-3) Collingwood (29-14) MM MM MM issenters: MM22 & 23) nters: MM2, 4-8, 10, 12 & 30-35) Richmond (14-0) Geelong (14-0) Fremantle (9-5) Super MM Super MM Super MM (Dissenters: None) (Dissenters: None) (Dissenters: SMM3, 4, 5, 6 and 23) **Uber MM** Richmond Uber MM Port Adelaide **Uber MM** Collingwood Port Adelaide Simplified Richmond Simplified Simplified Collingwood Geelong 15.15 (105) def Richmond 17.7 (109) def Collingwood 16.15 (111) def Result Result Result Carlton 11.13 (79) Port Adelaide 14.12 (96) Fremantle 13.7 (85) W Bulldogs v Adelaide West Coast v Bris Lions St Kilda Sydney (Docklands, 22nd March 2008) (Subiaco, 22nd March 2008) (Docklands, 23rd March 2008) Sportsbet \$1.38 \$2.90 Sportsbet \$1.40 Sportsbet \$2.05 \$1.72 66% - 72% 28% - 34% 64% - 71% 29% - 36% 42% - 49% 51% - 58% Bulldogs +6½ pts (\$1.87 / \$1.93) St Kilda -17½ pts (\$1.90 / \$1.90) West Coast -15½ pts (\$1.90 / \$1.90) Heritage Heritage Heritage Won 7.83% (7.83%) Alpha Alpha Alpha Beta Beta Beta Chi Chi Chi Line Line Line St Kilda by 24 Chi Chi West Coast by 23 Chi Adelaide by 6 (Game of the Round) St Kilda by 15 Quila Ouila West Coast by 9 Quila Adelaide by 20 Sydney Adelaide Shadow Shadow West Coast Shadow West Coast Adelaide CTL Sydney CTL CTL Sydney (40-3) West Coast (43-0) Adelaide (43-0) MM MM MM (Dissenters: MM3, 11 & 34) (Dissenters: None) (Dissenters: None) Sydney (14-0) West Coast (14-0) Adelaide (14-0) Super MM Super MM Super MM (Dissenters: None) (Dissenters: None) (Dissenters: None) Uber MM St Kilda Uber MM West Coast **Uber MM** Adelaide Simplified Simplified West Coast Simplified Adelaide Sydney St Kilda 6.15 (51) def. West Coast 14.8 (92) def. W Bulldogs 19.12 (126) def. Result Result Result Sydney 6.13 (49) Brisbane Lions 11.10 (76) Adelaide 18.15 (123) Hawthorn v Melbourne Kangaroos v Essendon Round 1 Statistics (M.C.G, 23rd March 2008) (Docklands, 24th March 2008) Scoring Winners Sportsbet \$1.31 Sportsbet 129 69% - 76% 24% - 31% 47% - 54% 46% - 53% 88 Goals Hawthorn -201/2 pts (\$1.90 / \$1.90) Kangaroos -6½ pts (\$2.00 / \$1.80) Behinds 96 97 Heritage Heritage Ave Score 108.8 78.1 Ave Marg Alpha Alpha Beta Beta **Qtrs Won** Winners Losers Chi Chi 6.5 1.5 1st Line Line 2nd 4 4 Hawthorn by 28 Chi Kangaroos by 27 6 Chi 3rd Quila Hawthorn by 7 Quila Kangaroos by 10 6 Shadow Hawthorn Shadow Kangaroos **Qtr Leads** Winners Losers CTL Hawthorn CTL Kangaroos End of 1st 6.5 1.5 Hawthorn (43-0) Kangaroos (43-0) End of 2nd 5.5 2.5 MM MM (Dissenters: None) (Dissenters: None) End 3rd Hawthorn (14-0) Kangaroos (14-0) Tipster **Tipping** Score Super MM Super MM MM11 (Dissenters: None) (Dissenters: None) 1st 6 Uber MM Hawthorn Uber MM Kangaroos 2nd Various Models 5 Simplified Hawthorn Simplified MM2 & MM4 Hawthorn 23.16 (154) def. Essendon 19.8 (122) def. Result Result Ave Score 4.53 (Std Dev = 0.59) Melbourne 6.14 (50) Kangaroos 9.13 (67)

Results in Review

MAFL Funds

So much for easing into the new season pocketing the cash after a first-up, coast-to-coast wagering triumph. Our lone bet, the Bulldogs, started well against the Crows on Easter Sunday and went into the first change up by $3\frac{1}{2}$ goals. But, a 5 goal to 1 second term from the Crows turned things around and had them heading to their nest at the main break with a 5-point lead and all the momentum.

The second half was a points-fest – the two teams managing 24.10 between them – during which the Dogs feasted just well enough to flop over the line by 3 points, having trailed by 9 points at the 18½ minute mark in the final term. In doing so they handed Heritage Fund Investors a 105% return on their first wager, and a 7.83% increase in Funds, thus continuing a fine tradition of successful first-up MAFL bets in each season.

