

FOOTBALL INVESTOR

COMBO SYSTEM

Season Review

2017-18

May 2018

Welcome to the 2017/18 end of season review for the Combo System. The Combo system isn't really a system at all in the strictest sense of the word as the selection criteria is based on the two UK systems that I have (Football Investor and Strike Zone). The Combo selections are those selections that are common to both systems.

Football Investor and Strike Zone use the same five algorithms but in different ways so it made sense to see if the common selections showed greater profitability than the individual systems and that has proven to be the case since 2012 when the system was introduced.

Season	Bets	Won	Win %	Profit / Loss	ROI %
2012-13	191	84	44.0%	63.34	33.2%
2013-14	231	91	39.4%	29.47	12.8%
2014-15	116	45	38.8%	10.38	8.9%
2015-16	214	80	37.4%	20.51	9.6%
2016-17	150	63	42.0%	25.63	17.1%
2017-18	207	67	32.4%	-3.81	-1.8%
Grand Total	1,109	430	38.8%	145.52	13.1%

The above table shows the results for the six seasons the system has been live. It should be noted that these are the results for the current selection criteria. Including the omitted data would only serve to cloud the analysis. The complete system history can be downloaded from the web site.

Unfortunately, the 2017/18 season is the first season that the system has failed to return a profit. At first glance, it would appear that the lowest win % is to blame but I wanted to delve a little deeper into the underlying data and system metrics to try to understand the reasons for the recent poor performance. But first, here are the results for the home and away bets :-

Season	Bets	Won	Win %	Profit / Loss	ROI %
2012-13	47	26	55.3%	10.50	22.3%
2013-14	63	35	55.6%	14.31	22.7%
2014-15	44	22	50.0%	6.54	14.9%
2015-16	56	20	35.7%	-11.90	-21.3%
2016-17	46	28	60.9%	12.39	26.9%
2017-18	60	20	33.3%	-16.78	-28.0%
Grand Total	316	151	47.8%	15.06	4.8%

It's fair to say that the performance of the home bets isn't the strongest area of the system although a long term return of 4.8% isn't exactly peanuts either.

Season	Bets	Won	Win %	Profit / Loss	ROI %
2012-13	144	58	40.3%	52.84	36.7%
2013-14	168	56	33.3%	15.16	9.0%
2014-15	72	23	31.9%	3.84	5.3%
2015-16	158	60	38.0%	32.41	20.5%
2016-17	104	35	33.7%	13.24	12.7%
2017-18	147	47	32.0%	12.97	8.8%
Grand Total	793	279	35.2%	130.46	16.5%

The away bets have been much more consistent with the 2017/18 performance being much more in line with the long term average.

Division	Bets	Won	Win %	Profit / Loss	ROI %
Premier League	141	73	51.8%	26.91	19.1%
Championship	242	104	43.0%	28.22	11.7%
League One	228	78	34.2%	30.32	13.3%
League Two	393	142	36.1%	42.85	10.9%
Scots Prem	105	33	31.4%	17.22	16.4%
Grand Total	1,109	430	38.8%	145.52	13.1%

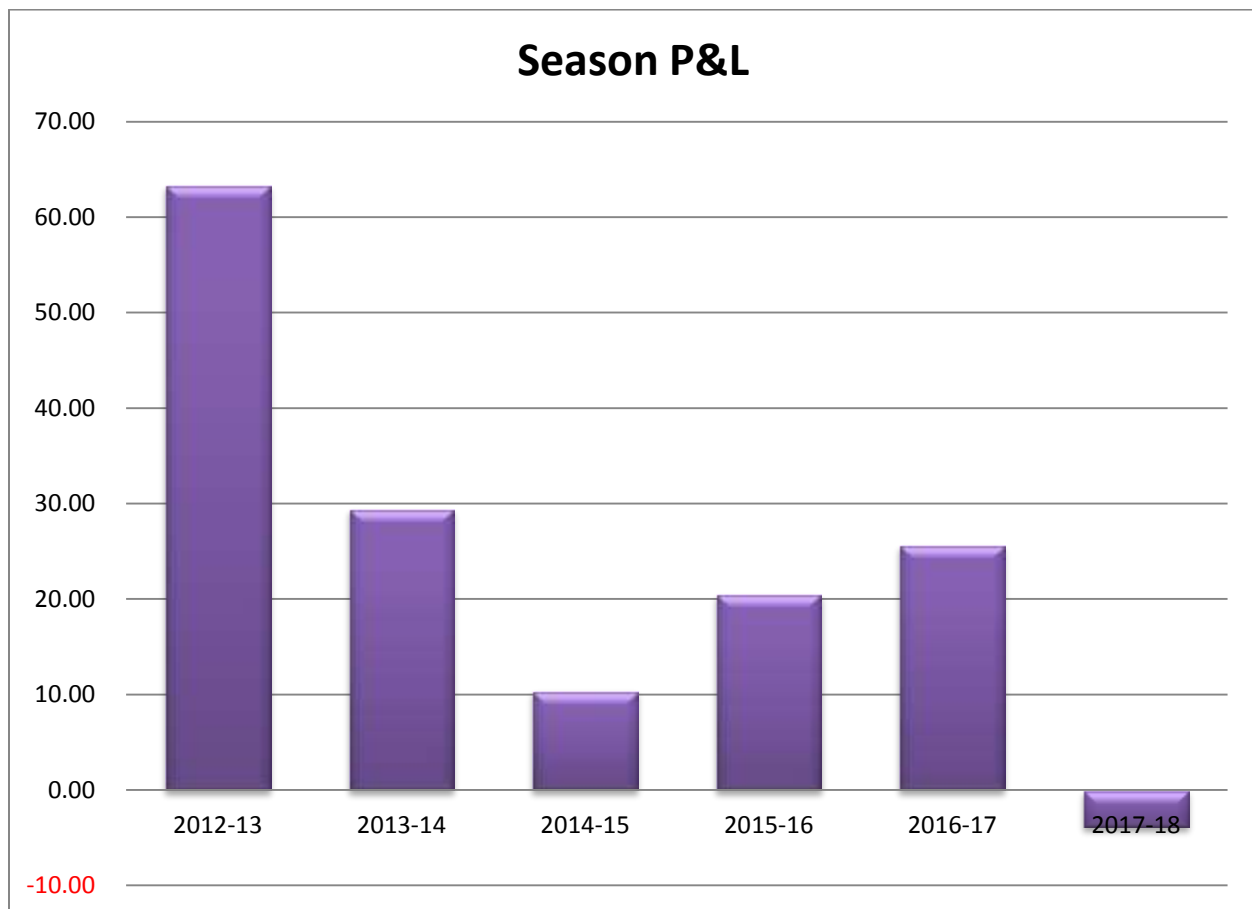
The above table shows the performance by division. It's interesting to note that the two highest performing leagues are the top tier leagues in England and Scotland with the remaining Football League divisions showing similar ROI figures.

Division	Bets	Won	Win %	Profit / Loss	ROI %
Premier League	127	68	53.5%	20.12	15.8%
Championship	156	69	44.2%	-2.34	-1.5%
League One	12	7	58.3%	3.02	25.2%
League Two	21	7	33.3%	-5.74	-27.3%
Grand Total	316	151	47.8%	15.06	4.8%

The performance of the home bets by division is a little patchier with the Premier League contributing the majority of the profits.

