# Betting on the Future:

## Online gambling goes mainstream financial

Michael Mainelli &
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By Michael Mainelli & Sam Dibb

## Preface

When I was young, Northern and working-class, I was very po-faced about gambling. It was, I thought, a regressive tax on the poor and stupid – an attempt by Them to keep Us in our place. So, unlike many of my peers, I never crept off to the bookies – let alone to the dogs or the horses. And I felt pretty smug about it. Now, I am old, soft and resolutely middle-class – and I wonder if I was right to be so dismissive. After all, where better to learn about risk/return trade-offs, or about basic probability theory? Where better to learn the mental maths that (it is said) our schools no longer teach, but which we all need if we are to make any sense of pension rights, annuities, endowments, APRs etc.?

Of course, some forms of gambling will always be just a brain-dead rip-off. The Lottery for instance, or the fixed-odds terminals and biased-odds games that the government is trying to foist on us through Ms. Jowell's super-casinos. But slapping a few quid on the 3:45 at Uttoxeter may not be quite as useless a way to pass one's adolescence as I had been inclined to think; it certainly seems better training for real life than Grand Theft Auto or HALO.

And then there is the internet…

It is the chief contention of this controversial paper that the eruption on to the gambling scene of online gambling exchanges – notably, in the UK, Betfair – has fundamentally changed the dynamics of betting, significantly increasing the potential return to punters at the expense of traditional bookmakers, who (in the opinion of the authors) must adapt or die.

The authors – a very successful American management consultant and a former PwC accountant who is now making a comfortable living as a semi-professional gambler – argue that the tremendous success of on-line gambling over the last few years is widely misunderstood. For them, it is an entirely healthy development, and allegations that it undermines the integrity of racing (or sport in general) are self-serving nonsense put about by those who have had their snouts firmly in the public's pockets for years. What it does do is disintermediate the middle-man and introduce real market discipline to the gambling area.

Perhaps more interestingly, the authors also argue that, as on-line betting markets develop, those markets are starting to look virtually indistinguishable from financial markets as we know them in the City. After all, what Betfair and its competitors offer is just a sophisticated, electronic order-matching system in which buy and sell

orders are broken down and matched at the best price available – with the market operator taking a modest fee for putting buyer and seller together. How is that different from what the average City broker does all day? They point out that the dealing screens used by on-line gambling firms even look like SETS terminals.

The implications of this are fascinating – particularly in terms of product development. Already, online gambling exchanges are starting to move in on areas that have been traditionally restricted to conventional insurance – sports contingency insurance, weather insurance etc. FX is already traded via hybrids that really look more like Betfair than Cazenove. This kind of convergence is bound to continue – particularly since gambling markets may actually benefit from tax advantages and from a much lighter regulatory burden.

But this paper is not just a panegyric for the Betfair model.

Our authors are also pushing their own variant – a mutually-owned on-line betting exchange (which they call YourBet) in which the commissions currently raked off by the exchange operator are rebated to the users. Every time commissions are cut, the number of gamblers who can bet profitably increases; pretty soon, our authors predict, on-line gambling is going to be just another asset class in the great investment game of life. And professional gamblers will be just as socially respectable at Islington dinner parties as bankers, or brokers, or investment managers.

Andrew Hilton
Director, CSFI

# Introduction: Where are we now?

**A growth industry . . .**

Worldwide, gambling of all forms is growing. Betting companies are not just fly-by-night operations any more. Indeed, staid financial institutions like Banco Santander are now in the fray with new products such as "lottery-linked deposit accounts"[1] – let alone venerable institutions such as long-established state and national lotteries and the UK's Premium Savings Bonds.

Technology has been driving the gambling industry. Only a few years ago, betting was restricted in time and place – restricted to state-approved lotteries, race courses, casinos or a handful of retail outlets. Today, gamblers can place bets over the internet, over mobile telephones or via interactive television. Furthermore, the range of gambling products is exploding. From a fairly restrictive set of mechanistic, biased-odds products (e.g. lotteries and most casino games) or specified sporting events, gamblers can now bet on more esoteric sports, financial markets, the weather and, through betting exchanges, anything in which they can interest other gamblers.

Unsurprisingly, innovation has been greatest where regulation is least restrictive, with the UK government apparently striving (so far, quite successfully) to make the UK a global centre for online gambling, much as it already is in the FX market.

One of the great growth areas has been spread betting, as opposed to fixed odds betting, where the risk and return profile is often almost indistinguishable from equivalent financial markets – but with greater flexibility and tax advantages. Contracts for differences, covered warrants and spread bets on shares have long been blurring the legal, regulatory and tax distinctions between investment and betting. And then betting exchanges exploded on the scene…

While market size can be difficult to judge, astonishing estimates (and projections) abound.

**. . . with astonishing prospects**

For instance, a recent article in *The Economist*[2], using figures from Global Betting and Gaming Consultants (GBGC), estimated total global gambling turnover in 2003 at US$433bn, consisting of 36.9% betting (US$160bn), 31.9% lotteries (US$138bn) and 31.2% gaming (US$135bn). An article in the *Financial Times*[3], also quoting GBGC, estimated the UK's betting shop turnover at £39.4bn. Whatever, global betting markets are enormous – equivalent to a few percentage points of GDP in some cases. But the most amazing growth has been in new online services. Combined revenues from the online and iTV gambling markets in the United States and Europe are predicted to exceed US$20 bn in 2005, according to research by Datamonitor; Juniper estimates that mobile gaming (largely on mobile or cell phones) will exceed US$16bn in 2008.

This translates into market capitalisation. StreetDice.com, a tracking service for online betting stocks, estimates that stock market capitalisation of just online betting compa-

nies worldwide is nearing US$6bn. GBGC, tracking the largest 50 specialist gambling companies in its index (the GBGC 50), notes that market capitalisation of the top 50 stocks has risen nearly 75% during the last 12 months, reaching US$76.4bn, with 17 of the component stocks now having a market capitalisation in excess of US$1bn. During the same period, the FTSE rose by 21% and the Dow by 34%.

Interestingly, perhaps 30% of the global online industry is based in the UK, with the US having a similar share, though fragmented by state. Consumer interest is high, including new magazines such as *Inside Edge*, a publication for gaming and gambling aficionados available at newsagents, as well as established publications such as *The Racing Post* and online services such as sportinglife.com. Customs and Excise reported that betting stakes for 2003 were £26bn (cf. the FT estimate above), up from £8bn in 2001. UK bookmakers are increasingly comparable with the Lloyd's insurance market (premiums for which in 2002 were £13.2bn).

## Does tax really make so much difference?

**. . . and traditionally highly profitable**

Since the early 1960s, when the UK first licensed betting offices, bookmaking in Britain has been an extraordinarily profitable business, operating at margins envied by other high volume consumer businesses – and paying remarkably little to the providers of its content (in particular the horseracing industry) or to government (as bookmakers required their customers to pay the transaction taxes imposed). In the late 1990s, this began to change, for two main reasons:

- taxation moved from a transaction to a gross profits basis, now paid by the bookmakers rather than their customers; and
- betting exchanges were established – and quickly built momentum around the dominant player in this sector, Betfair.

"Beware of what you wish for" may turn out to be an appropriate lament for UK bookmakers in connection with the changes to betting tax for which they lobbied so hard.

Indeed, change would not have come about so soon (or perhaps at all) but for the move in the late 1990s by the innovative Victor Chandler to set up an off-shore telephone and internet betting operation in the tax-advantageous regime of Gibraltar. Other, larger bookmakers then followed suit. The UK government – recognising the impracticality of forbidding UK citizens from betting with these off-shore operations, and seeing the consequent inevitability of tax revenues escaping – took a pragmatic view and reached a compromise. Thus, a 15% tax on bookmakers' gross winnings replaced the 9% transaction tax (which included an element for the levy paid to horseracing) on turnover. This compromise was agreed in exchange for bookmakers

promising to bring their operations back to the UK. Together with a fairly robust yet reasonably liberal regulatory environment, this change helped reinforce the UK as the obvious home for many established and emerging betting operations.

This period illustrates the increasing competitiveness of the UK betting industry. Initially, Victor Chandler charged an administration fee of 3% of turnover for bets placed with its off-shore operation. Punters, whose only alternative at the time was to pay 9% tax in the UK, understandably saw this as a net six percentage point saving. Within months, other bookmakers had moved to Gibraltar or similar jurisdictions and, whilst many initially imposed a similar 3% levy, some charged less. Within a short time of the first operation offering a zero levy, all were compelled to abandon their charges.

One other consequence of this turbulent time was that many punters moved from cash betting in shops to betting using debit cards over the phone and, in time, over the internet.

This would have happened in any case, but bookmakers' heavy promotion and expanded services greatly speeded the process. While most punters shifted their business initially to save tax, many then stayed with the more efficient and safer cashless transactions even when the tax treatments became identical. Many bookmakers viewed this change as beneficial. After all, the infrastructure costs for a high-street chain of shops are much higher than for a telephone-based operation, let alone an automated internet site. At the time, few thought that increased turnover with lower taxes might have negative consequence for bookmakers.

