

Opinion

Asser-Report “The Odds of Match Fixing. Facts & Figures on the Integrity Risk of Certain Sports Bets”, T.M.C. Asser Institute (2015)

European Lotteries paid for this opinion. There has been no contact on the content and the conclusions of this opinion with European Lotteries. This opinion is written after the oral hearing for the Dutch parliament where the author criticized the -academic- validity of the Asser-report on 21 May 2015.ⁱ The author is free to publish (parts of) this opinion.

i) BACKGROUND.....	2
III. SUMMARY.....	3
1. INTRODUCTION: MATCHFIXING.....	4
2. SCOPE: SCOPE TOO NARROW, CONCLUSIONS TOO BROAD.....	5
3. METHODOLOGY (DATA, DATA-ANALYSIS)	6
<i>Dataset and the valid of proof in disciplinary and court cases.....</i>	6
<i>Asser didn't mirror the proven fixed cases with the dataset of suspicious matches.....</i>	7
<i>False positives ignored: A suspicious game doesn't have to be fixed</i>	8
<i>False negatives ignored: fixed games might stay under the radar.....</i>	8
4. FINDINGS	9
<i>Risks.....</i>	9
<i>Sports-integrity, ethics.....</i>	10
<i>Overriding reasons of public interest.....</i>	10
<i>Side bets markets and market illiquidity</i>	11
<i>Focus on organized crime?</i>	11
5. RESEARCH AND VERIFICATION NEEDED	12
CONCLUDING REMARKS	12

Opinion: The Asser-Report “The Odds of Match Fixing. Facts & Figures on the Integrity Risk of Certain Sports Bets”, T.M.C. Asser Institute (2015)

i) Background

This opinion concerns the Report “The Odds of Match Fixing. Facts & Figures on the Integrity Risk of Certain Sports Bets”, T.M.C. Asser Institute, 2015, (hereinafter: Asser-report).ⁱⁱ The Asser Institute (hereinafter: Asser) aims in this report “to further the understanding of betting-related match-fixing and to inform current policy debates about the appropriateness of limitations on the regulated sports betting offer.” Asser states that the report is the result of empirical analysis based on two main sources. First, Sportradar’s dataset was used of highly suspicious football matches, gathered over a period of five years, May 2009-November 2014, and historical data of betting operator Betfair. The Asser-report was published in January 2015. The main findings are:

1. Betting-related match fixing is predominantly related to the final outcome of a match and in particular to the number of goals (winning margin).
2. The claim that side bets pose significant match fixing risks lacks empirical support.
3. The claim that live betting would poses a specific or greater match fixing risk in comparison to traditional pre-match betting lacks empirical support.
4. Domestic league football rather than top-level international football is the main target of betting-related match fixing. The evidence also points to a higher number of incidents in relation to first tier league matches than second tier league matches.

21 May 2015 an oral hearing was held for the Dutch Parliament. During this hearing the author criticised the report.ⁱⁱⁱ Asser reacted to the hearing in SportKnowHow.^{iv} This opinion also takes into account this reaction (hereinafter: reaction). This opinion is, in line with the oral hearing, a more in depth and fundamental reaction to the report.

iii. Summary

There is controversy over a number of assumptions, interpretations and systematic errors found in the report, which undermine its conclusions. It is no wonder that the online-industry received the Asser-report with great enthusiasm. The misleading results are used to stress that restrictions on the betting offer aren't necessary. However, the scope of the research is too narrow for the main findings, the methodology lacks a strong empirical basis, the main findings and conclusions are too far-reaching, in contradiction with other research and conflict with other (overriding public-interest) arguments. In short "the appropriateness of limitations on the regulated sports betting offer" is a matter of balancing all kinds of factors based on solid facts and research to ensure a secure and safe environment for consumers, athletes, minors, etc.

