

Exploring the relationship between gambling involvement and financial health

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Background

This study aims to find highly involved gamblers among open banking users in the UK and compare their financial health with low involvement gamblers. The objective of this study is to explore if higher gambling engagement is associated with poor financial health.

Methodology

From a dataset of 1.8 million open banking users, 554,916 were identified following exclusion of users with zero reported income or missing transaction records. To characterise the concentration of gambling activity, Gini coefficients and Lorenz curves were computed for three primary metrics: total gambling deposits, number of gambling deposits, and net gambling spend. For each metric, a data-driven High-Involvement (HI) threshold was identified using the Kneedle algorithm applied to the descending cumulative distribution, locating the inflection point beyond which a small proportion of users accounts for the vast majority of total gambling activity. Users at or above this threshold were classified as High-Involvement (HI); the remainder as Less-Involvement (LI). A combined HI classification was derived by requiring a user to exceed the elbow threshold on all three metrics simultaneously. Financial health indicators were then compared across HI and LI groups.

Engineered Features

Financial Health & Income

- Total & Salary Income
- Income Volatility & Visibility
- Account Balances (Avg/Min/Max)
- Disposable Income
- Buffer / Shock-Withstanding Capacity

General Expenditure & Baseline Behavior

- Total Transactions & Activity
- Total Outflow & Expenditures
- Fixed vs. Flexible Spending Ratios
- Investment & Insurance Spend

Debt, Overdrafts & Credit Cards

- Overdraft Months & Fees
- Payday Loans & BNPL Amount
- Traditional vs. Non-Traditional Credit
- Debt Collection & Service Ratios

Gambling Behavior & Intensity

- Gambling Deposits & Credits (Counts/Amounts)
- Net Gambling Spend & Volatility
- Spend Relative to Income/Disposable Income
- Merchant Concentration (HHI) & Active Months

Are gambling habits related to financial health?