## So how could tax breaks be bad for bookmakers?

Bookmakers foresaw Nirvana: in the absence of a transaction tax, punters would lose proportionately less on each bet (typically getting a net return for each £1 gambled of 85p, as opposed to 76p when they had to pay tax), but would then churn this money more frequently so that their overall loss would be the same – but now with all of it going to the bookmakers' gross profits. In addition, the "better value" environment would (it was hoped) attract new customers, both in the UK and from abroad. The 15% tax on these gross profits would, they assumed, be compensated many times over by the forecast increase in turnover.

**The "smart" punter . . .**

To some extent, this was a fair analysis: punters who lose less on each bet do increase their turnover. But, the analysis falls down for "smart" punters who have enough skill and/or knowledge to win.

# Winners - by fair means or foul

Some punters have consistently made money betting on sports – primarily through having better information than bookmakers and (particularly in the case of pool and exchange betting) other punters.

There are two broad categories of winners. First, those with inside knowledge, such as that possessed by players, managers, trainers, owners and other "connections" of sports teams or individual participants. This is akin to insider trading in financial markets and raises real ethical and, in some cases, legal issues.

To preserve the integrity of their sports, most governing bodies ban those closely associated with participants from betting on events where they have an interest or can influence the outcome. Such rules are usually rigorously enforced, as evidenced by the recent suspension of two UK Rugby League players who had backed the opposing team knowing that their club was due to field a much weakened side.

One notable exception is horseracing, which has a rather ambiguous view of insider trading. Whilst connections are now banned from laying their horses to lose on betting exchanges, connections backing horses to win is allowed – and indeed is regarded by most in racing's establishment as an integral part of the sport. As the primary victims in each case are those punters not privy to inside information pertinent to a horse's chance, it is hard to make a logical case for drawing this distinction. Indeed, the lack of clarity over what is and what isn't an acceptable use of inside information is one of the main contributing factors to the British Horseracing Board's often confused, illogical approach towards racing's actual and perceived integrity problems.

The second category covers those who undertake detailed analysis of factors such as form, competition, conditions and patterns of results. To continue the financial markets analogy, this is equivalent to the role of analysts, but without any obvious conflicts of interest. Such approaches clearly pose far fewer ethical problems than those based around inside information, since the basic data is generally publicly available and an edge is gained only through discipline, hard work and analytical skills.

The inherent difficulty of the latter strategy means that, to date, there have been few successful players. However, the number is rising – and it will continue to increase as computational power, availability of information via the internet and increasingly effective analytical tools become more broadly available. Historically, the most successful practitioners of the analytical approach have been a number of extremely successful syndicates in Hong Kong, who use complex and powerful computer-based analysis to win on horseracing, and a few individuals who specialise in particular niche areas. Perhaps the most notable niche player is Tony Ansell, who specialises in athletics and Scottish second division football and is someone most bookmakers freely admit is simply much better in his chosen fields than they are. To Ansell, the costs of employing a statistician and an assistant are trivial compared to the financial success they help him enjoy.

In addition, there are firms that sell their analysis to consumers, such as the venerable *Timeform* (www.timeform.com), which has been providing punters with detailed analysis and insight into UK horseracing for many years – and whose ratings have become such an established yardstick that they are used routinely to compare the relative merits of horses across the years.

In practice, many successful punters take a hybrid approach, augmenting basic analysis and secondary services with the judicious use of carefully cultivated contacts. The contacts are not always the obvious players, trainers and managers – the most useful associate is often the relevant doctor, physiotherapist or veterinarian.

The proliferation of new betting operators – and particularly the advent of exchanges – introduces new ways to win. The winners described above are all *speculators*, that is persons who take positions on specific outcomes they think offer good

betting value. In contrast, the ability to *arbitrage*, that is to bet on opposing or negatively correlated outcomes so as to lock in certain (or near-certain) profits, arises only in areas where there are multiple channels pricing similar events.

The simplest example of arbitrage is matches where there are two possible outcomes and there is sufficient divergence of opinion amongst bookmakers to be able to back both and make a profit either way. This has always been possible, but it happens infrequently – and typically in events such as tennis which are not core to bookmakers' business and where big bets are difficult to place. Also, there is always a risk of prices changing between placing the opposing bets or of bookmakers refusing to accept a bet, particularly where they know they are out of line with their peers. For more complex events with many outcomes (e.g. football with win, lose or draw; horse-races with many more possible outcomes than there are runners, etc), arbitraging with traditional bookmakers becomes very hard.

With exchanges, arbitraging is much easier, both because of their lower margins and, crucially, because of the ability of the punter to act as a layer of bets. Quite frequently, opportunities arise where an outcome can be backed at one price with a particular bookmaker or exchange and then layed at a lower price with another exchange. An interesting variant is the "behavioural arbitrageur" who predicts ingrained patterns such as fan over-reaction to a goal being scored, and then bets that the team odds will revert to the mean.

The "*How to Win*" box of this paper (p11) sets out a currently viable arbitrage strategy – and also explains why we think a variation of this method provides the best opportunity (at least for those without inside information) for punters to take money off bookmakers at the moment. Be in no doubt that this will be a transitory window as bookmakers fight back to change their operating and risk management practices to close the loop-hole. But also be in no doubt that new opportunities will present themselves as betting markets continue to evolve.

Historically, "smart" punters have been very thin on the ground. When you consider that prior to the change in tax treatment, the average return to punters was about 76p in the pound, this is unsurprising. To win, a punter needed to beat this negative expectation by more than 24%. Put this in perspective: in financial markets, it is extremely rare for (very highly paid and sometimes highly intelligent) fund managers consistently to beat the average market return by more than a few percentage points, and indeed the clear majority under-performs the market average net of fees. By abolishing transaction tax, a winning punter now needs to beat the market expectation by "only" 15%. As there are many more punters in the +15% to +24% range than in the over 24% range, this brings a relatively large number of players into the winning punter category.

Now, consider the churning behaviour whereby punters "recycle" returns. For losers, this typically leads to a pattern of exponential decay of funds over time until they havestakes. So, potentially, their funds will show an exponential increase over time – and all at the expense of their bookmaker.

### Boomakers hate winners . . .

Quite understandably, ***bookmakers do not like winners*** – and they have account management departments (sometimes termed liability or trading managers) aimed at preventing winners harming profits. But this doesn't always work. As well as individual winners, some betting advisory firms – e.g. www.ace2race.co.uk and www.winonsports.com – claim that they consistently outperform market average returns, behaving in effect similar to strategic financial services firms. Other firms or individuals guardedly claim consistent success.

Traditionally, "account management" comprised two rather blunt (but up to now quite effective) tools:

- first, consistent winning punters had their accounts closed or their bets restricted to very small amounts or reduced prices; and

- second, where a particular outcome is backed by many punters (particu larly if they are winners), its odds are cut and these specific bets are further restricted.

Most bookmakers estimate that, until the last few years, the number of consistent winning punters in the UK was at most in the very low thousands. Even by mid-2003, the Tote put the number of people that it declines to do business with in the region of 1,000 to 1,500. In the context of the overall population of customers, this appears a small number. However, when you consider that the Tote's most recent half-year results showed it made a six month operating profit of only £15.7m on turnover of £907m, and if allowed to bet unencumbered each of these punters could reasonably be expected to win tens of thousands each, it is apparent that there is already the potential to make bookmakers unprofitable before tax. Unfortunately, for bookmakers, exchanges make it worse…

## Exchanges – a golden age for punters

If punters can bet with punters, then who needs a bookmaker?

**Exchanges change everything . . .**

Bookmakers traditionally perform a variety of functions that allow punters to bet. They provide product structure (types of bet), price formation (setting odds that attract bets), technology (in the ability to distribute prices across different channels and adjust them as demand fluctuates), information dissemination, some regulation (millions of bets can't wait for legal or government adjudication), a payments system, and trust. The last of these is particularly important. In fact, the absence of legal enforceability for gambling debts has meant a pragmatic response to building trust (contrast this with the tremendous amount of law surrounding insurance payouts). However, trust can be abused – e.g. Luvbet (sic), which appeared to vanish from the internet owing money to large numbers of people. It is interesting to observe that punters have very little protection from "licensed" bookmakers, yet through 100% collateralisation of liabilities in the exchange model are pretty much guaranteed payment from "unlicensed" layers. What punters don't necessarily have, as illustrated by the recent Sporting Options collapse, is protection from misuse of that collateral by the exchange operators, although in this case the "rescue packages" put together by Betfair and iBetX should provide compensation to most of Sporting Options' account holders.

## How safe is your money?

For exchanges to claim that client money is held in separate accounts, or otherwise “ring-fenced”, is largely meaningless without fuller description of the arrangements. Similarly, to claim that separate accounts are audited also does not generate any great confidence as standard financial statement audits are usually heavily caveated and quite restricted in scope. Even with Betfair, which appears a solvent and well-run company, the arrangements for segregating clients’ funds are somewhat opaque – at least on the basis of evidence available in audited accounts. End-April 2003 accounts of The Sporting Exchange (Clients) Limited simply show a balance sheet comprising £2 debtors balanced by £2 share capital since inception. The relationship to other group companies is described as “The Company is a subsidiary undertaking of the Sporting Exchange Limited incorporated in the UK. Clients monies (sic – there should be an apostrophe indicating that the monies belong to clients) of The Sporting Exchange Limited are held by The Sporting Exchange (Clients) Limited as nominee.” It is clearly right that the clients’ monies are held in a nominee company. However, the audited accounts do not shed any light on whether, for example, the amount of cash held on behalf of clients reconciles to the sum of individual client accounts (or indeed to the relevant bank accounts) or what controls are in place to ensure that clients’ funds are kept segregated from company funds so as to protect their trust status and to prevent them from being used for purposes other than meeting clients’ betting-related liabilities or paying money back to clients upon demand. The equivalent accounts of The Sporting Exchange Limited show that it does not include clients’ funds within its own assets. Again, this gives some assurance, but it says nothing further substantive about the protection afforded to these funds.