1. Scope: Asser's research focuses on the two highest divisions in football only, ignoring other sports, lower divisions, youth sports, friendly matches, etc. The title of the report "The odds of match-fixing..." and Asser's main findings suggest a far broader scope of research. In short, Asser generalizes the results, without taking (enough) into consideration the limited scope of the research.
2. Research-method: The empirical material upon which Asser bases its conclusions mainly consists of a dataset of suspicious matches. Suspiciousness is defined by an abnormal betting pattern identified by Sportradar. A suspicious betting pattern does not necessarily mean that the competition is manipulated. In short, Asser confuses association with causation, by drawing conclusions about match-fixing. In short, the main findings are too general and too broad since there is no causal relation between a fixed game and a suspicious game.
3. Research-method: Asser ignores the probability of false positives or false alarms, denying a reasonable conclusion for the suspiciousness of games, or the (huge) number of suspicious games. In the Netherlands, for example, there are dozens of identified suspicious football matches but none of these matches were proven-fixed-cases (Spapens, 2015). Asser also mitigates the possibility of false negatives. It is possible that 'fixing' stays below the radar, because of (numerous) smaller bets placed via (numerous) accounts. Since Asser ignored to mirror the proven fixed cases with the dataset; it isn't clear whether the dataset of suspicious games has a high or low likelihood of fixed cases.
4. Findings: Asser concludes that match-fixers bet on the outcome and the number of goals. Betting during the match (live betting) or at events, like the first corner, or who gets the first yellow card, would not be attractive for fraudsters. The same would apply to football matches in lower divisions. These conclusions are in contradiction with earlier research, for example, Boniface et al. (2012). Next to this Asser ignores studies, which point at certain risks (Sorbonne-ICSS, 2014, Spapens, Olfers, EY, 2013). Asser doesn't take into consideration public interest arguments, like f.e. the protection of minors, and avoids an important ethical question, the question whether betting on red cards, or yellow cards, is in line with the norms and values in sport and society. Asser points mainly at the illiquidity of the market, by stressing that spot fixing/side bets, don't pose a significant match-fixing risk. However, what is illiquid now can become liquid in the (near) future, f.e by promoting these types of bets via advertising. Policymakers need to think through all consequences, imbalance can be a major source of risk.

1. Introduction: matchfixing

There is no legal definition of match-fixing. To this day, the definition of the Council of Europe is the most authoritative, *“manipulation of sports competitions means an intentional arrangement, act or omission aimed at an improper alteration of the result or the course of a sports competition in order to remove all or part of the unpredictable nature of the aforementioned sports competition with a view to obtaining an undue advantage for oneself or for others.”*^v In the opinion of Spapens the definition should relate to the objective of the manipulator to influence the uncertainty of the game.^{vi} Although match-fixing is as old as sports itself, match-fixing has increased (partly) because of the increase in the online gaming offer.^{vii} Online operators provide an opportunity to gamble on sporting events with the prospect of high returns. Sorbonne reports a considerable increase in return rates for bettors.^{viii} These potentially high returns provide incentives to manipulate sports competitions.

In 2012 FIFPro organized a survey in Eastern European countries.^{ix} 3000 players from 15 countries completed the survey. The result of this survey was that 12% of the players were ever approached to fix a match. Moreover, 24% of respondents thought that match-fixing occurred in their league. Zamante undertook In Belgium a similar study at the end of 2012.^x In both aforementioned studies it wasn't clear what type of match-fixing was involved, f.e. betting related match-fixing or non-betting related match-fixing. In the Netherlands, in 2013 a total of 732 athletes participated in an on-line survey. It showed that 27% of them thought match fixing had taken place in their own environment, while 4% of the athletes themselves had been approached. This involved in the majority of cases, to sport-related match fixing.^{xi} As Spapens concluded, although there are differences in survey-questions and methodology, the results show that no country is immune for match-fixing.^{xii} There is a relative scarcity of (empirical) studies.^{xiii}

Asser claims however, that the report is the *“first ever study to examine potential links between betting-related match fixing cases and specific types of sports bets on the basis of quantitative empirical evidence”*. What can be said about this study, the methodology and the conclusions?

2. Scope: scope too narrow, conclusions too broad

Asser focuses on football only and ignores the differences between sports

Asser's conclusions relate to football only, since Sportradar provided information about football and not about f.e. tennis, cricket, etc.

There are differences between sports.^{xiv} Football is a team sport. Individual sports are more vulnerable because it takes one player to fix a match.^{xv} In case both tennis players are involved they can agree on specific scores. That's why the Dutch government demanded that several sports had to be studied for the study match-fixing in the Netherlands.^{xvi} In some sports, match-fixing is more common than in other sports. Sorbonne ranked cricket as second in the number of cases of manipulation, after football.^{xvii} It is possible that in some sports spot-fixing – manipulation of specific aspects of the game- is more likely than in other sports. In some sports spot-fixing is more difficult to detect and is more profitable than in other sports. In August 2010 a spot-fixing scandal in cricket occurred, during an international test match between England and Pakistan.^{xviii} Some members of the Pakistan national cricket-team took bribes from a bookmaker during a test match in London and deliberately bowled no balls at specific points in an over. A London Court convicted the players. Cricket, as well as other sports like tennis remains outside the scope of the Asser-research. Asser's main findings are however formulated in general terms, for example the main findings that side bets or live betting pose significant match fixing risks lacks empirical support. These findings are too broad for the relatively narrow scope of the research.