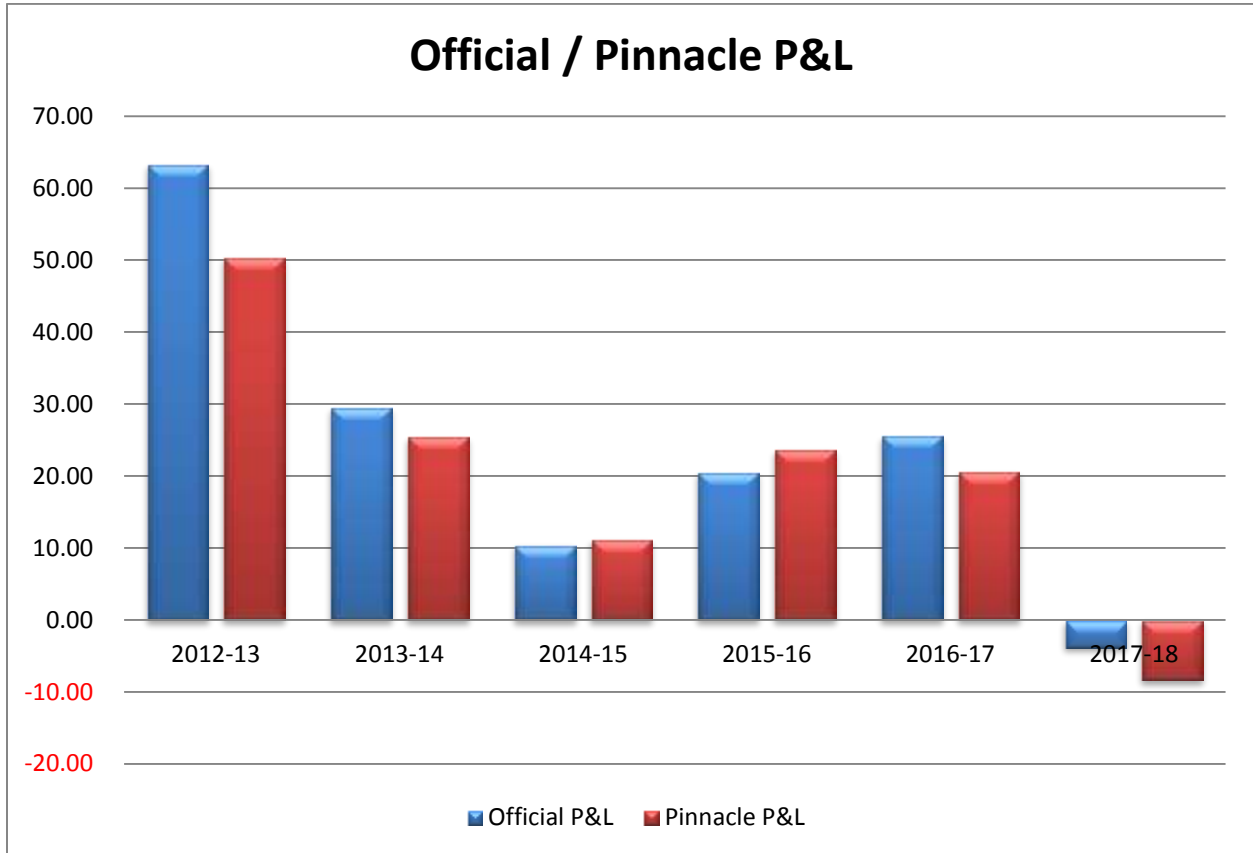
Division	Bets	Won	Win %	Profit / Loss	ROI %
Premier League	14	5	35.7%	6.79	48.5%
Championship	86	35	40.7%	30.56	35.5%
League One	216	71	32.9%	27.30	12.6%
League Two	372	135	36.3%	48.59	13.1%
Scots Prem	105	33	31.4%	17.22	16.4%
Grand Total	793	279	35.2%	130.46	16.5%

The away performance is consistently strong across the board for away bets. The sub-set for Premier League bets is small because I only started advising these for the 2017/18 season as a result of the changes I made to the Strike Zone system. Only 14 bets so far but the return is rather encouraging.



Here's a recap of the system performance since it went live in 2012/13. The stand out season was the first season in 2012/13 although it should be noted that the results are somewhat inflated by the odds policy in place at the time (UK soft books were often used). The following season I switched to quoting more prices from Pinnacle Sports and 2014/15 was exclusively Pinnacle. This resulted in too few

selections so from 2015/16 onwards, I settled on a mix of Pinnacle, SBO and Matchbook which I think gives a better balance overall.



The above chart illustrates the point regarding the inflated prices in 2012/13 but the Pinnacle profit is still very good. The overriding message is that the system has consistently delivered profits at Pinnacle closing price with only a relatively minor reduction from the official performance.

So far, I have outlined the long term performance of the system but the main purpose of this review is to analyse the 2017/18 results to see what went wrong (if anything) and to pin point potential weakness in the current approach. To begin, I will look at the wider picture : the betting environment in which we operate.

Season	Sum of HW%	Sum of D%	Sum of AW%
2012-13	42.0%	27.6%	30.5%
2013-14	42.4%	26.5%	31.1%
2014-15	42.8%	25.6%	31.6%
2015-16	41.0%	26.9%	32.0%
2016-17	44.7%	25.1%	30.2%
2017-18	43.4%	26.3%	30.3%
Grand Total	42.7%	26.3%	31.0%

This table shows the % win rates for each result for every game played since the Combo system was introduced. A cursory glance shows that the splits have been very consistent across the board. When drilling down into the data, the only point of note is that the away win% was significantly reduced in League Two this season :

Div	Season	Sum of HW%	Sum of D%	Sum of AW%
E3	2012-13	41.1%	27.1%	31.8%
	2013-14	37.5%	31.3%	31.2%
	2014-15	44.2%	25.2%	30.6%
	2015-16	38.9%	25.5%	35.5%
	2016-17	40.0%	25.9%	34.1%
	2017-18	44.4%	25.9%	29.7%
E3 Total		41.0%	26.8%	32.1%

I recently read about this subject on Cassini's Green All Over blog and his view was that the combination of Joseph Buchdahl publishing historical Pinnacle closing odds and his blog highlighting the blind betting returns in the division had completely wiped out any market inefficiency that may have existed. My view is that the downturn is simply variance at play with the away win % clearly having an impact on returns.

Season	Sum of Count	Sum of Home P&L	Sum of Draw P&L	Sum of Away P&L
2012-13	2,262	-100.30	5.19	58.76
2013-14	2,264	-114.64	-73.41	-51.77
2014-15	2,263	-51.04	-142.92	25.22
2015-16	2,264	-148.60	-13.19	37.97
2016-17	2,264	30.16	-167.92	-191.34
2017-18	2,264	-4.52	-33.84	-181.71
Grand Total	13,581	-388.94	-426.09	-302.87

The above table shows the result of blindly backing all results to Pinnacle closing price. We know that the Pinnacle closing price is very efficient as studies have shown that the long term returns for each possible result are close to their overall profit margin of around 2.5%. Of course what we don't know is how they apply their margin over the three possible outcomes for any given match but the overall message from this data is that backing away sides has not been a friendly place to be in the past two seasons. Conversely, backing the home sides has been very punter friendly. This is not what we want to

see as followers of the Combo system as the system is weighted heavily in the favour of backing the away sides as this is where there is the most value.