It is useful to consider how the FSA’s client money rules would apply.

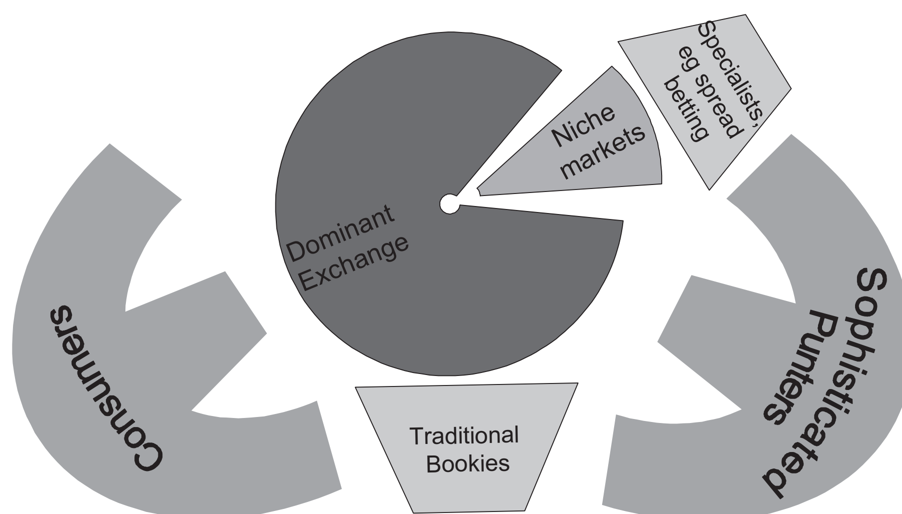
The FSA’s rules demand that client funds are held in separate accounts under unambiguous and enforceable trust arrangements. This would appear to be the case with Betfair above, although further independent assurance would increase confidence. However, the FSA rules back up these basic trust arrangements with detailed regulations as to the required governance and control structures surrounding client money. This gives a much higher level of confidence to customers – and, crucially, further assurance is afforded as auditors are required to give an opinion on the application of client money rules and effective operation of associated controls, rather than just the accounts of the company. One solution may be for exchanges voluntarily to adopt the relevant FSA rules, and for their auditors to opine on the application of these rules. Similar arrangements could be adopted for traditional bookmakers.

An interesting consequence of the unease surrounding bookmakers’ treatment of client funds (and their ability to meet liabilities) may be to funnel nervous punters towards spread betting firms, particularly if no quick action is taken to restore confidence. Such firms are already subject to FSA regulations, and their clients are also afforded protection by the Financial Services Compensation Scheme should the firms default.

Online betting has many parallels with financial markets, although Paul Tetlock[4] cautions that, at the moment, online betting markets are not as efficient as financial markets. Historically, bookmakers were the core of their gambling communities, including providing the equivalent of a community hall. Again, there is much in common with the development of other financial communities[5]. But we believe that the core price formation function is moving to exchanges.

The current market structure can be set out as below:

**Figure 1: Current Tensions – Price Formation by Exchanges (or Bookies or Specialists)**




This model is currently under considerable stress as the traditional bookies find themselves being disintermediated.

**Exchanges give technology to punters . . .**

The key is that betting exchanges put technology in the hands of punters that allows them to act in the role of layers, which previously had been the exclusive preserve of bookmakers. According to Hugh Taggart, International PR Manager for Betfair:

> "Our customers, like all customers of traditional bookmakers, merely support or oppose an outcome. The ability to oppose an outcome is nothing new. Backers and layers are simply punters betting on outcomes to happen or not to happen, e.g. backing Henman to beat Hewitt is the same as laying Hewitt. By opposing an outcome or 'laying' a bet, you do not assume the role of the bookmaker. Only convention (rather than legislation) has dictated that bookmakers traditionally lay bets."

This ability to ‘lay’ more easily greatly reduces barriers to entry and, in the absence of transaction taxes, allows the formation of an efficient market. This is frightening for bookmakers. With online exchanges, the punters set their own odds. It’s bad enough to be pushed to one side. What is even more alarming is that bookmakers can be played off against the exchanges. So, not only do they lose customers, their old customers can come back selectively to make money off of the bookmakers’ inefficient pricing.

How does it work? Easy. Customers bet against the bookmaker when the bookmaker’s odds are greater than the exchange “lay” price – it really is this simple [see box].

## How to win - a seven word winning betting strategy

As noted above, historically there have been two broad categories of winner: those with inside knowledge and those who undertake detailed analysis of factors such as form and patterns of results. The former category is limited to a fortunate few; the latter requires hard work and no little skill. However, for a few years now, there has been a much easier, though inevitably temporary, way to win.

In seven words: take bookmakers’ prices exceeding exchange lay price.

To illustrate, consider the following table showing the odds for an event from a betting exchange and five bookmakers, A to E:

| Betting exchange | | Bookmakers | | | | |
|---|---|---|---|---|---|---|
| Back | Lay | A | B | C | D | E |
| 7.1<br>£1,233 | 7.3<br>£1,585 | 7.0<br>(6/1 using UK convention) | 6.0<br>(5/1 UK) | **8.0**<br>**(7/1 UK)** | **7.5**<br>**(13/2 UK)** | 6.5<br>(11/2 UK) |

Using our seven word strategy, the decision here is to back the selection at the best available odds, 8.0 with bookmaker C, as this also exceeds the exchange lay price. If bookmaker C did not accept all or part of the bet, it would then make sense to back with bookmaker D at 7.5 - less generous but still better than the exchange lay price[6]. In this case, the margin in your favour with bookmaker C approximates to the proportionate difference between 8.0 and 7.3, about 9.6%. With bookmaker D the margin is closer to 2.7%.

You can create your own real-life example comparing a selection of exchange prices from Betfair.com and bookmaker prices from oddschecker.com. Note that the default price on something like oddschecker.com would use the UK odds convention, which does not include the stake in the quoted price and uses fractional[7] rather than decimal (or return to a set stake) expression.

Of course, looking at this bet individually, you would still be likely to lose; having a one in 7.3 chance of winning, i.e. about 15% of the time. However, if you consistently bet when the margin is in your favour, then over time a portfolio effect[8] means that you are very likely to win, and while you may endure sometimes significant losing spells, the expected return in the long term will be the average margin in your favour, in the example above 9.6%.

Moreover, you could hedge this risk on the exchange and lock in a profit as in a standard arbitrage trade. To illustrate, you place a £1,000 bet with bookmaker C at 8.0, so if it wins you are returned £8,000 for a £7,000 profit. You then lay the selection for £1,100 at 7.3 on the exchange. If it wins, you lose £6,930 (£1,100 x 6.3) on the exchange, with overall net winnings of £70 (£7,000 - £6,930). If it loses, you lose the £1,000 with the bookmaker but make £1,067 (£1,100 less commission, in this example, of 3%) with the exchange, for net winnings of £67. Thus, for an outlay of £2,100 you are *guaranteed* (credit risk excepted) a profit of at least £67. A return of 3.2% may not look that good, but when you consider that your capital would often not need to be tied up for more than an hour and that returns could then be recycled, it certainly makes savings rates of 5% a year look rather inadequate. The combination of the exchange's commission (typically between 2% and 5%), the need to tie up twice as much capital through off-setting bets with different counterparts and the bid-offer spread greatly reduces the margin that can be achieved; in this case, a risk-free 3.2% compares to the 9.6% long-term expected return without hedging. Higher risk has a correspondingly higher return – what's your risk appetite?

This strategy comes with no guarantees. But there is evidence, both academic and empirical, that backs it up. In the financial world, while there are occasional aberrations, such as the technology share price bubble of the late 1990s, exchanges have long proved an accurate pricing mechanism for shares, commodities, currencies and derivatives. Studies[9] have shown that information and betting exchanges outside financial markets also prove an accurate predictor of events, although with some important differences and anomalies. Empirically, and perhaps most importantly, using this strategy has also proved successful in independently conducted real-money trials over the past eighteen months.

The advent of price comparison sites such as oddschecker.com and a proliferation of new ebookmakers seeking to attract customers have also contributed to greater competition and price transparency, clearly to the advantage of customers and the disadvantage of bookmakers. Nevertheless, some still believe that exchanges will help bookmakers:

> "I think the two (exchanges and traditional bookmakers) will coexist quite happily. The crossover of client base is small and their current profit trends show that we don't affect their profitability in any way." (Hugh Taggart, Betfair.)

But then, he would say that, wouldn't he?