Asser focuses on the highest divisions football and ignores f.e. friendly matches

The study and the conclusions drawn in the Asser-report relate to the two highest divisions in football only. Recent examples, such as in Italy where more than 50 people were arrested relate to fixed matches in the third and fourth division.^{xix} RTL 4 Dutch television investigated match fixing in amateur sport.^{xx} An investigation by Belgium concerns match fixing in tennis (Challenger-level).^{xxi} There are many more examples that show that lower leagues are vulnerable to match fixing.^{xxii} A player in a lower division can easily boost his/her salary by fixing a game. An English judge put forward that the people involved in the fix had clearly targeted lower division football clubs because the cost of bribing the players "on their modest wages" was cheaper than approaching players from the higher leagues".^{xxiii} Hill, points at the vulnerability of the preliminary rounds of Champions league matches, "where teams from smaller and poorer European countries play one another". "The games between relatively obscure teams attract more gambling than normal simply because there are no other high-level soccer games during June and July."^{xxiv}

Case studies show that friendly matches are vulnerable to match-fixing.^{xxv} Friendly matches aren't within the scope of the Asser-research either. Perumal, the fixer who was convicted in Finland in 2011 'used' international friendlies.^{xxvi} "The best thing about international friendlies is that save for the final score, nobody reports to FIFA what happens on the pitch. Bookmakers are usually keen to offer bets for international friendlies; betting companies are profit oriented businesses and will bring as many games as they possibly can on their website to attract punters. Since all league activity is suspended during international FIFA calendar days, the only revenue for gambling companies on those dates is represented by international fixtures."^{xxvii}

In Asser's reaction, Asser confirmed that the research and its main findings do not relate to lower division games, youth games and friendly matches.

3. Methodology (data, data-analysis)

Dataset and the valid of proof in disciplinary and court cases

The empirical material upon which Asser bases its conclusions mainly consists of a dataset of suspicious matches whereby suspiciousness is defined by an abnormal betting pattern identified by Sportradar. This however, does not mean that the competition is manipulated.

It's important to know whether in disciplinary or in criminal cases the data, based on suspicious betting patterns, is considered proof for match-fixing.

- ❖ Disciplinary cases: For the Court of Arbitration for Sport (CAS) the degree of proof requested in a case of match fixing is related to the relevant facts that must be established to the comfortable satisfaction of the Panel having in mind the seriousness of the allegations.^{xxviii} In a case related to Bochum, CAS stated that "Evidence of repeated contacts between the referee and the members of a criminal group involved in match-fixing and betting-fraud, in particular the establishment of the facts that the referee had been contacted by persons who offered him money to manipulate the results of a match constitutes not only proof to the comfortable satisfaction of the Panel but indeed a proof beyond reasonable doubt." CAS doesn't review suspicious betting patterns as a fully reliable means of detecting match-fixing.
- ❖ Criminal cases: The largest football investigation was coordinated by multiple police enquiries across Europe, was facilitated by intelligence reports from Europol and "based on the analysis of 13,000 emails and other material, which identified links between matches and suspects and uncovered the nature of the organised crime network behind the illegal activities".^{xxix} Cases also show that wiretaps were crucial to detect match-fixing. "Conversations tapped by the German police, whose exact content UEFA received access to, including an SMS of 21 October 2009 ('I had coffee with number 17') and a phone conversation between Marijo Cvrtak and Ante Sapina of 20 October 2009 (19.41),

in which Cvrtak informed Ante Sapina that the Debreceni VSC goalkeeper had sent him a text message in which he had cancelled the deal. These conversations confirm that the match in question was to be fixed and, together with the witness' statement, confirm that the players in question were somehow informed of, if not involved in, this match-fixing deal."^{xxx} Italian prosecutors uncovered the 2006 Calciopoli scandal after tapping phone conversations in relation to an investigation on the use of doping at Juventus team.^{xxxi} And there are many other cases on which scientists conclude that proven match-fixing cases were mainly uncovered by investigations in -other- criminal behaviour and where accidentally prosecutors found proof of match-fixing in wire taps, emails and so on.^{xxxii}

Match-fixing cases were proven not because of data of suspicious matches but by thorough and comprehensive examination and investigation of other facts and sources by criminal investigators. In its reaction to the hearing Asser states "... Reports of suspicious betting patterns are just a starting point for a further and thorough investigation by the federation or other authorities..." And thus aren't in itself proof of match-fixing.

Basically Asser confuses association with causation by drawing conclusions about match-fixing out of a dataset of suspicious games. It's not that a causal relation between a suspicious match and a fixed match isn't possible, but a suspicious game doesn't necessarily mean a fixed game. We don't draw conclusions about shoplifting by counting the number of persons that run out of shops.