At right is a table showing how each Investor's portfolio is performing as at the end of Round 1. Investor #002, whose portfolio is pure Heritage, has had the happiest start to the season, but even those with the Recommended Portfolio have 2.35% more in their MAFL Investment than they did on Thursday.

For anyone who missed out on investing in Round 1, remember that the Funds all stay open throughout the season and you're most welcome to join (or exit) whenever you like. If you'd like to be a part of Round 2, please let me know before Wednesday of this week.

The decision to make the Alpha and Chi Funds wait until Round 4 before they commence trading was completely vindicated this weekend. Had they been trading, the Alpha Fund would have started with a shocking 31% loss, and the Chi Fund would have been down almost 14%.

001 3.13% 002 7.83% 2.35% 004 2.35% 005 2.35% 006 2.35% 007 2.35% 008 2.35% 009 2.35% 010 011 012 2.35% 013 2.35% 014 2.35% 015 0.00% 016 2.35%

Investor # Profit/Loss (%)

A similar restriction on the Line Fund – it will start trading in Round 5 – proved less fortuitous, however, with its single recommended wager, Port Adelaide with 9½ points start, squeaking home by half a point.

Tipping

What was good news for MAFL Investors was bad news for tipsters, as each had selected the Crows to beat the Dogs on Sunday. The Roos' loss was also universally lamented, and the Saints' victory over the Swans tipped by only 7 of the 64 tipsters. Amongst the remainder of the games, only the Pies' win over Freo caught out more than a handful of tipsters.

All up then, not a bad first round for most tipsters, the best of them being MM11 who managed 6 from 8. This is not one of the Momentum Matters models that I expect much from this year as it's managed to average only 58½% over the past 3 seasons.

After MM11 there are 34 tipsters on 5, and then 27 more on 4, including the three dogs.

Finally, there's MM2, which has started the year much as I expected, bagging just 3 from 8, a score it shared only with MM4.

Last year, some of you might recall, Chi narrowly missed out on recording an absolute average prediction error (AAPE - the average of the absolute difference between a tipster's predicted margin and the actual game margin) of below 30 points per game, which is the level I think quality margin-tipping models should revere. The Sportsbet bookie, for example, managed a 28.8 point AAPE. In the end he finished with an AAPE of 30.5 for the season having sat below 30 for some weeks until blowouts in one of the Preliminary Finals and in the Grand Final drove his average over the benchmark level.

For Round 1 of this year he's recorded an AAPE of 33.1, Quila has managed 32.5, and the Sportsbet bookie is at 28.4.

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Do Bookies Profit Excessively From Underdog Bettors?

If you spend any significant amount of time investigating the topic of gambling on the web, you'll come across the phrase "Favourite-Longshot bias" or its Americanised equivalent. Usually it crops up in the context of horse racing, though I have seen it applied to greyhound racing, American Football and American baseball. It refers to the empirical finding that favourites win more often - and longshots or underdogs win less often - than their odds would imply they should so that, per dollar wagered, favourites return more to the punter than underdogs.

An example might be illuminating.

Imagine that a particular bookmaker has priced Team A at \$1.10 and Team B at \$6.00. This market has an overround of 1/1.1 + 1/6 = 107.6%, which implies that the bookmaker is guaranteed a sure return of 1 - 1/0verround = 7.04% if these prices produce a balanced book, that is, if the proportion of total wagers on Team A is 6/(1.1 + 6) = 84%%, and that on Team B 15%%.

Now, if the bookmaker has spread the overround evenly across the two teams, then the true fair prices are $1.10 \times 107.6\% = 1.18$, and $6 \times 107.6\% = 6.45$, and the corresponding implied probabilities of victory are 1/1.18 = 84% and 1/6.45 = 15% (which are proportions that should look familiar).

What the Favourite-Longshot bias suggests is that favourites like Team A will, over the long term, win more often than 84½% of the time and that underdogs like Team B will win less often than 15½% of the time.

One way to explain this is to assume that bookmakers build less of a profit margin into the price of favourites than they do into the price of underdogs. To take the extreme case, assume that, in our example above, the bookie actually thinks that \$1.10 is the fair price for Team A (ie there's no overround built into the price of Team A). This would mean that he thinks Team A's probability is actually 1/1.10 = 90.9% and so, if he's correct, teams like Team A will win at a rate of 90.9%, a considerably higher rate than the 84% we calculated before. Such a result is directionally consistent with the empirical observation that favourites win more often than they should, where 'should' is based on the assumption that the favourite's price incorporates the same overround as the underdog's price.

I've used the data I have for seasons 2006 and 2007 to test whether the TAB Sportsbet bookie has exhibited a Favourite-Longshot bias over the past two seasons. In short, it appears as though it has.