# Unfair odds

## Betfair – from long odds to short odds in four short years

Given the amount of turmoil it has created for competitors, it is easy to forget that Betfair was only launched in June 2000. Betfair was the brainchild of Andrew Black, a former professional punter and derivatives pricing modeller. He founded the company alongside current director Edward Wray, a former Vice-President at JP Morgan debt capital markets. In its first month, Betfair matched less than £50,000 of bets a week, within a year £1 million a week, and by August 2002 £50 million a week.

Betfair is a registered bookmaker in the UK. Betfair defines betting exchanges as bookmakers that offset all risk through sophisticated technology. By bringing together two counterparties with directly opposing views, prices can be excellent. One independent study said that odds were, on average, more than 20% better than the starting prices (SP) offered by conventional bookmakers, although closer analysis shows that the percentage by which the final Betfair price beats SP is generally lower for winning horses. Betfair takes 2% to 5% commission of net winnings on a given market. It pays 15% of its gross profits (ie of its 2-5% commission) in General Betting Duty and 10% of profits on British horseracing to the Horserace Betting and Levy Board. This is in line with all UK bookmakers, although traditional bookmakers argue that layers of bets on Betfair should also pay betting duty and levy on their profits, and that Betfair therefore enjoys an unfair tax advantage. We believe this is a superficially attractive but ultimately wrong argument. It is not backing or laying that principally distinguishes a bookmaker, but rather setting the terms and conditions that frame markets and govern the determination of bets – and accepting money and bets from consumers.

Betfair is already an astounding success story. In 2003, it was the third largest sponsor of horseracing in Britain and it was honoured with a Queen's Award for Enterprise in the Innovation category. As of 2004, Betfair has nearly 300,000 registered customers from 85 countries, with an average of 40,000 active in any given week. Betfair's system handles over one million transactions a day and, at peak times, matches up to 12,000 bets per minute. The company employs over 400 people in its offices in Hammersmith, West London. Betfair has information-sharing agreements with a host of international sports bodies, including the Jockey Club, the International Cricket Council, the Association of Tennis Professionals and the Football Association.

### Bookies are fighting back . . .

The betting industry is belligerently countering the threat of the exchanges by exploiting their failure (so far) to access cash-based business, by creating new products (typically those which are impossible for serious punters to win on, such as numbers betting, virtual racing and high-tech fruit machines), by increasing their marketing and by providing combined event products. New products have been particularly successful, particularly virtual roulette machines which (according to Ladbroke's published results) on average generate profits of well over £500 per week per machine. Many analysts believe that it is these machines that are driving bookmakers' current profit trends and that they may well be masking less favourable trends in the profitability of betting on real world events.

In addition, the betting industry continues to insist that exchanges are poorly regulated or that they undermine the underlying sports on which they depend

The bookmakers' position has been backed by the British Horseracing Board, whose ex-chairman, Peter Saville, claimed that exchanges posed "a fundamental threat to the integrity of racing". His argument is that exchanges permit millions of people to make money out of horses losing, and that this threatens the integrity of racing. Nearly right, but actually very, very wrong. In truth: exchanges permit millions of people to make money… but at the expense of bookmakers, not racing's integrity.

Recently, the chief executive of Ladbrokes, Chris Bell, claimed on a BBC Money Programme that one race a day is being corrupted through the practice of laying on exchanges – but he has not yet backed up this extraordinary statement with credible evidence. Others strongly disagree:

> "The pivotal question… is whether Betfair increases the amount of corruption in racing, or simply shines an unforgiving light on what was already there, often thanks only to the deliberate connivance of the same 'traditional' bookmakers who are now so resentful as the exchanges move on to their territory."[10]

The exchanges are now fighting back – particularly, as the market leader, Betfair (which some currently estimate has 85% of the exchange gambling market). In a large advertising campaign, it maintains that corruption in racing is less likely on an exchange (see box p15) since "you'd have left an indelible audit trail which could be shared with The Jockey Club." This audit trail contrasts with traditional bookmakers, where nearly all of the business is cash-based – and therefore potentially much more attractive to those wishing to manipulate or fix results and not leave a trace, or indeed to those engaged in money-laundering.

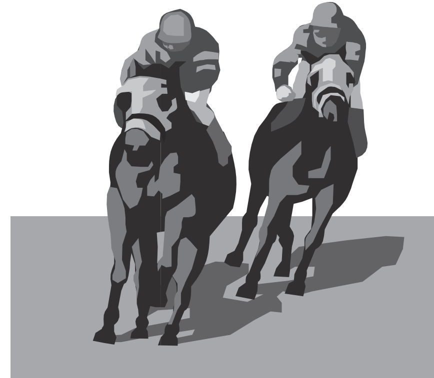
**Markets *work* . . .**

Those with a background in industries where exchanges are long-established, such as equity and other financial markets, are puzzled by the demands of bookmakers and the BHB to restrict the users of exchanges. Markets work efficiently and, generally, with limited wrongdoing where intermediaries are closely regulated and the markets are subject to rigorous monitoring and investigation of suspicious trading. Punishment of insider trading miscreants is an effective deterrent (just ask Martha Stewart). Further regulation of end-users is unnecessary, and the calls for different regulatory and tax treatments of backers and layers are frankly perverse, being equivalent to treating differently those who buy and those who sell shares.

**Advertisement in The Economist (and elsewhere) 2004**

Ice Saint

The Field



You have information that Ice Saint will lose.

**Q**: Do you

**1** Lay Ice Saint for £1,000 at 6.4 on Betfair?

**2** Back Honneru Fontenail (FR) for £2,538.50 at 15-8 (SP),
Back Cyanara for £2,432.70 at 2-1 (SP); and
Back Mayb-Mayb for £1,326.90 at 9-2 (SP) in a betting shop?

**A**: Either

Because both result in a £1,000 win. But on Betfair you'd have left an indelible audit trail which could be shared with The Jockey Club. Whereas in the betting shop you'd leave no name, no trace, no suspicion whatsoever.

Unlike some others, Betfair has always sought to eradicate corruption in racing.

Betfair.com

Sharp Minds Betfair

# From network economics to monopoly

The success of the betting exchange model is, in hindsight, as unsurprising as it was shocking to established bookmakers. Quite simply, electronic exchanges offer the most efficient price formation and risk transfer mechanism. It is difficult to conceive of many aspects of modern financial markets operating without electronic exchanges. What works for matching those with opposing views in financial markets also works for any other market where people have different opinions of future events.

The typical betting exchange screen looks very similar to electronic matching engines such as SETS, the equity order matching system of the London Stock Exchange. As with SETS, you can place either *back* (equivalent to buy or bid) or *lay* (sell or offer) orders at prices you determine, or match orders that others have placed. Importantly, if you want to take only part of an order, or want to build a bigger position from matching many smaller orders, you can. In contrast, some early betting exchange models required matching of both price and amount. They did not work.

Going 'electronic' can explain the success of the generic betting exchange model in winning business from existing players with much less efficient operating methods. However, it does not explain why one particular exchange, Betfair, has come to dominate the landscape.

Betfair may be well on the way to becoming the dominant exchange. It is estimated to have in excess of 85% of UK exchange gambling. Why? One reason is that betting exchanges, as with other markets and community-based businesses, are subject to network economics. As new members join, large positive externalities accrue as all members are able to access a growing pool of liquidity. This is good for those members (certainly in the short term), but very bad for existing or prospective competition. Liquidity, once established, is hard to shift. Even where the competition offers better services or value, the proposition needs to be a great deal better to compensate users for the loss of liquidity, which limits the ability to take large positions and increases the cost of trading since the spread between back and lay prices (the equivalent to the bid-offer spread in financial markets) is generally higher in illiquid markets.

One factor that enabled Betfair to reach a position of dominance was its takeover of its main rival, Flutter, in 2001. The impact of network economics can be seen very clearly, as the post-merger volume of bets matched on the combined platform greatly exceeded the sum of the two separate companies immediately preceding the merger. Increased liquidity attracts further liquidity. From this large base, Betfair's position was difficult to challenge – although one rival in particular, Betdaq, has tried hard and has managed to survive, although without truly challenging the top spot.

Not content with the natural protection afforded the market leader in a network economy, Betfair has a commission structure that offers regular users lower rates. On the face of it, this may seem normal; but its effect is to penalise those who might otherwise use competing exchanges, thus further outdistancing the competition. Interestingly, Betdaq follows a similar strategy, albeit with lower overall commission charges, not apparently accepting that it only works for incumbents.

# It ain't just entertainment

Does an entertainment industry matter?

**Betting matters . . .**

Well, given the sums involved (and those projected for the future), betting is starting to be of concern for financial stability. It is also of concern for societal security, e.g. the social instability caused by problem gamblers, money laundering or organised crime. At the same time, if a secure, trusted and inexpensive betting industry emerges online, many other exciting products can be created that will move the industry from entertainment to genuine risk transfer that is beneficial to the economy as a whole. Indeed, consumer gambling markets may well transform wholesale finance as we know it by removing some of the venerable intermediary institutions in markets such as banking and insurance – allowing consumers to hedge other consumers' risks directly. As Robert Shiller, writing in *The Economist* on March 20, 2003, put it, "information technology will allow us to produce large international markets for a complex array of aggregated risks that today are not traded at all".

This is already going on, albeit on a limited scale.