Season	Sum of Count	Sum of Home P&L	Sum of Draw P&L	Sum of Away P&L
2012-13	1,664	-115.88	-0.14	98.83
2013-14	1,609	-37.72	-45.15	-93.24
2014-15	1,582	-66.70	-77.89	35.72
2015-16	1,605	-105.81	0.61	21.67
2016-17	1,559	26.99	-80.09	-190.67
2017-18	1,583	-16.51	59.02	-199.01
Grand Total	9,602	-315.63	-143.64	-326.70

As the Combo system predominantly selects underdogs in the away markets, I decided to see if the position was any better in this sub-set. I defined an underdog to be priced at 2.75 or higher. The table above shows that these bets are performing just as badly as the main dataset which is even worse news for the system.

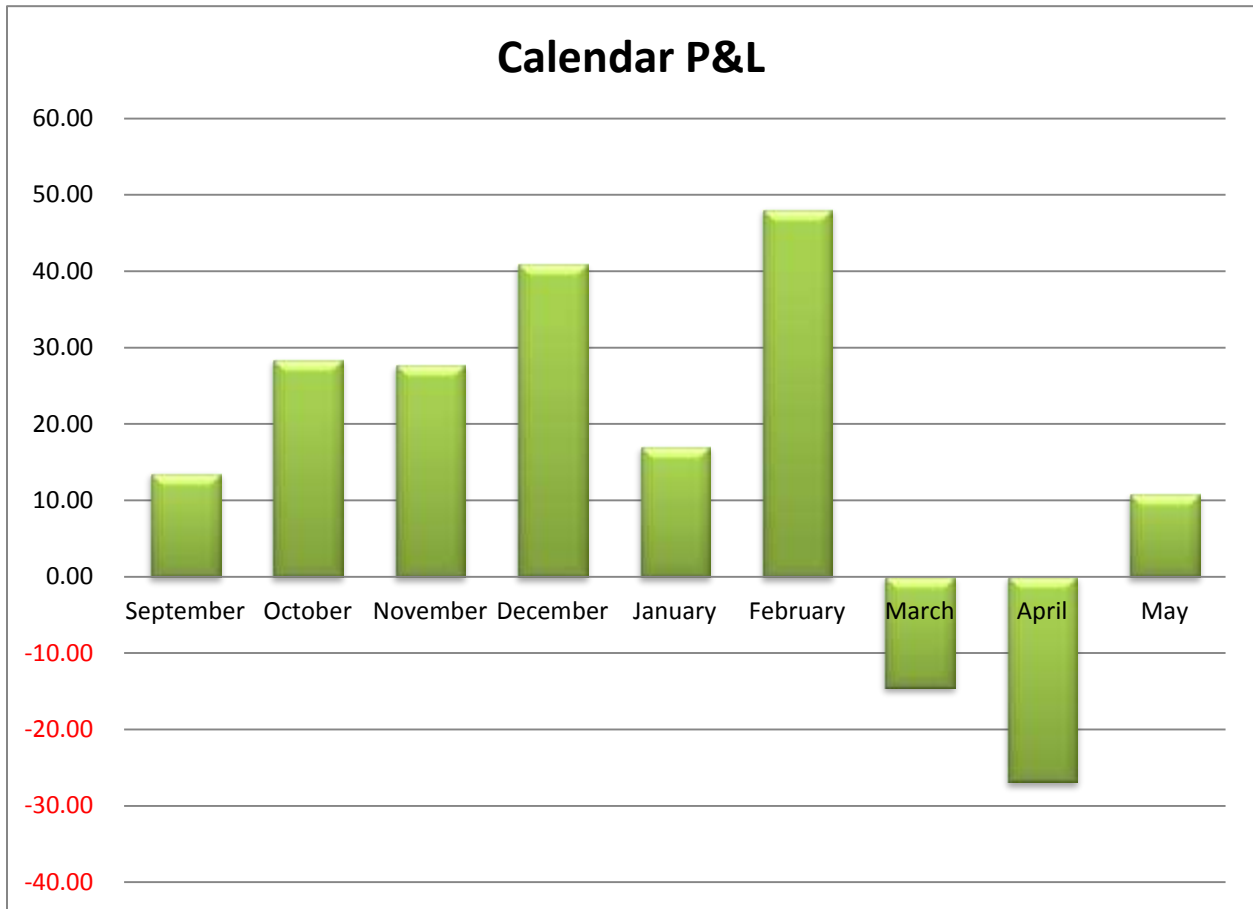
Season	Sum of HW%	Sum of D%	Sum of AW%
2012-13	46.3%	27.3%	26.4%
2013-14	49.8%	26.3%	23.9%
2014-15	48.8%	25.7%	25.5%
2015-16	47.1%	26.9%	26.0%
2016-17	52.2%	25.5%	22.3%
2017-18	50.2%	27.4%	22.4%
Grand Total	49.1%	26.5%	24.4%

Here are the win rates for away odds over 2.75. They have declined significantly in the past two seasons.

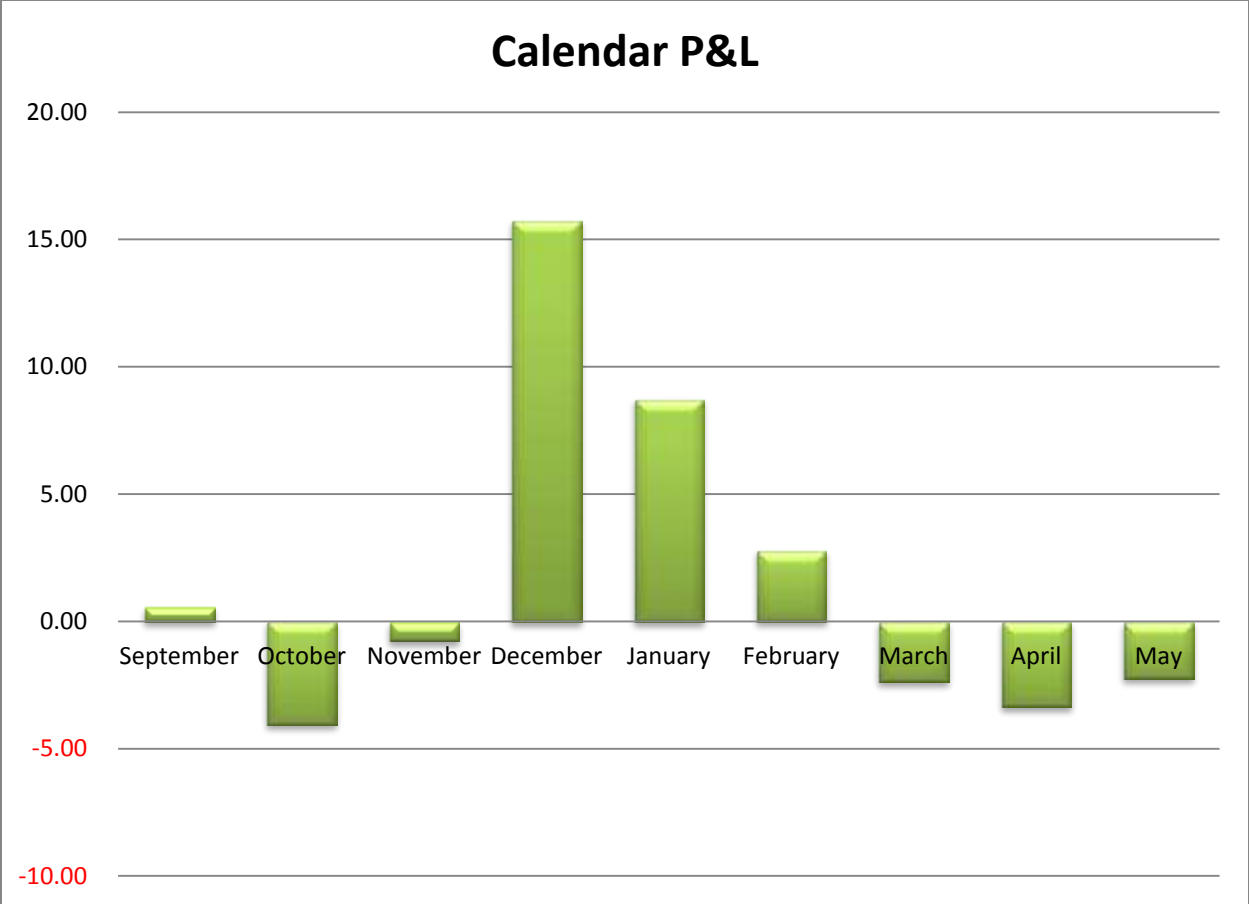
Season	Sum of HW%	Sum of D%	Sum of AW%
2012-13	45.2%	24.9%	29.9%
2013-14	40.5%	31.5%	28.0%
2014-15	49.4%	25.1%	25.5%
2015-16	47.5%	23.1%	29.4%
2016-17	46.0%	24.9%	29.0%
2017-18	50.3%	26.4%	23.3%
Grand Total	46.4%	26.1%	27.5%