Asser didn't mirror the proven fixed cases with the dataset of suspicious matches

Asser stated in its reaction to the hearing^{xxxiii}: "systematic collected, reliable primary sources about match-fixing are unavailable. Typically, press releases are the only source of information on suspected or proven cases of match-fixing." This is highly suggestive and hinting at the non-academic nature of for example criminal studies as performed for example by Hill or Spapens.^{xxxiv} It isn't true either. Primary sources are for example the underlying court-cases in Finland, Germany, England, and so on, and the disciplinary cases from the Court of Arbitration for sport. In March 2012 one of the objectives of the report 'Match fixing in sport a mapping of criminal law provisions in EU 27', which was carried out for the European Commission (Directorate General for Education and Culture) was to 'Provide an overview of relevant criminal case law on the application of existing legislation to cases of match-fixing' a questionnaire was send to national Ministries in the 27 Member States. At page 46 the researchers enclose a list of cases and penalties. In Annex 1 of this report, the researchers listed all jurisprudence per Country. Next to the criminal cases it's easy to get access to all match-fixing jurisprudence via the website CAS-TAS.org.^{xxxv} Some researchers like Hill or Spapens, did also have access to police

reports and other investigative information. Of course there are also academic-survey-studies, etc.^{xxxvi}

Since Asser does not study proven cases of match-fixing, or cases that are current under investigation by criminal investigation services or sports-bodies, it isn't clear which cases within the dataset of suspicious matches were proven to be fixed cases. In the Netherlands, for example, there are dozens of identified suspicious football matches but none of these matches proved to be fixed.^{xxxvii} For a thorough and trustworthy empirical research it's important to mirror the proven-to-be-fixed cases with the betting behaviour before and during the matches and then draw conclusions about betting related match-fixing. Because Asser didn't mirror the proven fixed cases with the dataset, it's impossible to conclude whether the dataset of suspicious games has a high or low likelihood of fixed cases.

False positives ignored: A suspicious game doesn't have to be fixed

The Asser report is not based on crime statistics of match-fixing, but solely based on model provisions that consist of data of abnormal betting patterns identified by Sportradar that lead to a dataset of suspicious matches (hereinafter: dataset). Abnormal betting patterns can however, be caused and explained by other means than match-fixing. In its reaction to the hearing Asser confirmed that there is a possibility of false positives. A false positive is 'normal' behaviour that is identified as 'suspicious' behaviour. In case all suspicious matches are fixed, the false positive rate is zero. 'Suspiciousness' can for example be caused by strategic behaviour of bookmakers who are expecting to deal with insiders.^{xxxviii} Insiders are individuals who have access to non-public information and act on it, or pass the information on to another who uses this information to place bets. In order for a dataset of suspicious matches to stand up to other -criminal- studies, it's important to manage the risk of 'false positives'. To do this properly, it's important that a false positive is extremely unlikely: to test and research what is normal betting behaviour and how much variation is acceptable. The method used by Asser, drawing conclusions on a dataset of suspicious games isn't accurate enough and isn't sufficiently robust to enable a reliable judgement about match-fixing.

False negatives ignored: fixed games might stay under the radar

Chief investigator in the Bochum case, Friedhelm Althans, claimed at a press conference covered by Der Spiegel that systems installed by FIFA and the European football organization UEFA "had remained thus far without any measurable success." In this article a former UEFA

employee was quoted who pointed out "when someone bets a high amount on a match, an amount of money that is much higher than the average bet, then the system calls attention to the match as endangered." But the system was "essentially blind" in cases where "many, smaller bets are made at several different sports betting shops." In the same article a former employee of Europol is quoted who states that real bet manipulators find the systems easy to avoid.^{xxxix} Paul Rooij confessed at the hearing in Court (Bochum-Case) that he manipulated four matches within the German league and explained that placing smaller bets on several accounts is relatively easy. The placed bets didn't draw any attention of the monitoring systems.^{xl} A thorough study is needed to disclose the proportion of proven fixed cases that stayed below the radar. In its report Asser didn't take into consideration the probability that a fixed game doesn't appear in the dataset of suspicious matches. Asser confirms in its reaction: "a lot of proven cases of match-fixing have remained under their radar". It is not clear what kind of fixed matches stay below the radar and how many.

4. Findings

Asser concludes that match-fixers would gamble on the outcome and the number of goals. Betting during the match (live betting) or at events, like who gets the first yellow card, would not be attractive for fraudsters. The same would apply to football matches in lower divisions. These conclusions are in contradiction with earlier research.

