

The Use of Artificial Intelligence and the Future of Data Analytics to Fight Fraud

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DEPARTMENT FOR WORK AND PENSIONS

WHAT WE DO MATTERS



We've been undertaking the greatest welfare reform in a generation



CUSTOMERS

DWP serves over 20 million customers with diverse needs and backgrounds

Access to work changes
New Child Maintenance system
Work Programme
Time limit contributory ESA
Work Choice
Benefit Cap
Child Poverty strategy
Move lone parents onto JSA
New sanctions regime
Automatic Enrolment
New Enterprise Allowance
Triple lock on pensions
Sector Based Work Academies
End contracting out for pension schemes
New State Pension
New single fraud investigation service
Universal Credit
Personal Independence Payment

Fraud, Error and Debt Strategy

Prevent – where we can

Detect – quickly

Correct and Collect – efficiently , effectively and with compassion

Fraud and Error in 2018/19

2.2% of benefit expenditure was overpaid in 2018/19

This remained the same as in 2017/18. It amounted to **£4.1bn** of overpayments. This is the joint highest recorded rate

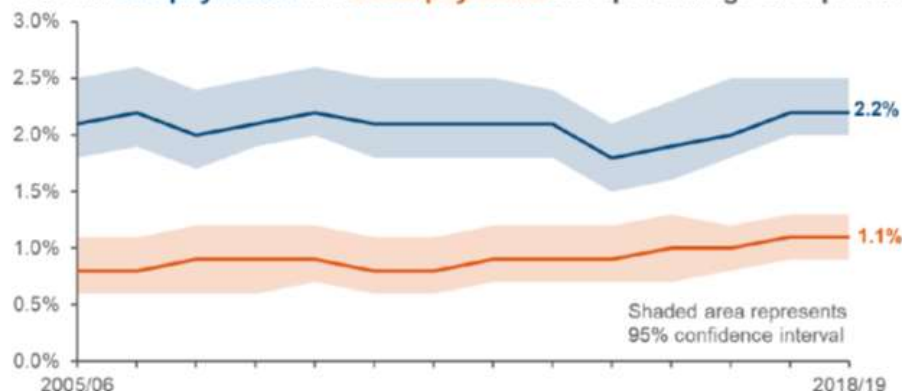
1.1% of benefit expenditure was underpaid in 2018/19

This remained the same as in 2017/18. It amounted to **£2.0bn** of underpayments. This is the joint highest recorded rate

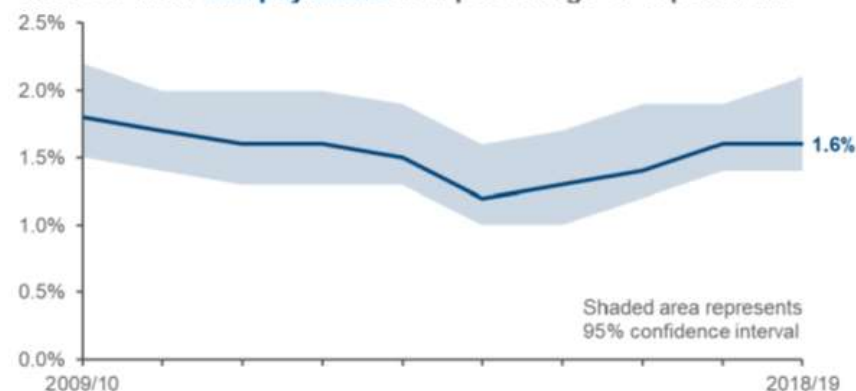
Net Government loss from overpayments was 1.6% of benefit expenditure

This remained the same as in 2017/18. **£1.1bn** of overpayments were recovered in 2018/19 so the net Government loss was **£3.0bn**

Overall overpayments and underpayments as a percentage of expenditure



Net loss from overpayments as a percentage of expenditure



Fraud, Error and Debt Strategy – prevent and detect

Opportunities in Using Data Analytics



Challenges



Where we are



Things we've done



Examples

- **Filtering public referrals using machine learning**
- **Detecting SOC using Network Analytics**
- **Re-ordering our backlogs**
- **Looking for LT using anomaly detection**



In conclusion

- **It's early days, but we've made a great start**
- **We are continuing to investment, in people, infrastructure and tools;**