Again, League Two has seen the most dramatic decline.

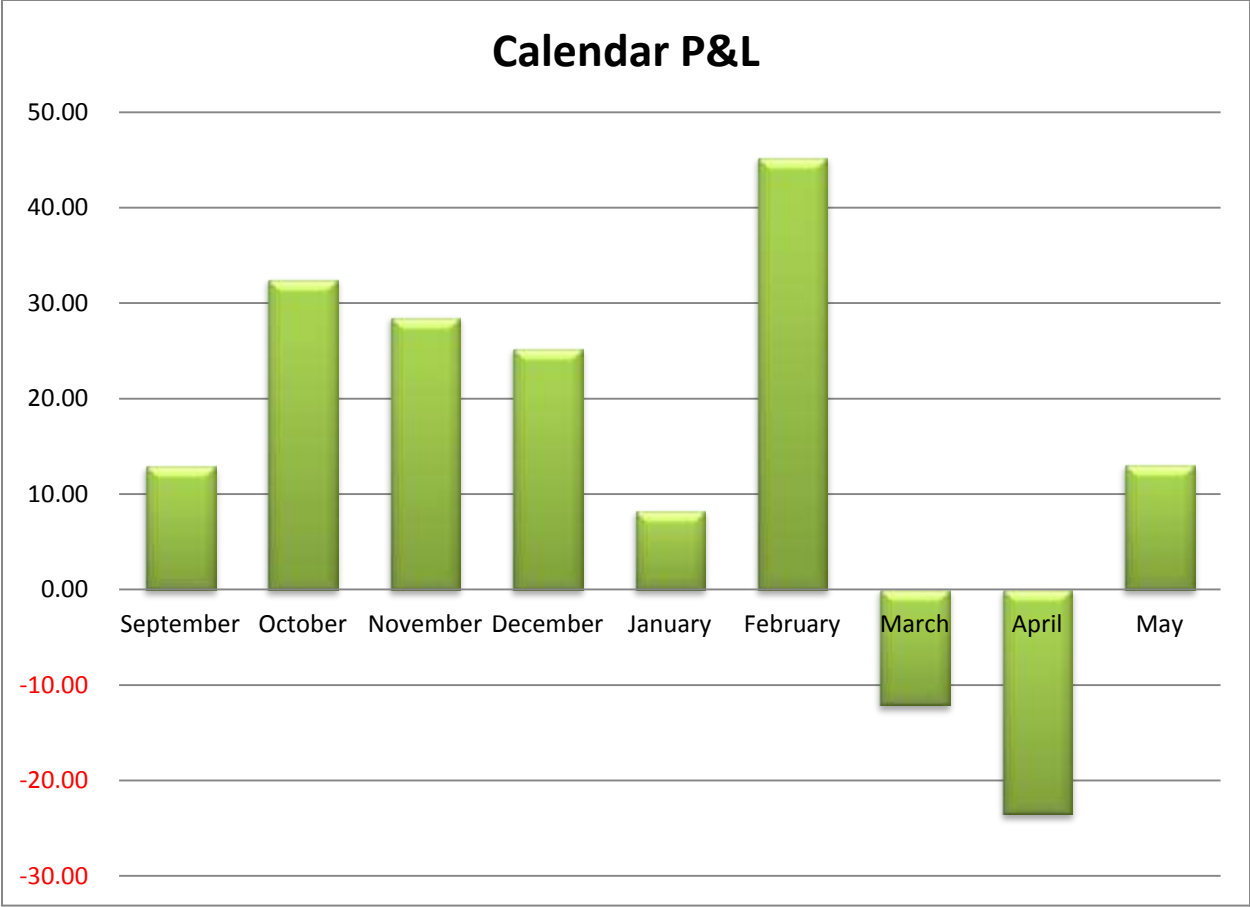
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I decided to begin my analysis by examining the performance for each calendar month. Historically, the system has performed very well until the month of March when it dips considerably before recovering in May.