Risks

Spapens, Olfers defined a number of risks that increase the risk of match-fixing, such as financial problems (clubs, players, referees), contacts with criminals (players, referees) and a dependency relationship between player and club. Of course there are also risks with regard to the betting offer. When there is no betting offer at all, there is no betting related fixing... Bonafice et al conclude with regard to live betting that "live bets on the Internet are likely to pose a specific risk because where a certain phase of a game is rigged, it is possible to take advantage of variations in the odds and thereby be assured of winning irrespective of the outcome of the game."^{xli} Matches that are easily to manipulate are of greater risk, like for example matches that are easily to manipulate by one person. Sorbonne points at the risk of betting of certain betting formulas like handicaps –f.e. one team starts with a handicap in goals- and under/over. According to Sorbonne these betting formulas, where there is a separation of the sporting result with the betting result, represents a major risk factor, because these formulas will "increase liquidity to a level that is sufficient to ensure the profitability of criminal operations."^{xlii} Spapens, Olfers conclude that betting on events during the match, like betting on yellow cards; enhance match-fixing risks, because this type of fixing isn't directly related to the match-result.^{xliii} Next to these risks there are risks related to the online gambling industry like fraud, money laundering,

theft and so on.^{xliv} States aim at a safe and secure online gambling market, for consumers and operators. “As such controlling market entry and the operational activities of online businesses is at the forefront of most regulatory measures.”^{xlv}

Sports-integrity, ethics

All sports are concerned with unethical behaviour and there are many programs to enhance fair play.^{xlvi} The question is whether the betting offer can be contrary to ethics. Betting on red cards, which means betting on unethical behaviour on the field - contrary to the norms and values of sport is acceptable? It is thinkable that policymakers forbid certain types of bets, because of risk-prevention and overriding ethical reasons.

Overriding reasons of public interest

Sports associations, the EU and governments are also active to protect minors. It is thinkable that policymakers forbid betting on youth games for creating a safe environment for children and for ethical reasons.^{xlvii} So are worrying trends in gambling, something governments do take into account. When it comes to pathological gambling the Supreme Court in the United States put forward: “... the law should not invite them to play themselves into debt. The judiciary cannot protect pathological gamblers from themselves, but we can refuse to participate in their financial ruin.”^{xlviii}

Policymakers forbid certain types of bets, limit the maximum amount people can bet, or limit the pay-out ratio, because of risk-prevention, consumer protection, protection of minors and overriding ethical reasons. Policymakers need to think through all consequences, imbalance can be a major source of risk. That’s why the Council of Europe calls for to combat the manipulation of sports competitions in relation to sports betting, including, where appropriate the limitation of the supply of sports betting, following consultation with the national sports organizations and sports betting operators, particularly excluding sports competitions which are designed for those under the age of 18 or where the organizational conditions and/or stakes in sporting terms are inadequate. The resolution of the European parliament in 2013^{xlix} calls for more cooperation at European level, under the coordination of the Commission, to identify and prohibit online betting operators engaged in illegal activities such as, inter alia, match-fixing or betting on junior competitions involving minors and expects the online gambling industry to respect this ban through self-regulation. Next to this the European parliament resolution encourages the Member States to consider a ban on all forms of spot fixing, such as gambling on corner kicks, free kicks, throw-ins and yellow cards, “as these has proven to be very vulnerable to match-fixing”. Restrictions may be justified, in particular, by the objectives of consumer protection and the prevention of both fraud and incitement to squander money on gambling, as

well as the need to preserve public order.^l

Side bets markets and market illiquidity

Side bets are not directly related to the final outcome of the game f.e. betting on whether a penalty will be taken by a team, or which player gets a yellow or red card. Sorbonne concluded that there is market-illiquidity. “Although these products contributed to the transformation of traditional betting markets, their liquidity levels limit, for the time being, their attractiveness to cheats and therefor limit the danger of sport”^{li} Sorbonne gives in figure 22 and figure 23 the main risks and sport danger associated with betting types and betting formulas. Spapens, Olfers studied several websites and concluded that there was a limited number of websites to offer bets on specific events, like yellow cards.^{lii}

The conclusions are: a) Volumes attract criminals; b) The risk of individual fraud is more significant than organised crime. c) Liquidity levels are limited.

Asser argues that since the liquidity levels are limited, there is no need to regulate. A lack of liquidity can however change, in case volume is attracted f.e. by more advertising. What is illiquid now can become liquid in the foreseeable future and therefor will be (even more) profitable. The conclusion that because of illiquidity there is no need to regulate is too far reaching.

Focus on organized crime?