Win/Loss Performance by TAB Sportsbet Starting Price (2006-2007)

						Actual Ave	Implied Profitability to
Price 💌	Loss	Win	Grand Total	% Win	Fair Price	Price	Sportsbet
\$1.30 or less	17	73	90	81.1%	\$1.23	\$1.17	5.4%
\$1.31 - \$1.53	41	80	121	66.1%	\$1.51	\$1.39	8.1%
\$1.54 - \$1.75	45	58	103	56.3%	\$1.78	\$1.63	8.4%
\$1.76 - \$2.05	55	53	108	49.1%	\$2.04	\$1.87	8.2%
\$2.06 - \$2.50	63	49	112	43.8%	\$2.29	\$2.23	2.6%
\$2.51 - \$3.30	61	34	95	35.8%	\$2.79	\$2.88	-3.2%
\$3.31 or more	83	18	101	17.8%	\$5.61	\$4.45	20.7%
Grand Total	365	365	730	50.0%	\$2.00	\$1.85	7.3%

The first and last rows of the body of this table provide the evidence.

The first row tells us that, of the 90 teams that have been offered at a price of \$1.30 or less, 73 of them, or 81.1% have won, implying a fair average price for them would have been \$1.23 (ie 1/0.811). In reality, their average price has been \$1.17, meaning that they've produced a return for Sportsbet of 5.4% (implying an overround of 105.7%).

In contrast, the last row of the table tells us that, of the 101 teams that have been offered at a price of \$3.31 or better, 18 of them, or just 17.8%, have won, implying a fair average price for them would have been \$5.61 (ie 1/0.178). Their actual average price has been \$4.45, so they've produced a whopping 20.7% return for Sportsbet (and implying an overround of 126.1%).

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It appears then that the Sportsbet bookie does indeed shortchange underdog bettors. Consistent with a number of the other studies, however, such shortchanging applies only to the mutliest of underdogs.

Consider, for example, the second last row in the table. It records the fact that underdogs priced between \$2.51 and \$3.30 have won 34 of 95 encounters, or about 36%, making the fair price for them \$2.79. This is \$0.09 less than their actual average price, meaning that the Sportsbet bookie has wound up losing money on these teams, albeit not much money.

Just one row further up the table we find the teams priced at between \$2.06 and \$2.50, a price range which, I confess, can barely be considered longshotish. Anyway, for these teams, the average offered price was just \$0.06 short of breakeven, meaning that Sportsbet has earned a narrow profit on these wagers. The return, at 2.6%, is nothing like the 20.7% earned on the longest longshots.

Whilst the evidence is consistent with a Favourite-Longshot bias, more data is required before we can declare this definitively (boy would I like a dollar for every time I've concluded this in my recommendations for a client). It would have taken, for example, only two more losses at the average price amongst the teams priced at \$1.30 or less to kick the bookie's profitability on these teams up to 7.7%. Conversely, just three more wins at the average price amongst the teams priced at \$3.31 and above would have lowered the bookie's profit on these teams to 7.5%.

So, if there is a Favourite-Longshot bias, what does it mean for MAFL?

In practical terms all it means is that a strategy of wagering on each and every genuine longshot would be thunderously unprofitable. That's not to say that there isn't ever value amongst underdogs, just that there isn't consistent, dependable value. The statistics underpinning MAFL aim to detect and exploit this value – to sort the pooch from the pedigree.

I'm not claiming for one second, though, that we haven't managed to back the occasional fleabag over the history of MAFL. Some of them, unquestionably, have fallen about scratching furiously as early as the middle of the first term.

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In the next newsletter I'll be describing how I've created a team rating system using the same principles that are used to rate chess players.

Meantime, here's something to ponder.

Our legal system incorporates the notion of a 'burden of proof', for which there are two standards: "on the balance of probabilities" and "beyond reasonable doubt". The first of these applies to less serious, civil cases and the second to more serious, criminal cases. If you were asked to assign odds or probabilities to these two standards, what numbers would you assign?

Imagine, for example, that you were on the jury for a murder trial and that, given the evidence, you felt 90% certain that the defendant was guilty. Would you convict?

As far as I can ascertain, the law neither mandates nor even so much as suggests particular values for these probabilities. So, appealing to the obvious authority for the answer isn't going to get us anywhere.

What then of empirical data? Well, based on my web-based research, most people attach a probability of just over 50% to the "balance of probabilities" standard, with only a few people varying markedly from this value. In contrast, the notion of "beyond reasonable doubt" is far more contentious. I came across numbers as low as 70% and as high as 99%. That's an awfully large range for such a fundamentally important notion.

Considered somewhat simplistically this would suggest that some people – the 70 percenters – would 'convict' me of cheating based on their interpretation of the "beyond a reasonable doubt" standard if I rolled a fortuitous 6 with a die on one occasion, whereas others would requires me to do it thrice in succession before they'd convict. Prosecutors, I guess, are looking for the single-roll convictors; defenders the three-strike adherents.

'til next time,

Tony

24 March 2008

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