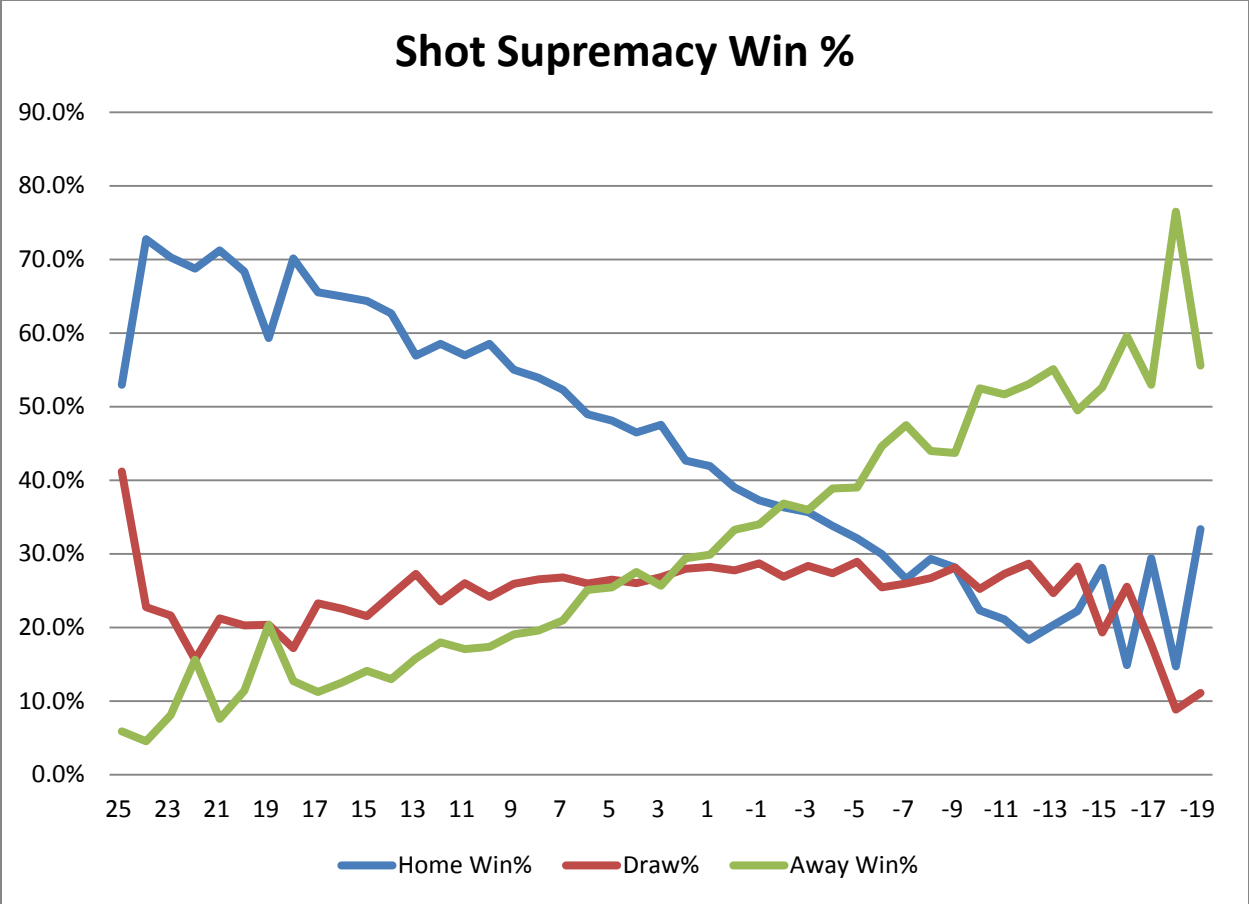


The home bets have got off to a slow start before recovering well in the middle of the season and dropping off again in March.



The performance chart for the away bets looks similar to the overall position which is as you would expect with the away bets comprising the majority of total selections.

The obvious question to ask is why does the system not perform very well from March to the end of the season?



I decided to start by looking at the shot supremacy statistics but before I do that, I thought it would be a good idea to demonstrate the relationship between shot supremacy and win rates. The above shows the win % on the y axis and the relative shot supremacies on the x axis for all matches played from the 2000-01 season onwards. Positive shot supremacy indicates home dominance and a negative shot supremacy indicates away dominance. The chart confirms what you would intuitively expect to see: teams that dominate in terms of shot supremacy win more matches. Note that the pesky draw is fairly uniform across all shot supremacies. The guy who invented the Pools must have obviously cottoned on to this fact!

So in order to be a successful bettor on football, you need to be finding the teams that are going to create the most chances. Of course, this is only half the battle as you also need to find value prices as anyone can find winners.

Split	Month	Sum of Count	Sum of Won	Sum of Service Profit	Average of HS	Average of AS	Average of SS
Sept-Feb	September	52	24	13.56	11.06	10.54	0.52
	October	188	71	28.47	11.70	10.91	0.78
	November	148	56	27.79	11.68	11.09	0.58
	December	172	75	41.03	12.22	10.16	2.05
	January	127	51	17.01	12.14	9.87	2.27
	February	130	58	48.12	12.01	9.72	2.28
Sept-Feb Total		817	335	175.98	11.88	10.41	1.47
March-May	March	123	40	-14.48	12.04	10.07	1.98
	April	127	39	-26.84	12.93	10.26	2.67
	May	42	16	10.86	12.26	10.31	1.95
March-May Total		292	95	-30.46	12.46	10.18	2.27
Grand Total		1,109	430	145.52	12.03	10.35	1.68

I decided to break the season up into two distinct periods, September to February and March to May to see if the poor performance could be explained in terms of shot supremacy. The data clearly shows that home teams become more dominant towards the second half of the season although this doesn't explain why January and February continue to be profitable months whereas March and April show losses.

Split	Month	Sum of Count	Sum of Won	Sum of Service Profit	Average of HS	Average of AS	Average of SS
Sept-Feb	September	16	8	0.58	11.81	10.06	1.75
	October	41	16	-4.07	14.95	11.32	3.63
	November	29	12	-0.78	15.07	11.72	3.34
	December	52	31	15.77	13.83	10.25	3.58
	January	35	20	8.74	15.54	10.03	5.51
	February	37	18	2.80	14.81	10.73	4.08
Sept-Feb Total		210	105	23.04	14.52	10.70	3.83
March-May	March	41	18	-2.38	14.34	11.29	3.05
	April	49	22	-3.35	15.49	9.88	5.61
	May	16	6	-2.25	14.69	11.25	3.44
March-May Total		106	46	-7.98	14.92	10.63	4.29
Grand Total		316	151	15.06	14.66	10.67	3.98

The above table shows the performance split for the home bets. There's no clues here as if anything, the home teams are slightly more dominant but aren't converting this into profits.

Split	Month	Sum of Count	Sum of Won	Sum of Service Profit	Average of HS	Average of AS	Average of SS
Sept-Feb	September	36	16	12.98	10.72	10.75	-0.03
	October	147	55	32.54	10.79	10.80	-0.01
	November	119	44	28.57	10.85	10.94	-0.09
	December	120	44	25.26	11.52	10.13	1.39
	January	92	31	8.27	10.85	9.82	1.03
	February	93	40	45.32	10.89	9.32	1.57
Sept-Feb Total		607	230	152.94	10.97	10.32	0.65
March-May	March	82	22	-12.10	10.89	9.45	1.44
	April	78	17	-23.49	11.32	10.50	0.82
	May	26	10	13.11	10.77	9.73	1.04
March-May Total		186	49	-22.48	11.05	9.93	1.12
Grand Total		793	279	130.46	10.99	10.23	0.76

This table does show that for away bets, the home teams are slightly more dominant from March onwards by 0.5 shots which isn't a great deal to be honest. It's interesting to see that the away sides actually have a small advantage from September to November.

None of this analysis is particularly conclusive.

Next I decided to look at goal supremacy statistics.

Split	Sum of Count	Sum of Won	Sum of Service Profit	Average of HGL	Average of AGL	Average of GLS
Sept-Feb	817	335	175.98	1.35	1.20	0.15
March-May	292	95	-30.46	1.42	1.08	0.34
Grand Total	1,109	430	145.52	1.37	1.17	0.20

The standout statistic here is that the home teams are scoring more goals per game and the away teams fewer goals per game in March-May with an overall goal differential of 0.20 in favour of the home teams.

Split	Sum of Count	Sum of Won	Sum of Service Profit	Average of HGL	Average of AGL	Average of GLS
Sept-Feb	210	105	23.04	1.45	1.02	0.43
March-May	106	46	-7.98	1.51	1.15	0.36
Grand Total	316	151	15.06	1.47	1.06	0.41

There's not a great deal of difference with the home bets although the away sides are scoring slightly more goals per game after the split.

Split	Sum of Count	Sum of Won	Sum of Service Profit	Average of HGL	Average of AGL	Average of GLS
Sept-Feb	607	230	152.94	1.31	1.26	0.05
March-May	186	49	-22.48	1.38	1.04	0.33
Grand Total	793	279	130.46	1.33	1.21	0.12

The away bets show a definite decline in performance from the away teams scoring less goals per game and conceding more which isn't a healthy combination.

I then decided to combine the previous two metrics and focus on the shots per goal statistic.

Split	Sum of Count	Sum of Won	Sum of Service Profit	Sum of HS GL	Sum of AS GL
Sept-Feb	817	335	175.98	8.82	8.68
March-May	292	95	-30.46	8.75	9.41
Grand Total	1,109	430	145.52	8.80	8.86

The above table shows that from the split, the home sides require slightly fewer shots to score a goal whereas the away sides need significantly more shots.

