



**Università
di Brescia**

Department of Economics and Management



RESEARCH SEMINAR

Statistical analysis of betting markets

Profitability, efficiency, optimality and information extraction

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14:30

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The sports betting market is not only a billion-dollar business, but also a fruitful data domain for scientific research. Betting odds offered by bookmakers can be considered accurate forecasts for real-world events for at least three reasons.

On the one hand, they can be seen as the product of sophisticated forecasting models used by the bookmakers to accurately set these odds. On the other hand, they can be seen as a product of a market structure with financial incentives, where many participants influence the odds, which fulfils theoretical requirements of market efficiency and crowd wisdom. Moreover, and maybe most importantly, the high accuracy of betting odds is a robust empirical result in the literature.

The present talk will shed light on several aspects of statistical analysis in betting markets: First, it tackles the question of what is required to obtain a profitable model against the market. Second, it asks whether finding profitable models is even possible based on public information or whether markets are semi-strong efficient. Third, it approaches the question of how much information are actually enclosed in betting odds and whether these can be compared to statistical optimality. Fourth, it showcases how the information enclosed in betting odds can be extracted to be used in sports practice, sports analytics and performance analysis.

Reference:

Wunderlich, F., Caparrós, M.G., Memmert, D. (2026). Does the consideration of market prices in model selection increase model profitability? Evidence from theory, artificial data and real-world data. International Journal of Forecasting.

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