Sorbonne states “The risk of individual fraud is more significant than the risk of organized crime, especially since an individual can easily manipulate an action during a game”.^{liii} The report hints in Part 3 at betting related match-fixing combined with bribery or coercion by referring to the involvement of ‘criminal organisations’.^{liv} “The opportunities for criminal organisations are appraised on the basis of the levels of liquidity in different betting markets, using the data from Betfair as illustration”. (Asser-report). Asser concludes that the “key take away is rather that the focus of efforts to prevent, investigate, and sanction betting-related match fixing should lie on fraud linked to organised crime.” And further: “The potential risk for individual fraud, i.e. players or referees conceiving and exploiting their own manipulation without intervention of a criminal organisation, could be considered more significant. However, if advantage were only taken from the betting opportunities offered by European regulated operators, the profits to be gained from this manipulation (without running the risk of detection) are minimal”. The argument: because of minimum profit and risk of protection in case of players/referees manipulating own games, the focus should be on fraud linked to organised crime. By focussing solely on fraud linked to organized crime, a ‘hidden category’ stays below the radar, but this type of behaviour

is just as harmful for the integrity of sports. The integrity of sports needs to be protected, see Council of Europe, whether criminal organisations are involved or not.

5. Research and verification needed

Asser is an academic institute based in the Netherlands. According to the Dutch Academic integrity principles of good scientific education and research, presented data need to be verifiable.^{lv} The code expressly states that it's necessary that the research can be replicated to test its accuracy. Within the gambling world and the (commercial) interests of many parties, it's extremely important that research can be replicated, to prevent that the main findings are a product of selective reporting, selective analysis, etc. In its reaction to the hearing Asser questions the reliability of other studies which refer to interviews, survey results, quotations from newspapers and so on. This doesn't say anything about the need to replicate scientific research. The other studies give information about the survey-questions, the respondents, method of research and can be replicated.

According to Asser, Sportradar is "independent". Sportradar is a commercial firm and data releases must also be considered in light of business interests. This doesn't mean the dataset is unreliable, nor that Sportradar is unreliable, this does solely mean that the commercial interest should be taken into account. Commercial interests should f.e. be considered in assessing whether there might occur or there are any conflicts of interest and if so, whether the conflicts of interests might adversely affect the data.

Concluding remarks

This opinion addressed the shortcomings of the Asser report. First the methodology used is inadequate, the main findings too broad and lack sufficient support. Second this opinion addressed key concerns. Not surprisingly, the online betting industry uses the report as evidence that (more) regulation and restrictions on the betting offer aren't necessary. This, however, doesn't do justice to all academic reports and ignores the fact that when it comes to policymaking, all factors need to be balanced to ensure a secure and safe environment for consumers, athletes, minors, etc.