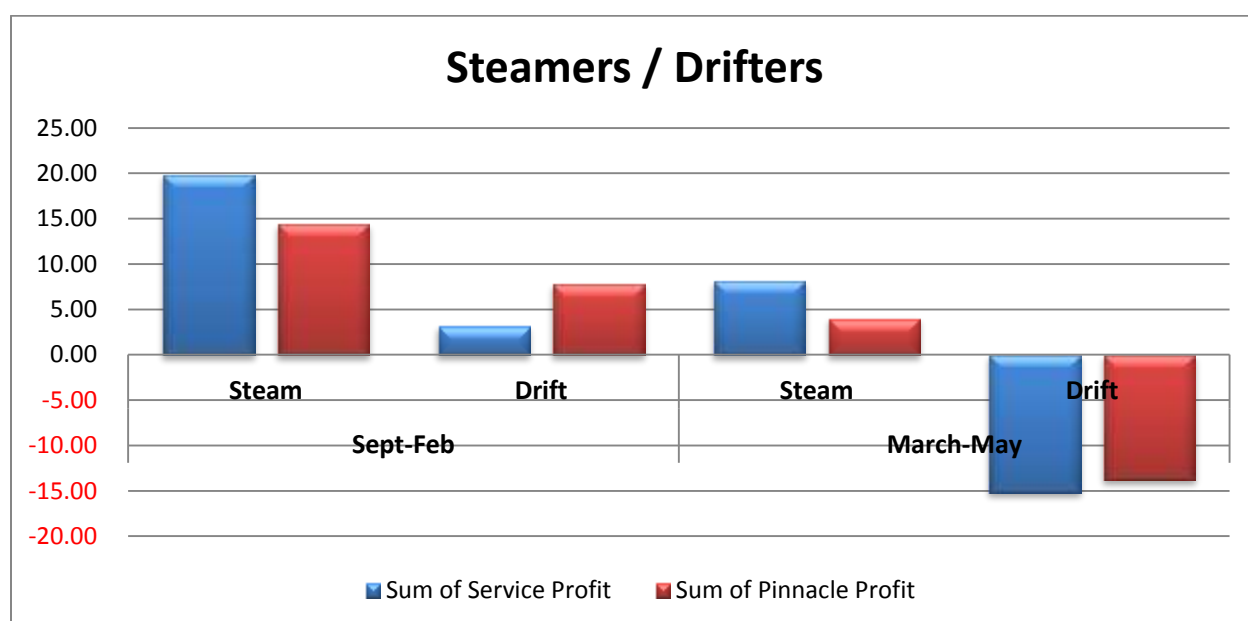
Split	Sum of Count	Sum of Won	Sum of Service Profit	Sum of HS GL	Sum of AS GL
Sept-Feb	210	105	23.04	10.03	10.50
March-May	106	46	-7.98	9.89	9.24
Grand Total	316	151	15.06	9.98	10.04

For the home bets, there is a small reduction of shots required by the home teams but the away sides are more efficient to the tune of 0.74 shots per goal which is not a good metric for the system.

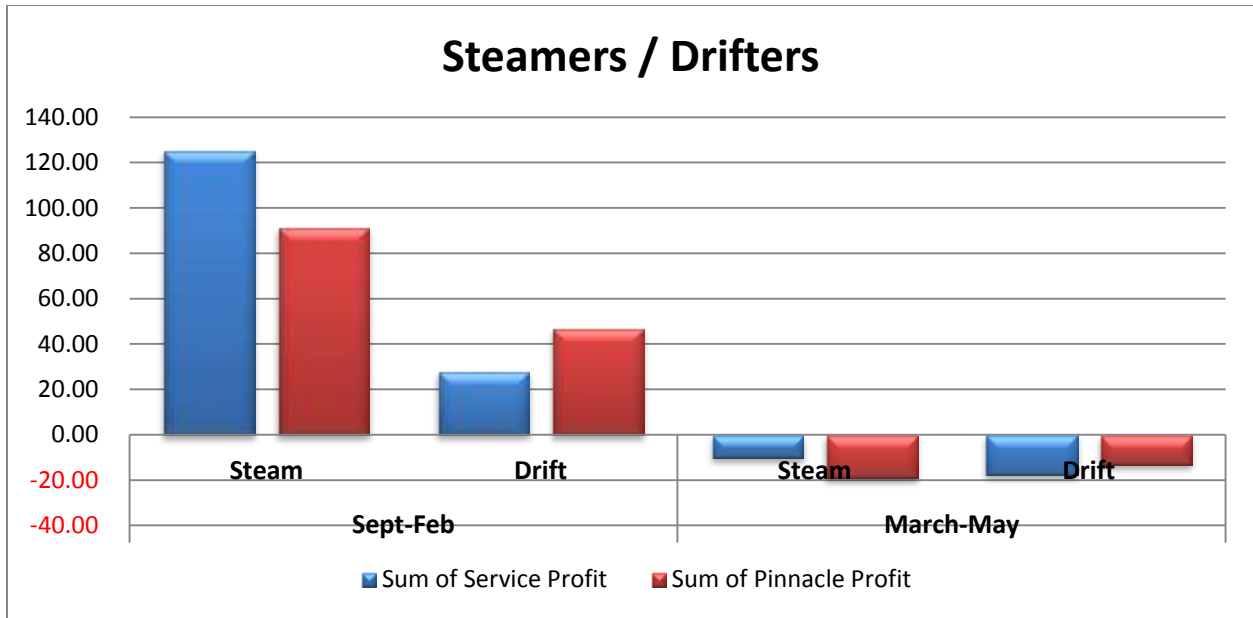
Split	Sum of Count	Sum of Won	Sum of Service Profit	Sum of HS GL	Sum of AS GL
Sept-Feb	607	230	152.94	8.35	8.17
March-May	186	49	-22.48	8.03	9.52
Grand Total	793	279	130.46	8.27	8.45

Of all the analysis I have done so far, I think this one gives the most clues as to what is going on. For the away bets, the home teams are requiring 0.32 shots per goal less to score a goal whereas the away sides are requiring 1.35 more. This is a significant swing by anyone's standards. Why this should be so I've no idea as it isn't replicated across the board in the larger dataset of all matches played.

In the final part of this analysis, I want to focus on the subject of odds.



The above chart shows the returns for Steamers and Drifters before and after the split. Steamers are defined as those bets where the Pinnacle closing price is lower than the advised odds. Drifters are where the closing price is higher. The home bets have shown steamer profits before and after the split but the drifters have only returned a profit before the split.



The away bets have returned profits for both steamers and drifters before the split but only losses for both after the split.