**Insurance without the middle-man . . .**

Some large corporate markets – for example, sporting risks for sponsors, football clubs and the like – are poorly served by traditional insurance brokers and underwriters. They have already turned to the betting industry. Gambling products bypass traditional brokers and underwriters, going directly to independent risk takers. This direct approach has several advantages:

- better service – indicative prices can be obtained quickly and capacity rapidly determined for rarer products;
- better security – the products can be financially backed by rated banks or fully collateralised through independent trust arrangements, in contrast to the pooled nature of medium-sized underwriters;
- better prices – prices should be much keener than traditional insurance, perhaps as little as two thirds the cost;
- tax efficiency – the transaction structure may avoid Insurance Premium Tax and other equivalent European taxes;
- flexibility – the gambling market allows corporate clients to reassess and dynamically hedge their exposure, as bets can be closed out or increased at varying prices any time before the outcome of an event is determined;
- partial placement - unlike traditional insurance that seeks to place 100% of the risk over a period of weeks, gambling clients may place tranches of risk on a daily basis;
- lower costs – bets do not generally have the legal and contractual baggage of insurance contracts; and
- faster and uncontested payment – as there is no 'claims processing', betting contracts typically pay up almost immediately on a "common sense" basis, certainly not a common feature of insurance contracts.

There are, however, risks with a gambling-financial product:

- liquidity – there may not be enough capacity in the betting organisations (in practice, this has been a genuine risk);
- credit – some of the betting organisations may not be able to pay out in certain circumstances – the opaque nature of some of their finances restricts wagers to entertainment level, rather than financially important transactions; and
- contractual – betting organisations operate under rules which may conflict with each other, e.g. one organisation may pay the next day despite a disputed outcome (eg the identity of a goal scorer where the ball is deflected), while another may wait for the governing body's ruling a week later.

**Legal status of gambling debts . . .**

Also, in the UK, gambling debts are not yet recoverable in law – although they are anticipated to become so under the proposed Gambling Bill, and the risk of reputational damage almost always ensures prompt payment. Indeed, the absence of legal sanction can, arguably, be seen to have imposed more transparency – which means that claims are likely to be resolved more fairly than an insurance contract, without the need for expensive litigation.

All of that said, the new financial products being developed through the gambling industry clearly imply a need for closer consumer regulation.

**. . . convergence with conventional financial/insurance products**

At a CSFI seminar in late 2003, a number of ideas were discussed showing the over-laps between betting and traditional risk transfer products. For instance:

- weather derivative markets might function better, with consumers or SMEs taking the opposite side of wholesale contracts with utilities for outdoor events, weddings or utility bills;
- sports contingency insurance for relegation or players' bonuses might be held directly by opposing fans' bets or by the team's sponsors;
- individual mortgage insurance could be provided on the basis of indices of local house prices;
- pharmaceutical companies could hedge the risk of the election of a pro-consumer politician who may implement policies that could reduce their future profits;
- film-makers could hedge their costs, based on bets of opening audience numbers or take; and/or
- nominees for awards (or TV talent shows) could hedge against the risk of not winning prizes or associated earnings.

The rule? Anywhere there is enough consumer interest to take a financial risk, there is an opportunity for a corporate hedge. This is not a big stretch. Indeed, consumer interest is already finding its way into traditional financial products. For instance,

Arsenal, the north London football club, is supposedly looking at a bond issue backed by income from ticket sales at its new stadium.[11]

One conclusion of the CSFI discussion was that the market is getting large enough to warrant a look at consumer protection through better and more targeted regulation. One interesting example of regulatory problems was the Cyprotex incident in 2002. The Cyprotex incident involved a bet on Cyprotex by Paul "The Plumber" Davidson with City Index, and the concurrent flotation of the company on the AIM exchange. City Index hedged its position using contracts for difference with Dresdner Kleinwort Wasserstein, which had in turn purchased the underlying shares to hedge its exposure. The linked transactions were investigated by the FSA and fines awarded, although these are currently subject to appeal.

This incident illustrated two key aspects of betting:

- first, bets can be economically equivalent to financial derivatives and securities transactions; and
- second, bets need not be solely speculative, but can influence the "real world" events upon which they are struck.

# Gaming forward

The betting industry is in transition, and change is unlikely to stop here. We believe that the transition is likely to see losing punters lose the same amount; But with exchanges, their losses will be shared between the exchanges' commissions and skilled punters, as well as with bookmakers.

**Change is in the air . . .**

Looking ahead at political, economic, social and technical considerations (PEST), a few comments are worth making about the future:

- Political – more regulation and taxation: As the betting industry grows, it is naïve to believe that governments will not seek more 'rent'. UK betting winnings are currently tax-free, but they may not be in future: Plus, anti-money laundering regulations will certainly target betting winnings. Inevitably, increased interaction with consumers will lead to more regulation.

  The big uncertainty is the US. At the moment, the gambling world is very different outside US borders, and international firms are not supposed to offer gaming services to US citizens from abroad (actually a little more complicated than this and subject to some potentially interesting challenges from the WTO, but for the moment broadly correct). If the US pushes for extra-territorial regulation, industry growth could be impaired. If the US liberalises, gambling is likely to grow even faster.

# Betting shop or potential launderette?

Unwittingly, traditional UK bookmakers may be facilitating the laundering of ill-gotten gains or the funding of terrorist activities, anonymously, and without trace.

Most comment on the potential links between betting and money laundering has focused on the rise of internet betting operators and the possibility of creating complex webs of transactions and transfers of money to and from different accounts. These risks may be overstated, since bookmakers typically require the use of bank transfers or credit or debit cards to deposit and withdraw funds, so there is an immediate link to the banking system with its 'know-your-customer' regulations and sophisticated transaction monitoring systems. We believe the main risk may lie with more traditional betting activities. The key point is that High St. betting shops will still accept very large cash wagers without knowing the identity of the person placing the bet or the source of funds.

To convert cash to an apparently legitimate cheque is very easy. The following example, using odds available from the UK's biggest two cash betting outlets on the Chelsea versus Liverpool Premier League match from October 3, illustrates the opportunity:

| | |
|---|---|
| Back Chelsea: | £6,500 at 4/5 with William Hill |
| Back Liverpool: | £2,600 at 7/2 with Ladbrokes |
| Back the draw: | £3,600 at 9/4 with Ladbrokes |
| Total outlay: | £12,700 cash. |
| Guaranteed return: | £11,700 cash or cheque. |

Although entailing a loss of £1,000, this represents less than 8% of the original cash. Criminals are usually believed to be willing to accept a loss of 20-25% in converting 'dirty' to 'clean' money. Would they begrudge a 'fee' of 8% to procure an apparently legitimate cheque from a well-known high street company that can be paid into a bank account with no questions asked? By using more than one bookmaker, slightly better odds are achieved and, more importantly, suspicion is averted. Placing bets on all outcomes with a single bookmaker would appear odd; but individually the bets cannot be distinguished from those taken in the normal course of business.

While these amounts are large enough to require referral to a bookmaker's risk management department, they would very likely be accepted as Premier League football betting markets are extremely liquid and the chance of match fixing is considered remote. After all, although one bookmaker will lose in the example above, between them they make £1,000 profit.

Not only is the above a virtually untraceable method of integrating the proceeds of crime into the mainstream banking system. More worryingly, a variation on the example could be used to fund terrorism. A winning betting slip is a small and innocuous-looking piece of paper, but it can be a store of considerable value – and it is able to be cashed almost at will without any questions about the holder's identity. A betting slip could be passed from funder to terrorist without leaving any record or trail by which the transactions can be identified as it bypasses completely the mainstream financial system.

Remarkably, bookmakers' activities are not included in the scope of the UK *Money Laundering Regulations 2003*, even though casino businesses are included (along with obvious areas like financial services and diverse activities such as estate agency and dealing in expensive goods). We strongly believe that cash-based betting is a potential loophole that ought to be examined. Bookmaking activities may need to be brought within the legislative framework to require proper identification and record-keeping in respect of customer identities and transactions.

- Economic – the ability to aggregate customers as never before will lead to intense consolidation, as long as regulation doesn't interfere: The larger the exchange, the closer it moves to zero marginal cost. Given the current regulatory environment and the porosity of online services across borders, it may turn out that certain jurisdictions become global gambling centres – as London is the global FX centre. Some organisations currently provide data and regulate outcomes (e.g. racing administrators and Jockey Clubs) or provide price information (e.g. traditional stock exchanges) that the gambling industry makes a lot of money from. Even more telling, the punters on exchanges are the primary information source – but they don't get paid for it.

  It is very possible that the information providers may become more powerful. The Achilles heel of the current for-profit exchanges may be not-for-profit mutual exchanges owned by the punters in proportion to their use. This was the way most traditional stock exchanges began too, and it could easily happen in gambling as punters begin to see that they are not getting some of the significant value from information about the transactions that they themselves create – or any say in the governance of their communities. Inevitably, network economics mean that exchanges with established liquidity will continue to grow and form near-monopolies. In such a case, competition concerns may be best addressed through user ownership as the incentive to charge monopoly rents is geatly diminished – although, looking at the financial services analogue, once markets reach maturity, there is a tendency for many exchanges to demutualise (and often to relinquish many of their regulatory responsibilities at the same time). Other content providers may also seek to profit, for example through payments to the sports providing content to the betting industry and to the intermediaries providing data, television, etc.