-
- ⁱ <https://www.youtube.com/watch?v=jYt3Nh-5PhQ>
- ⁱⁱ Rompuy van B., *The Odds of Matchfixing. Facts and Figures on the integrity risk of certain Sports Bets*, The Hague: T.M.C. Asser Institute, 2015.
- ⁱⁱⁱ <https://www.youtube.com/watch?v=jYt3Nh-5PhQ>
- ^{iv} <http://www.sportknowhow.nl/achtergronden/feedback-xl/item/98109/reactie-op-rondetafelgesprek--27integriteit-en-matchfixing-27>
- ^v Council of Europe *Convention on the Manipulation of Sports Competitions*, 2014
- ^{vi} Spapens, A.C. *Geen Schijn van kans, Orde van de dag*, Wolters-Kluwer, 2015. CAS 2007/A/1427 M. V. ATP Tour Inc, award of 11 June 2008. In this case the Panel supports the reasoning of the AHO to conclude that the player had not in mind to attack the integrity of tennis.
- ^{vii} Forest, D, McHale, I, McAuley, K. Say it ain't so: betting related malpractice in sport. *International Journal of Sport Finance*, 156-166. 4-5.
- ^{viii} Sorbonne-ICSS, *Protecting the Integrity of Sport Competition*. The last bet for modern sport. 2014, 14.
- ^{ix} *Match-Fixing in International Sports*. New York: Springer FIFPro. FIFPro Balckbook Easertrn Europe, 2012.
- ^x Zamante, *Transfers, Money and the Social Aspect in Belgian Amateur Football*, 2012.
- ^{xi} Spapens, Olfers, EY, *Match-fixing in Nederland, de aard en reikwijdte van het probleem, de risico's en de aanpak*, 2013. http://www.tilburguniversity.edu/upload/fe00ba0b-5ac9-4632-b29b-5482213da8ce_MATCHFIXING%20RAPPORT.pdf
- ^{xii} Spapens, A.C. *Geen Schijn van kans, Orde van de dag*, Wolters-Kluwer, 2015.
- ^{xiii} Banks, J. *Online gambling and crime*, Farnhem: Ashgate, 2014, Haberfeld, M. D. Sheehan, *Matchfixing in International Sports*, New York: Springer 2014. Bonafice, P., Lacarriere, S., Verschuuren, P., Tuailon, A., Forrest, D., Icard, J-M., Meyer, J-P, Wang. *Sports Betting and Corruption, How top reserve the integrity of sport*, 2012. Rossi, M. *Match rigging and the favorite long shot bias in the Italian football betting market*.
- ^{xiv} Bonafice, P., Lacarriere, S., Verschuuren, P., Tuailon, A., Forrest, D., Icard, J-M., Meyer, J-P. en Wang *Sports Betting and Corruption, How top reserve the integrity of sport*, 2012.
- ^{xv} Spapens, Olfers, EY, *Match-fixing in Nederland, de aard en reikwijdte van het probleem, de risico's en de aanpak*, 2013., p. 36
- ^{xvi} Spapens, Olfers, EY, *Match-fixing in Nederland, de aard en reikwijdte van het probleem, de risico's en de aanpak*, 2013. http://www.tilburguniversity.edu/upload/fe00ba0b-5ac9-4632-b29b-5482213da8ce_MATCHFIXING%20RAPPORT.pdf
- ^{xvii} Sorbonne-ICSS, *Protecting the Integrity of Sport Competition*. The last bet for modern sport. 2014, 14.
- ^{xviii} K. Carpenter, *Match Fixing The Biggest Threat to Sport in the 21st Century?* Lawinsport, 2011, p. 13-14.
- ^{xix} *Guardian*, 19 May 2015.
- ^{xx} Kamervragen, 23 juni 2015, leden Dekken en Bruins Slot over het bericht in de media op 22 mei "Matchfixing aan de orde van de dag."
- ^{xxi} European Parliament *stes that lower divisions are a target*. FD, 3 juni 2015.
- ^{xxii} KEA, *Matchfixing in sport, a mapping of criminal law provisions in EU 27*, March 2012. <http://www.nu.nl/voetbal/4051537/vijftig-arrestaties-matchfixing-in-lagere-divisies-italie.html>
<http://www.rtlnieuws.nl/nieuws/binnenland/wijdverbreide-omkoping-amateurvoetbal> <http://www.humo.be/humo-archieff/332202/de-grand-slam-van-de-maffia-de-georganiseerde-misdaad-manipuleert-tenniswedstrijden-vanuit-belgie>
<http://www.lawinsport.com/blog/interpol-integrity-in-sport/item/integrity-in-sport-update-former-president-of-lecce-football-club-sentenced-for-fixing> <http://www.telegraph.co.uk/sport/football/10914440/Businessmen-jailed-for-five-years-over-match-fixing-scandal.html?mobile=basic>
- ^{xxiii} *Guardian*, 20 June 2014
- ^{xxiv} Hill, D. *The Fix*, Mc Clelland&Stewart, 2008, 97
- ^{xxv} Bonafice, P., Lacarriere, S., Verschuuren, P., Tuailon, A., Forrest, D., Icard, J-M., Meyer, J-P. en Wang *Sports Betting and Corruption, How top reserve the integrity of sport*, 2012
- ^{xxvi} *Invisible Dog*, Interview with the keelong King: Wilson Raj Perumal, wilson www.invisible-dog.com/interview_wilson_eng.html
- ^{xxvii} Fifa report, June 2014, see also: <http://america.aljazeera.com/articles/2014/6/5/world-cup-fixing.html>. See also, Forrest, B. *Duister spel, Matchfixing in het internationale voetbal*, Spectrum, 2014, 97
- ^{xxviii} Arbitration CAS 2010/A/2172 O. V. Union des Associations Europeennes de football (UEFA), award of 18 January 2011.
- ^{xxix} <https://www.europol.europa.eu/content/results-largest-football-match-fixing-investigation-europe>
- ^{xxx} CAS 2010/A/2266 2 N &V v. UEFA, award of 5 May 2011
- ^{xxxi} Rossi, M. *Match rigging and the favorite long shot bias in the Italian football betting market*.
- ^{xxxii} *Europol Update Results from the largest football match-fixing investigation in Europe*. Den Haag: Europol, 2013.
- ^{xxxiii} <http://www.sportknowhow.nl/achtergronden/feedback-xl/item/98109/reactie-op-rondetafelgesprek--27integriteit-en-matchfixing-27>

^{xxxiv} They both use qualitative and quantitative research methods and don't base their conclusions solely out of newspaper articles or interviews.