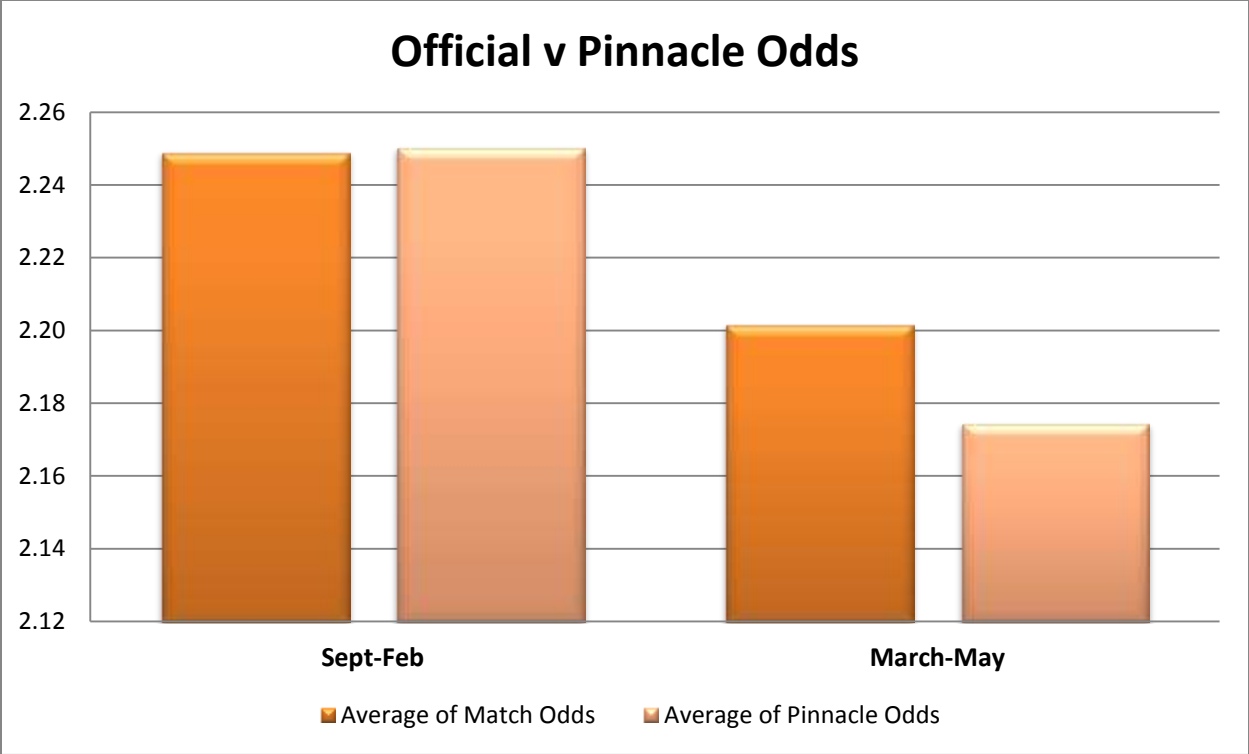
Here's the same data in table format :

Home bets

Split	Odds Move	Sum of Service Profit	Sum of Pinnacle Profit
Sept-Feb	Steam	19.84	14.47
	Drift	3.19	7.83
Sept-Feb Total		23.03	22.30
March-May	Steam	8.19	4.03
	Drift	-15.17	-13.80
March-May Total		-6.98	-9.77
Grand Total		16.05	12.53

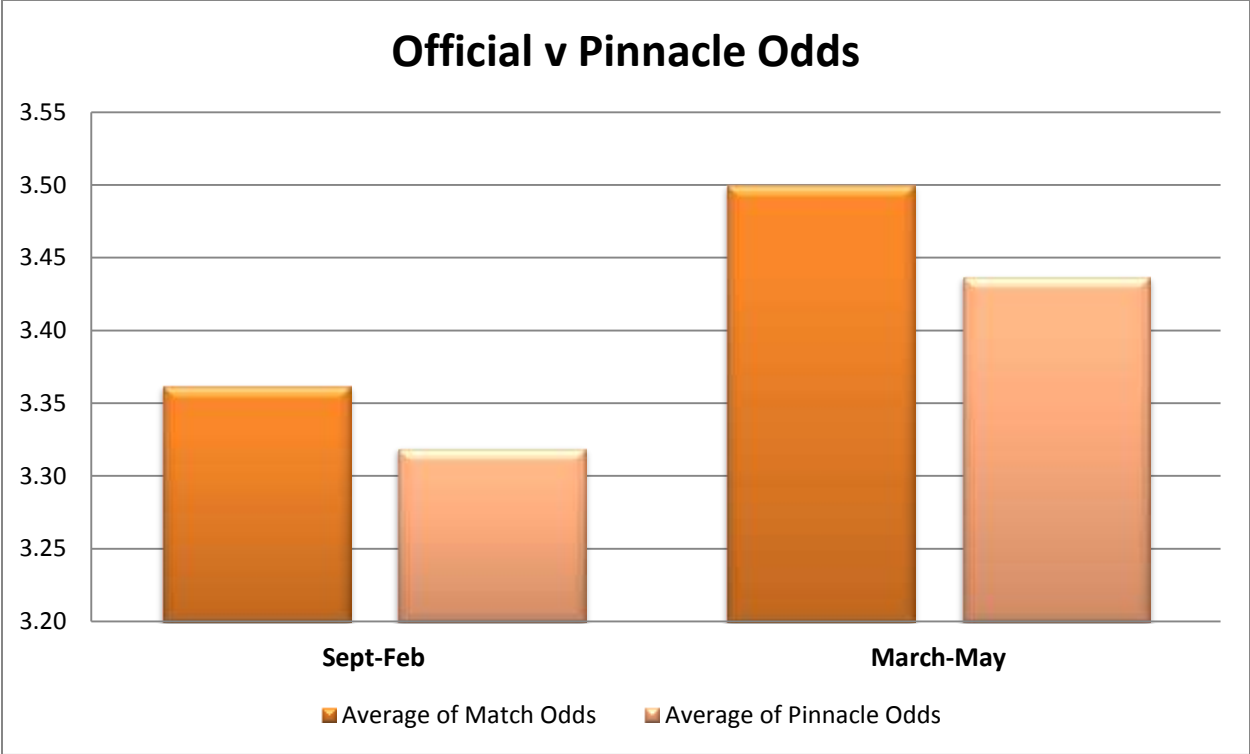
Away bets

Split	Odds Move	Sum of Service Profit	Sum of Pinnacle Profit
Sept-Feb	Steam	125.20	91.33
	Drift	27.99	46.91
Sept-Feb Total		153.19	138.24
March-May	Steam	-10.18	-18.81
	Drift	-17.61	-13.03
March-May Total		-27.79	-31.84
Grand Total		125.40	106.40



The odds for the home bets don't move much until after the split where we have been betting at lower odds than before the split.