- Social – gambling will become increasingly socially acceptable: There are some grey ethical problems with gambling, similar to drink and tobacco, but the fundamentals of many traditional financial products, e.g. contingency insurance, are indistinguishable from gambling. There is also some difference between taking a 'flutter' (e.g. a frivolous bet on a real world activity that means nothing to you) and hedging a risk (e.g. ensuring that a real world event does you less harm), but it is very difficult to specify the difference. The intent of the person making the bet is the key differentiator, and whilst known to that person, intent is unknown to his counterparts, exchanges, regulators or tax authorities. Of great interest is current research into using information provided by gambling markets to improve forecasting, both economic and political [12]. The Defence Advanced Research Projects Agency's (DARPA's) FutureMap even went so far as to solicit proposals during 2001 for an electronic policy exchange. While this project was cancelled in 2003 during a media storm about "betting on

terrorism", current research indicates, as *The Economist* noted, that "talk is cheap, but money speaks the truth".[13] This is unlikely to be the last attempt to use gambling information for political and economic forecasting as research seems to indicate that gambling markets are, in many circumstances, better at judging risk.

- Technology – there is more upheaval to come: While there is a focus today on "connectivity" (i.e. new means of reaching clients via devices such as computers, satellites, phones, televisions, kiosks, personal organisers, mobile internet, etc), there are other technologies that can change the infrastructure even more (e.g. payment cards, micro-payments, and/or mobile phone payments) or change the products (e.g. automated constructors of artificial products or product combinations).

  Recently launched gaming products such as Gizmondo (www.gizmondo.com), incorporate GPS and GPRS, permitting direct entry of bets within defined geographic limits. Similar approaches are possible with existing mobile telephones. On-track betting restrictions might be enforceable (the machine knows where you are), yet these devices would permit direct betting and arbitraging using off-course services while on-track. These same devices are also being considered for more traditional financial services applications ranging from mobile dealing rooms to "free" handouts allowing wealthy individuals to manage their portfolios. Betfair has also opened up its application interface to third parties, enabling a wide variety of technologies direct access to its data. Open interfaces will allow the creation of automated trading platforms and value-added services above and beyond Betfair's direct exchange.

  In addition, recent advances in Statistical Learning Theory are levelling the computational battlefield between punter and bookmaker. Dynamic Anomaly and Pattern Response systems (e.g. systems such as Z/Yen's risk/reward prediction engine, PropheZy) place the power of the most advanced statistical processing within the reach of smaller businesses or wealthy individuals. Blunt risk management tools are fine when a bookmaker is trying to manage a few, high-staking winners, but they don't work for a large number of regular punters following a winning formula. If book makers are to survive, they need to become much more sophisticated than the average customer. Bookmakers could learn many tricks from financial markets, including moving into the trendy area of behavioural finance for better analysis and identification of winning behaviours. Long term, the current bookmaking approach of relying on punter ignorance probably won't work.

# YourBet

Betting exchanges are taking over from bookmakers. Technology, tax and consumer behaviour changes have made exchanges one of the fastest growing online markets. But betting exchanges are prone to the "Highlander" problem – there can be only one (well, only a few anyway). Network economies mean that liquidity on betting exchanges, as with other financial exchanges, coalesces around a limited number of marketplaces. In the UK, Betfair has rapidly become the dominant exchange, with a share of betting exchange trade estimated at 80-90%. Betfair is becoming so dominant that it is difficult to see how a new exchange might compete. However, where users can see a clear benefit to themselves, they can be persuaded to move *en masse* to an alternative, for example the move of the DTB futures contract from LIFFE to Eurex in 1998. Users moved for the efficiency of electronic over floor trading – and for lower fees.

We believe that a new betting exchange could gain substantial revenues in the UK by encouraging users to move *en masse* in their own self-interest. A new betting exchange could offer lower charges, and would be welcomed by consumers for creating competition. Critically, it could pay interest on clients' deposits that would make longer term markets, including many financial bets, more viable and hence greatly increase liquidity in these areas. The compelling idea that we want to try to put on the table is to create an exchange that is owned by its members and is run for its members. We propose the creation of a mutual exchange, YourBet. Key characteristics of YourBet would be:

- User ownership – through a trust that is obliged to return benefits to users in proportion to their usage. Benefits will be returned in lower commission charges and rebates (i.e. getting money back for usage). In the event of members deciding to realise capital value, e.g. to demutualise, the trust would again distribute those benefits in proportion to usage.

- Commercial return to funders – there is the potential for significant commercial return to those who fund the new venture. This is likely to be acheived through high-yield debt that pays out a return based on surpluses in the mutual during the early years. This might take the form of a fixed odds bet; e.g. put up £1M and receive £10M in three years, if successful.

- Member governance and community – the key way to prise market share from Betfair is to address its fundamental weakness, profiting from value created by the users. Users are increasingly resentful of this aspect of Betfair – e.g. making high profits at their expense, giving users little say in the running of the market, and the lack of responsiveness to user concerns. This has also increased Betfair's vulnerability to attack from established betting participants. We would propose a full-blown user governance panel, subject only to protecting funders' rights until the funders are repaid.

Risks of a start-up of this nature are fairly obvious. While the technology is now not new, it is still a significant project to put YourBet together. Moreover, Betfair might well co-opt some of the ideas – although there is scope for cooperation with Betfair as well.

The authors of this paper are interested in discussing the concept with potential funders, e.g. existing bookmakers, marketing-based data companies, information services firms, publishers, individuals or venture firms.

# Wanna bet?

**Let's put some numbers on the table . . .**

Our key bet is that the online gambling markets will soon be analogous to the financial markets. The principal change from the current situation will be a clearer distinction between the price formation activities that will occur in exchanges and the capital-at-risk activities of "investment" or gambling. Today's bookmakers will have to choose. The largest bookmakers, with retail distribution, may well come to resemble large retail financial institutions, with high street distribution, cross-selling opportunities and some internal crossing of customers. They may move more aggressively into leisure centres or gambling parlours with a wider range of gaming and other leisure facilities, drinks or food.

For the specialist bookmakers, times will be hard. They will have to live on their wits and their capital in markets where pricing is keener and opportunities for arbitrage rarer. Not surprisingly, there is evidence that specialist bookmakers have already started recruiting more sophisticated, quantitatively savvy staff. As a result, 'full service' bookmakers may start to resemble some of the higher-end buy-side firms, with the ability to lay off complicated bets in a price-efficient way with minimal market disruption.

<u>We predict a future with exchange(s) at the centre as mechanisms for price formation and wholesale transfer of risk</u>. Bookmakers will act effectively as brokers, and will exist only if they can add value, e.g. through providing liquidity, multiple or more complex bets (equivalent to OTC derivatives, which enable counterparts' exposure to particular amalgamations of risk combining one or more underlying events or markets), market access for smaller and cash-based punters, best-execution between competing exchanges, central cash management, etc. We may also see more integration with traditional financial markets, blurring the boundaries. Indicative of this, Andrew Bathurst, a director at Benfield the reinsurance brokers, says:

> "Benfield has modeled the profitability for casinos in the UK across various games, and we have a number of insurers interested in offering insurance products to them. This could be either for smoothing earnings, taking high-roller, 'whale' risk, or even protecting regulatory capital."

The larger specialists will have to get wiser. Firms such as City Index, IG Index or Cantor Index resemble specialists in the old exchanges ('jobbers', or these days 'proprietary traders'). These firms need to use their capital effectively. They will start to resemble some of the sophisticated hedge funds in more traditional markets, looking at 'big plays' or arbitraging. There are some interesting opportunities already available to arbitrage between fixed odds (which are effectively digital range options, i.e. contracts which in return for a specified premium pay out either a fixed amount or zero, depending upon the outcome of a particular event) and spread betting. Cantor Index has recently launched <u>spreadfair.com</u>, which aims to do for spread betting what Betfair has

done for the fixed odd markets, and more innovation will come as markets advance. (Interestingly, Cantor-owned spreadfair.com has declined to offer markets on horseracing, citing concerns over integrity. However, this reason for excluding horseracing seems disingenuous as Cantor Sports has for many years offered spread betting on horseracing that allows punters to profit from a horse's poor performance. Another reason could be that Cantor is worried that traders needed to provide liquidity to the new exchange may be beaten by smarter and better informed horseracing punters.)

In the opinionated spirit of the betting industry, we forecast the following events as more or less likely to happen over three to five years. Whilst this is clearly conjecture, we strongly believe that many in the betting industry are substantially under-estimating the chances of profound changes occurring.

**THE MUG PUNTER STAKES**

| | |
|---|---|
| 1/10 | High Street Casinos |
| 5/2 | New Regulation |
| 6/1 | Effective Regulation |
| 5/1 | Addiction Lawsuits |

### The Mug Punter strikes back

UK betting shops will increasingly resemble high street casinos, with bookmakers' profits driven by fixed odds betting terminals (FOBTs offer computer-simulated casino games, typically roulette) and virtual racing and other sports. Bookmakers like these games as punters are certain to lose and profits are highly predictable, and we are convinced this trend will continue; hence odds of 1/10. Evidence[14] suggests that FOBTs and their equivalents greatly increase the incidence of problem gambling. Regulation beyond that envisaged in the current draft Gambling Bill may well be needed to further regulate FOTBs and control this growing problem. Whilst we make further regulation a 5/2 shot, the chance that any such legislation would then be effective is probably no better than even money; so we estimate the true odds of *effective* regulation as 6/1.