^{xxxv} <http://www.tas-cas.org/en/jurisprudence/recent-decisions.html>

^{xxxvi} Spapens, Olfers, EY, Match-fixing in Nederland, de aard en reikwijdte van het probleem, de risico's en de aanpak, 2013. http://www.tilburguniversity.edu/upload/fe00ba0b-5ac9-4632-b29b-5482213da8ce_MATCHFIXING%20RAPPORT.pdf

^{xxxvii} Spapens, A.C. Geen Schijn van kans, *Orde van de dag*, Wolters-Kluwer, 2015.

^{xxxviii} Rossi, M. Match rigging and the favorite long shot bias in the Italian football betting market. Crafts, N.F.R. *Some Evidence of Insider Trading Knowledge in Horse Race Betting in Britain*, *Economica*, 1985, 52, 295-304. Figlewsky, S. *Subjective Information and Market Efficiency in a Betting Market*, 1979, *Journal of Political Economy*, 87:1, 75-89. S. Swindler and R. Shaw, *Racetrack wagering and the uninformed bettor: a study of market efficiency*, *Quarterly Review of Economics and Finance*, 1995, 35:3, 305-14. Schnytzer, and Y. Shilony, *Inside Information in a Betting Market*, 1995, *Economic Journal*, 105, 963-71. Schnytzer, and G. Weinberg, *Testing for Home Team and Favorite Biases in the Australian Rules Football Fixed-Odds and Point Spread Betting Markets*, *Journal of Sports Economics*, 2008, 9:2, 173-90.

^{xxxix} Der Spiegel, February 5, 2013.

^{xl} Volkskrant, April 22, 2015

^{xli} Bonafice, P., Lacarriere, S., Verschuuren, P., Tuailon, A., Forrest, D., Icard, J-M., Meyer, J-P. Wang, et al. Sports Betting and Corruption, How to preserve the integrity of sport, 2012.

^{xlii} Sorbonne-ICSS, *Protecting the Integrity of Sport Competition*. The last bet for modern sport. 2014, 27.

^{xliiii} Spapens, Olfers, EY, Match-fixing in Nederland, de aard en reikwijdte van het probleem, de risico's en de aanpak, 2013.

^{xliiv} Sorbonne-ICSS, *Protecting the Integrity of Sport Competition*. The last bet for modern sport. 2014. See also 13th UN Congress on Crime prevention and Criminal Justice. IOC and UNOC Criminalization approaches to combat match-fixing and illegal/irregular betting: a global perspective, comparative study on the applicability of criminal law provisions concerning match-fixing and illegal/irregular betting. 2013.

^{xliv} Banks, J. Online gambling and crime, Farnham: Ashgate, 2014, Haberfeld, M. D. Sheehan, Matchfixing in International Sports, New York: Springer 2014. Bonafice, P., Lacarriere, S., Verschuuren, P., Tuailon, A., Forrest, D., Icard, J-M., Meyer, J-P. en Wang et al. Sports Betting and Corruption, How to preserve the integrity of sport, 2012, 134.

^{xlvi} Roland, N. Holze, J. Sports Development and young people, the role of international organizations in Routledge Handbook of Sports development, 2011, 204. See f.e. 19 September 2015, World Summit Ethics in Sport conference.

^{xlvii} White paper on sport

^{xlviii} Metropolitan Creditors services of Sacramento v. Sadri, 15 Cal. App. LEXIS 559, 19 Cal. Rptr. 2d 646 (Cal. Ct. App. 1993)

^{xlix} European Parliament resolution of 10 September 2013 on online gambling in the internal market (2012/2322(INI))

ⁱ ECJ, Case C-258/08, Ladbroke's Betting & Gaming Ltd and Ladbroke's International Ltd v Stichting de Nationale Sporttotalisator, 2010.

ⁱⁱ Sorbonne-ICSS, *Protecting the Integrity of Sport Competition*. The last bet for modern sport. 2014, 28..

ⁱⁱⁱ Spapens, Olfers, EY, Match-fixing in Nederland, de aard en reikwijdte van het probleem, de risico's en de aanpak, 2013.

ⁱⁱⁱⁱ Sorbonne-ICSS, *Protecting the Integrity of Sport Competition*. The last bet for modern sport. 2014.

^{lv} Spapens and Olfers made distinctions between the different types of match-fixing and argued that a distinction could be made between sports-related and betting-related match-fixing. Also a distinction could be made between situations with bribery or coercion and situations without bribery or coercion. (Spapens, Olfers, 2013). The Asser report doesn't make a distinction between situations with bribery or coercion and situations without bribery or coercion.

^{lv} Nederlandse Gedragscode wetenschapsbeoefening.