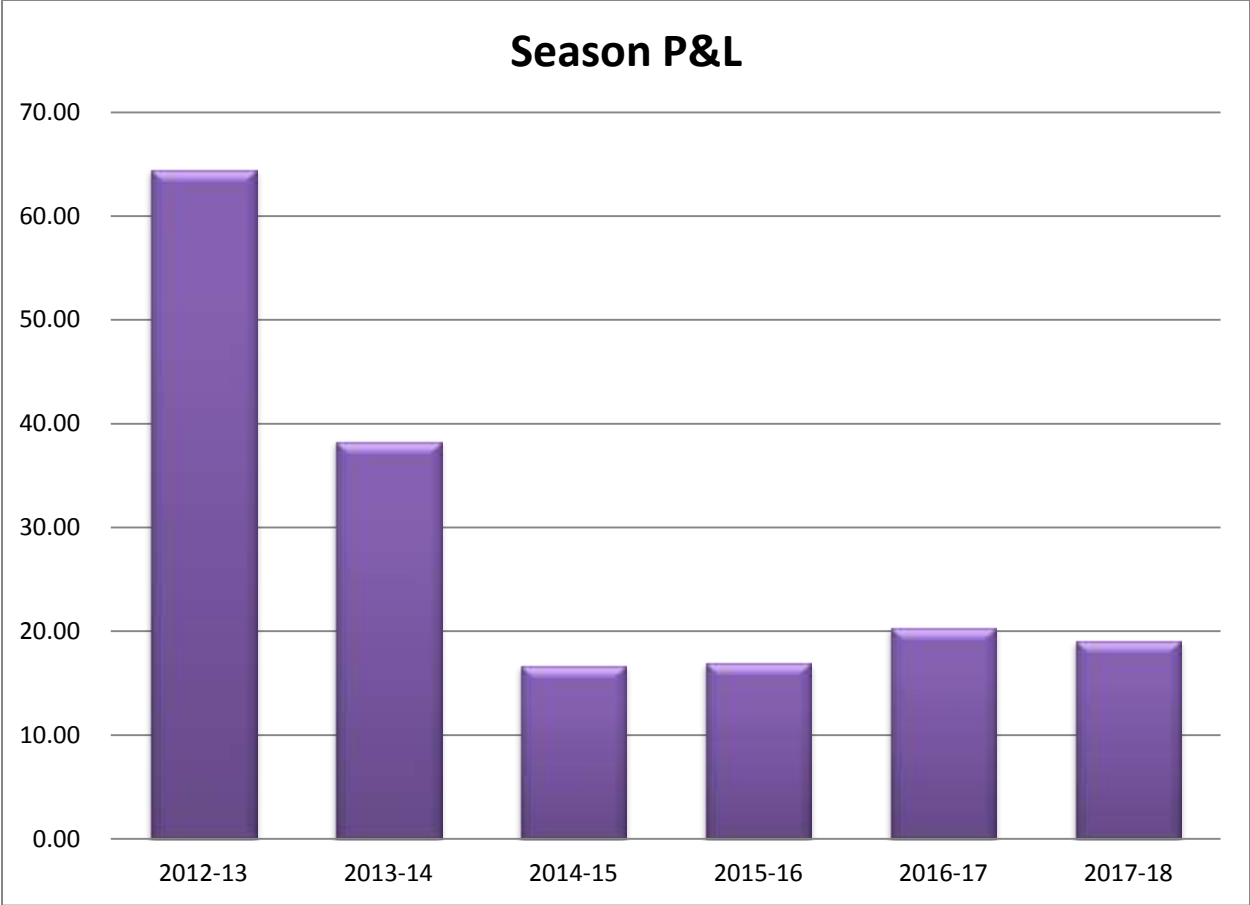
Split	Average of Match Odds	Average of Pinnacle Odds	Sum of Odds%
Sept-Feb	2.25	2.25	99.9%
March-May	2.20	2.17	101.2%
Grand Total	2.23	2.22	100.4%



The opposite is true for the away bets as we have been betting at higher odds after the split.

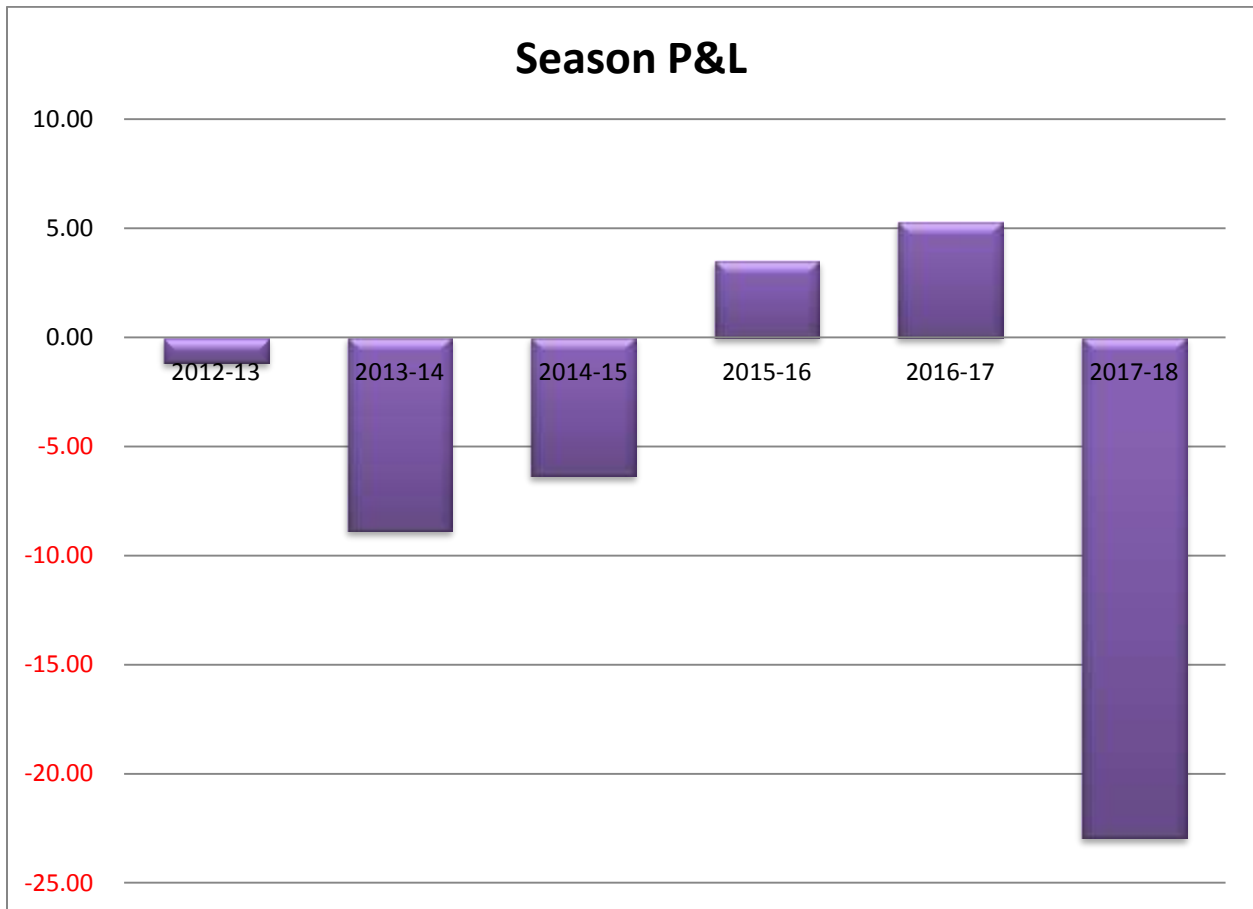
Split	Average of Match Odds	Average of Pinnacle Odds	Sum of Odds%
Sept-Feb	3.36	3.32	101.3%
March-May	3.50	3.44	101.8%
Grand Total	3.39	3.35	101.4%

The final piece of information I'd like to show you is the returns chart for the months of September to February :-



A consistent profit of 16-20 points for the past four seasons with a couple of bumper seasons at the start.

Contrast this with the March to May performance :-



Modest profits in 2015/16 and 2016/17 but losses in the other four years with 2017/18 being especially terrible. Maybe I should have seen this coming but the evidence from the previous five seasons didn't prompt me to dig deeper and so I must take the blame for that. They say in team sports, a manager will always find out more about his side when things are going badly and I think it's true to say the same could be said for sports betting.

In order for the system to be successful, the algorithms rely on teams performing to a degree of consistency which perhaps isn't there in the latter part of the season. There are definitely additional variables in the mix towards the end of the season e.g. injuries, suspensions, squad rotation, promotion and relegation battles, motivation, transfer windows, change of management etc. Most of these will affect all the leagues to some degree or another but not necessarily in the same way. I can only look at the data and speculate whether any of these issues are affecting performance but the numbers are definitely telling me that the system isn't performing from March onwards.

Maybe all of this is just random variance and I'm seeing things that aren't there but I believe I have made a strong case for ending the Combo season at the end of February but I'd like to hear your thoughts and opinions and any ideas for further analysis.

Thanks for reading.

Stewboss