More tangentially and more speculatively (5/1 in the medium term), bookmakers could face lawsuits from "addicts" seeking compensation for their betting losses and associated damages. The tobacco industry illustrates the potential financial impact of large scale litigation. Successful claims would be more likely if it could be shown that bookmakers were aware of problem gambling risks, but rolled out FOTBs anyway – or, worse, designed FOTBs to exacerbate their addictive nature. The threat of litigation could prove to be the most effective way to encourage socially responsible behaviour from betting companies, and on a long term basis we estimate such litigation is more likely than not, a 4/6 chance.

NEW EXCHANGE TROPHY

| | |
|---|---|
| 1/5 | Bookies' Exchange |
| 1/2 | YourBet |
| 5/1 | Shared Liquidity |

**Who will launch new exchanges?**

Despite frequent attacks on the exchange model, traditional bookmakers would be commercially naïve if they were not also looking at opening their own exchange. We believe such a development is extremely likely (1/5). Perhaps an even more compelling new entrant would be an exchange owned by users and run for their benefit, such as the YourBet business model outlined above. Such an exchange could offer much lower commission rates and other benefits to users, since there is no need to generate a return to shareholders. It would also offer real governance benefits, as maintaining market integrity will always be in the interest of users as a whole. It will need to attract funding and parts of its concept may be adopted by existing operators; hence, whilst likely, it is at 1/2 by no means certain.

One feasible development is a system by which exchanges pool liquidity, sharing commission where a bet was matched between customers of different operators. This would be of great benefit to consumers, both through access to greater liquidity and also through greater competition amongst exchange operators leading to lower commission and better services. Such a system would not, however, be in the interest of an incumbent dominant exchange. The market leader would therefore probably not cooperate, unless compelled to do so by competition authorities, and we rate this a 5/1 chance.

| WINNER TAKES ALL DERBY | |
|---|---|
| 2/1 | Betfair |
| 11/1 | Other Exchange |
| 3/1 | Bookie's Exchange |
| 5/1 | YourBet |
| 5/1 | No Clear Winner |

**And who will win?**

As previously noted, Betfair holds an extremely dominant position in the exchange market, and network economies mean competitors face a great challenge in tackling this dominance. It is therefore favourite at 2/1 to maintain its position.Its existing competitors all have business models and value propositions similar to Betfair's. Without radical change, it is hard to see why they should succeed in future when their efforts to date have largely fallen short, and we group these (and any other "me too" challengers) together as an 11/1 outsider.

An exchange launched by the big bookmakers, with their established customer base, resources and marketing skills, would be a formidable challenger, particularly if they formed a joint venture. We make this proposal a 3/1 second favourite; had they not damaged their own credibility through illogical and poorly argued attacks on the exchange model, the bookies would be an even shorter price.

YourBet could also prove a viable challenger. Although initially lacking the resources of a big bookmaker exchange, the value proposition to exchange users is compelling and clearly differentiated, and the mutual model is already proven in many financial markets. The price of 5/1 reflects the lower certainty over whether a user-owned exchange will launch; if it does, we think its chance of success would then be about 3/1.

The network economy of exchanges whereby liquidity attracts further liquidity means that it is likely that one player will dominate Thus, we estimate the chances of no clear winner as no better than 5/1. However, if an overarching "virtual" market was formed to share liquidity, the odds on no clear winner would shrink dramatically.

| DINOSAUR OR PHOENIX STAKES | |
|---|---|
| 6/4 | Squeezed Profits |
| 4/1 | Loss Leader |
| 1/10 | Better Price Management |
| 1/4 | New Price Management |
| 2/1 | "Industry" Prices |
| 5/1 | Maybe Anti Competitive |
| 1/3 | Exchange Based Price |

**Change or die?**

If the "how to win" section of this paper is correct (and we strongly believe it is, at least for the time being), then many bookmakers' current business and operating models may prove unsustainable. While there will always be price-insensitive punters who back on irrational factors and hunches, many will pick up on what is after all a fairly simple strategy. Every loser who adopts a winning strategy will squeeze profits, and bookmakers' risk management techniques will struggle to control a very large number of small-staking customers using this technique. Even where a net trading profit is still made, there is a strong possibility (6/4) that this will be insufficient to cover overheads.

Bookmakers coining it in from FOTBs may continue to offer horserace and sports betting as a means of enticing punters through the door - effectively a loss-leader – which we make a 4/1 shot. Bookmakers without FOTBs, including many internet and telephone-only operations, face an uncertain future which may come down to adapt or die. Most will surely (1/10) seek to develop more sophisticated risk management practices. However, a more effective response would be to change the way prices are set. In particular, the historic betting show system for horseracing reflects only part of the overall market, is slow to react and allows exchange users to pick off value bets; hence 1/4 it will be replaced.

Many bookmakers would like to be able to introduce their own prices – perhaps collectively, as they do already for some non-UK racing when returning "industry" show and starting prices. We make this 2/1. However, offering one collective price offers little choice or protection to customers, and could be deemed anti-competitive. Bookmakers could (5/1) be forced to price markets individually, and may even be compelled to offer customers a "best execution" service, or at least greater transparency over charges and margins.

Whatever route is initially followed, in the long run it is extremely likely (1/3) that exchanges will cement their position as the primary mechanism for price formation, with other betting market participants basing their own products, pricing and risk management around this core. Such a system has compelling logic. A free, open and transparent market is the best protection against consumers being exploited. It also offers betting firms a measure of defence against being beaten by smart punters.

| BETTING AND FINANCIAL MARKETS CROSSOVER CUP | |
|---|---|
| 1/2 | Betting As Insurance |
| Evs | Gambling Financial Products |
| 2/1 | Investment Strategies |
| 6/1 | Betting Funds |
| 2/1 | Gambling Debt Risk |
| 8/1 | Financial Bet Fixing |
| 2/1 | More Regulation |

**They call it a derivative, you call it insurance; I call it a bet**

We strongly believe that some great opportunities lie along the border between gambling and financial markets. Many gambling products are economically identical to equivalent financial products, but offer better access to consumer markets, lower transaction costs and, in some cases, friendlier tax and regulatory environments.Insurance is perhaps the clearest example. For betting stake, read insurance premium. And for winnings, read cover. Betting markets already offer better value than insurance in some areas, such as contingent insurance against bonuses payable when sports stars win. We believe it is likely (1/2) that some corporates will overcome concerns about the perceived probity of betting and look to exploit the opportunities for better and cheaper risk management.Very possibly (an even-money chance), other financial products will also utilise betting as a mechanism to exchange and sell risk. There are clear opportunities in areas such as betting on house prices or weather. Betting generally transcends wholesale and retail markets better than other wrappers for transferring risk.Where financial products lead, investment strategies are quite likely (2/1) to follow, using such products to augment return or reduce risk. For example, the share prices of football clubs are closely linked to the clubs' results on the pitch. Investors understanding this relationship may be able to hedge the risk of adverse share movements using spread and fixed odds bets on the results of the club and its competitors.

In time, betting on sports may be seen as an alternative asset class in its own right, and one that may be very attractive as it is uncorrelated to other asset classes. This is less likely (6/1) as the liquidity in betting markets is not yet great enough. Indeed, if you are a successful punter, your biggest problem is likely to be getting your own bets on; so managing the money of others would only dilute returns. In time, this may change.

Historically gambling debts have not been recoverable under UK law. Although the current draft Gambling Bill will change this, dealing with credit risk will still be one of the main obstacles to convergence between gambling and financial products. Quite a few (admittedly small) bookmakers have gone bust in the past, and we think it quite possible (2/1) that there will be a significant case involving non-payment of a gambling debt. A less likely scenario (8/1), but a real threat nonetheless, is that there will be a scandal involving the fixing of a financial bet, for example by tampering with a weather station.

Finally, we believe more regulation to be quite likely (2/1) – although whether this will be by the Gambling Commission or the Financial Services Authority is open to question, and we are not inclined to guess. Good regulation will require the two organisations to work closely together and to be pragmatic as to where lines should be drawn. An outsider?

COST BENEFIT CONSUMER HANDICAP

| | |
|---|---|
| 1/5 | Even Lower Cost Betting |
| 5/1 | Gambling Retirement Plans |
| 6/4 | UK Tax On Winnings |
| 1/10 | Further Flexibility & Innovation |
| 5/1 | Predictive Value |

**Predictable benefits and uncertain costs**

Most of the developments we predict are beneficial to consumers. In particular, ever-lower costs of gambling are extremely likely (1/5) as competition and new business models continue to put pressure on margins across the gambling sector. As with any industry undergoing fundamental and rapid change, it is savvy punters who will benefit most, with the best able to build up savings and perhaps (5/1) even retirement plans from their endeavours. However, no doubt less sophisticated consumers will still fall for well-marketed, high-margin products (as they do in the financial services and savings industry), losing consistently and predictably. There are obstacles ahead for successful punters as well. As already noted, bookmakers will not sit back and accept losses. To continue winning, punters will have to battle against ever more sophisticated risk management techniques and actively seek new opportunities as existing loopholes are identified and plugged. In addition, in the UK, the existing rules whereby betting winnings fall outside the scope of tax may well change (a 6/4 chance). In fact, since punters' winnings reduce bookmakers' gross profits, winners already reduce the overall tax raised from betting. It does not seem likely that our puritanical Chancellor enjoys the fact that successful gamblers make no contribution to his coffers from their gains.

Continued innovation (an almost certain 1/10 chance), both from existing players in the market and from new entrants such as financial services firms, will be aimed at bolstering margins and at holding on to or building market share. But it will also give shrewd punters ever more freedom and flexibility to place bets. Potentially, innovation will also allow people to hedge against downside risks that are currently hard to cover, such as falling (or rising, if you are looking to buy) house prices or bad weather on vacation.

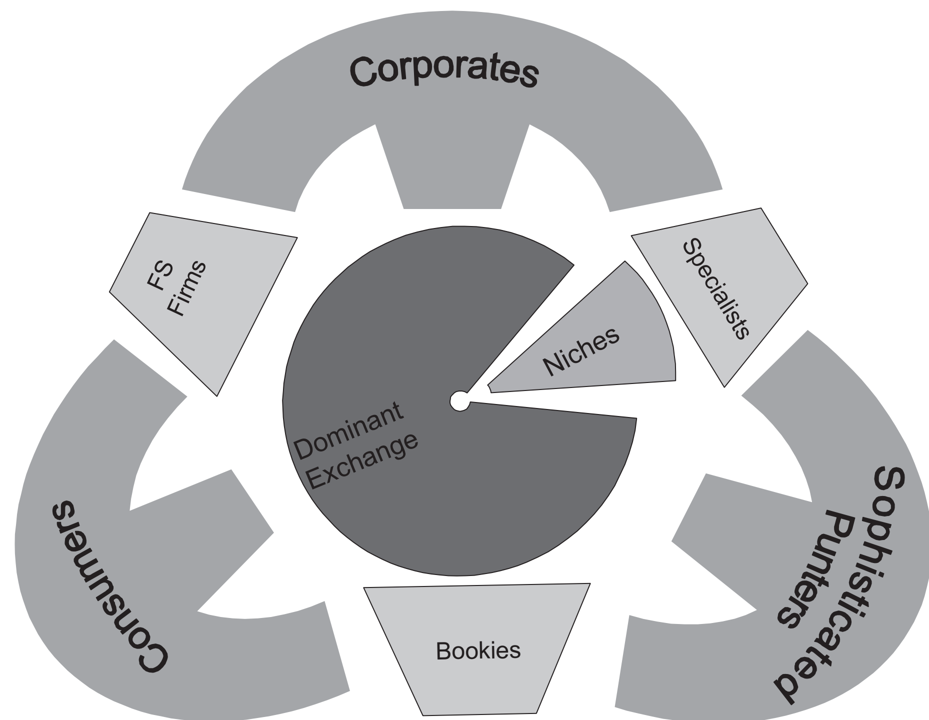
By pooling information, betting markets can predict the likelihood of such events with great accuracy. In our view, they are already more effective predictors of events such as political elections (or reality television show winners) than opinion polls, and they are certainly more immediate as they operate in real time rather than through after-the–event surveys. Over time, we expect (4/6) this predictive value to be recognised more widely, and for organisations that create value through forecasting future trends and outcomes to look at incorporating such markets into their operations. News reporters and commentators may well routinely cite the impact of events on public perception by reference to the consequent changes in betting markets. Betting markets may also aid economic policy-setting and decision-making, for example indicating likely future inflation rates or house price movements.

# "The Future Ain't What It Used to Be"

"The future just ain't what it used to be. And, what's more, it never was." *Yogi Berra*

We believe that the current betting industry model is going to evolve steadily [Diagram 2] with the entry of corporates, financial services firms and new links among them, e.g. pensions tied to bets through the financial services arms.

Diagram 2: A Future Industry Structure




Bookmaking may still be profitable, but it is increasingly vulnerable. And changes to the industry are likely to be bigger and happen faster than most insiders think. The bellwether is the fate of the exchanges – do they continue to absorb all price formation, or do they stumble? Does a single exchange grow and retain domination?

Traditional and specialist bookmakers, despite a long good run, should be feeling very uncomfortable unless they have deep pockets and real product innovation. They need to 'up' their quantitative game from 'seat-of-the-pants' to state-of-the-art technical analysis, especially their risk management and pricing. At the same time, as markets mature, the potential for specialists to 'beat the market' must be questionable as it hasn't really worked in financial markets. Retailers, both existing gaming organisations and newcomers, need innovative tie-ups with exchanges and specialists; but they also need to develop stronger ways of staying close to their customers.

There may also be some interesting – and innovative – interactions with consumers.

## Getting the consumer involved . . .

Most share price issues and corporate battles, aside from the odd personality-intensive takeover, are currently of little interest to consumers. However, consumers could easily be interested in, say, who will win control of a famous company, in a similar way to betting now on who will be appointed manager of a football club. In these new markets, corporates can hedge anything that takes consumers' interest, e.g. whether a corporate will have to buy the nation tickets to New York based on some promotional promise, or whether their key sponsored sports star wins at an international game. This more intensive relationship with consumers – and the importance of consumers to the subsequent pricing and returns – implies that maturity in handling the media and creativity in branding, brand defence or celebrity status will be essential. The downside is that reputational risk will also increase.

We believe that the arbitrage opportunities that we have identified as available today are unlikely to persist. More players and more liquidity should result in a market that more closely resembles traditional financial markets.

## Final thoughts . . .

There are two types of people in the world – those who see financial markets as another form of gambling and those who see gambling as distinct. We are in the first camp. We don't wish to belabour this point, but buying a share today is, in effect, betting against future potential shareholders. Shorting a share is betting against current shareholders. The traditional unease with gambling stems in part from former (and perhaps even some current) organised crime links; but there is also a deeper – and not quite rational – unease. Somehow, gambling on the outcome of events that are non-financial, e.g. sports, seems fun but frivolous – and slightly immoral. Gambling on shares seems like responsible investment. This makes no sense – but changing perceptions will require a real change to society, and how it thinks about status and professional respectability. Imagine an Islington or Wandsworth dinner party where a professional gambler holds him or herself out as the equivalent of an investment banker or hedge fund manager. It will happen: after all, what is *really* the difference?

Our bet is on the future, not on the past.

## References

[1] Guilleân, Mauro F and Tschoegl, Adrian E, "Banking on Gambling: Banks and Lottery-Linked Deposit Accounts", Journal of Financial Services Research, Kluwer Academic Publishers, Vol 21 No 3, 2002, pages 219-231.
[2] "All Bets Are On", *The Economist*, October 2, 2004, pages 79-81.
[3] "More Punters and Deregulation Put Gaming Industry Ahead", *Financial Times*, October 6, 2004, page 5.
[4] Tetlock, Paul C, "How Efficient Are Information Markets? Evidence from an Online Exchange" (Job Market Paper), January 2004 – http://www.people.fas.harvard.edu/~tetlock/papers/Tetlock-Efficient_Info_Markets-01_02.pdf.
[5] Mainelli, Michael, "Risk/Reward in Virtual Financial Communities", Information Services & Use, Volume 23, Number 1, pages 9-17, IOS Press (2003).
[6] As well as the absolute lay price, it is also worth noting the amount of money available at this price. In general, more money increases confidence that the market is a fair reflection of the true chance.
[7] In the UK odds are usually quoted in the format x/y. This corresponds to a return of (x+y)/y to a unit stake and to a probability of y/(x+y). Thus, odds of 6/4 are equivalent to a decimal return of 2.5 and to a probability of 0.4 or 40%.
[8] If someone offered you odds of 7.0 (same as 6/1) for rolling a particular number on a fair dice this is a good bet as the true chance is clearly one in six. Nevertheless, over one roll you will lose 83% of the time. However, if you bet one pound over 1,000 rolls of the dice you would expect an average return of £1,167 for your £1,000 outlay, and the chance of a return of less than £1,000 is remote. This suggests a wider discussion to be had on minimal capital requirements for certain strategies.
[9] For example, Tetlock (*op cit.*), examines betting markets compared to financial markets using data from the betting exchange tradesports.com. Whilst concluding that there are inefficiencies in betting markets, these anomalies are relatively small compared to margins of around 9% as described above. Also, the US exchange Tetlock relies on for data, tradesports.com, is illiquid compared to the UK Betfair.com. Using data from Betfair.com might demonstrate much greater efficiency in betting markets.
[10] Fitzgerald, Patrick "Can Betfair Australia Survive UK Scandal", http://www.crikey.com.au/whistleblower/2004/09/02-0006.html, 2 September 2004.
[11] "Business Digest", The Sunday Times, 7 November 2004, Business Section, page2.
[12] Robert W Hahn, "Using Information Markets to Improve Policy", ADI-Brookings Joint Centre working paper 04-18:www.aei-brookings.org, September 2004.
[13] "Guessing Games", *The Economist*, 20 November 2004, page 96.
[14] The Ontario Problem Gambling Research Centre (www.gamblingresearch.org) catalogues and has links to many relevant publications and studies. In the UK Professor Mark Griffiths of Nottingham Trent University (http://ess.ntu.ac.uk/griffiths/) is a respected authority on gambling addiction.

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