

AUDIT CONTROL AML (KYT) PROJECT



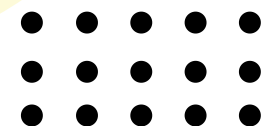
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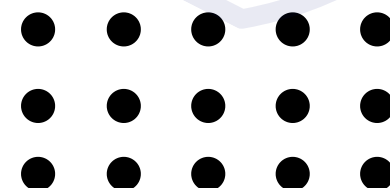
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CASE OVERVIEW

DEUTSCHE BANK MIRROR TRADING SCANDAL

- Period: 2011 – 2015
- Amount laundered: ~\$10 billion
- Mechanism: Mirror trading (buy in Moscow RUB → sell in London USD/EUR/GBP)
- Currencies involved: RUB → USD / EUR / GBP
- Regulators: UK FCA & NY DFS
- Fine: \$630 million (2017)
- Key concepts: Mirror Trading, FX Laundering, Cross-border flows, Layering stage

Deutsche Bank, <https://www.db.com/>

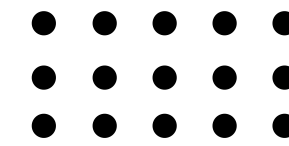


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CASE OVERVIEW

LAUNDERING MECHANISM: HOW MIRROR TRADING WORKED



LOCATION	ACTION	CURRENCY	KEY FEATURES	RED FLAG
MOSCOW	Buy securities	RUB	Trade executed on local market	No real economic purpose
LONDON	Sell same securities	USD/EUR/GBP	Mirror of Moscow trade	Identical volume & timing
Both	Same client involved	RUB → USD/EUR/GBP	Back-to-back trades	Synthetic FX flow (layering)

FROM MIRROR TRADES TO INTERNAL IMPACT



WHAT THESE TRADES DID INSIDE THE BANK?

Suspicious Patterns:

- Cross-border flows:
RUB out → USD/EUR/GBP in
- Trades look normal individually but suspicious collectively

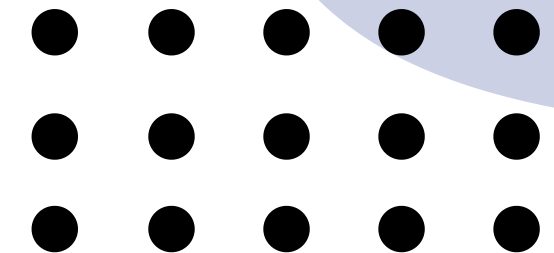
KYT / Audit Takeaways:

Flag transactions with:

- Repetitive trades
- No economic purpose
- Cross-border symmetry

Lesson:

- Money laundering can hide in normal-looking trades
- Integrate KYT
- Use data analytics and pattern recognition to detect patterns



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DOES THE MISMATCH BETWEEN 'PAYMENT CURRENCY' AND 'BANK LOCATION' SERVE AS A RELIABLE AUDIT RED FLAG FOR CROSS-BORDER MONEY LAUNDERING?

Kaggle: Anti Money Laundering Transaction Data (SAML-D)



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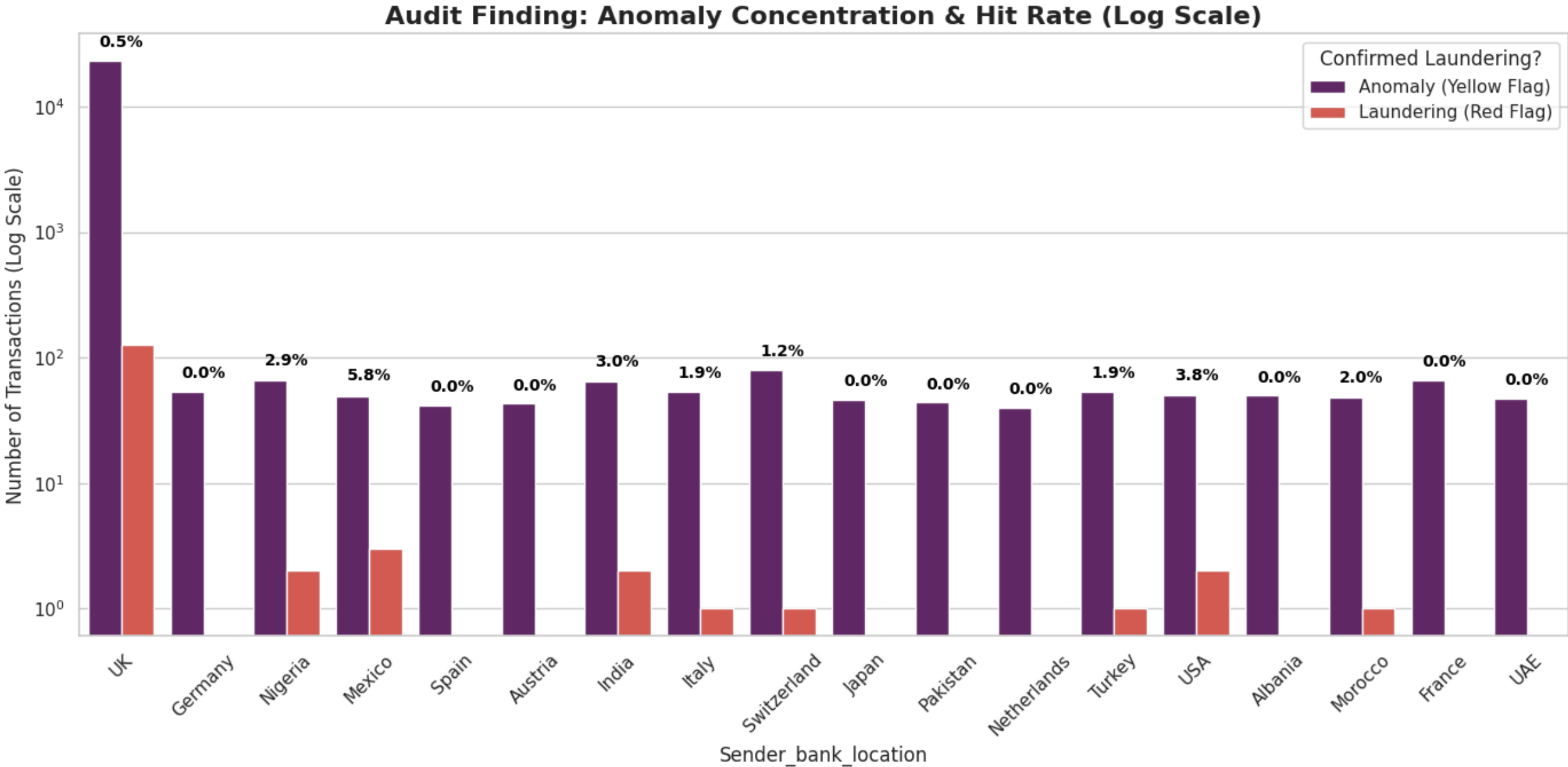
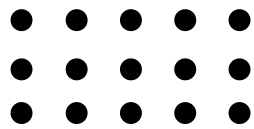
HYPOTHESIS A

Transactions where the sender bank location does not match the payment currency have a significantly higher correlation with confirmed laundering cases.

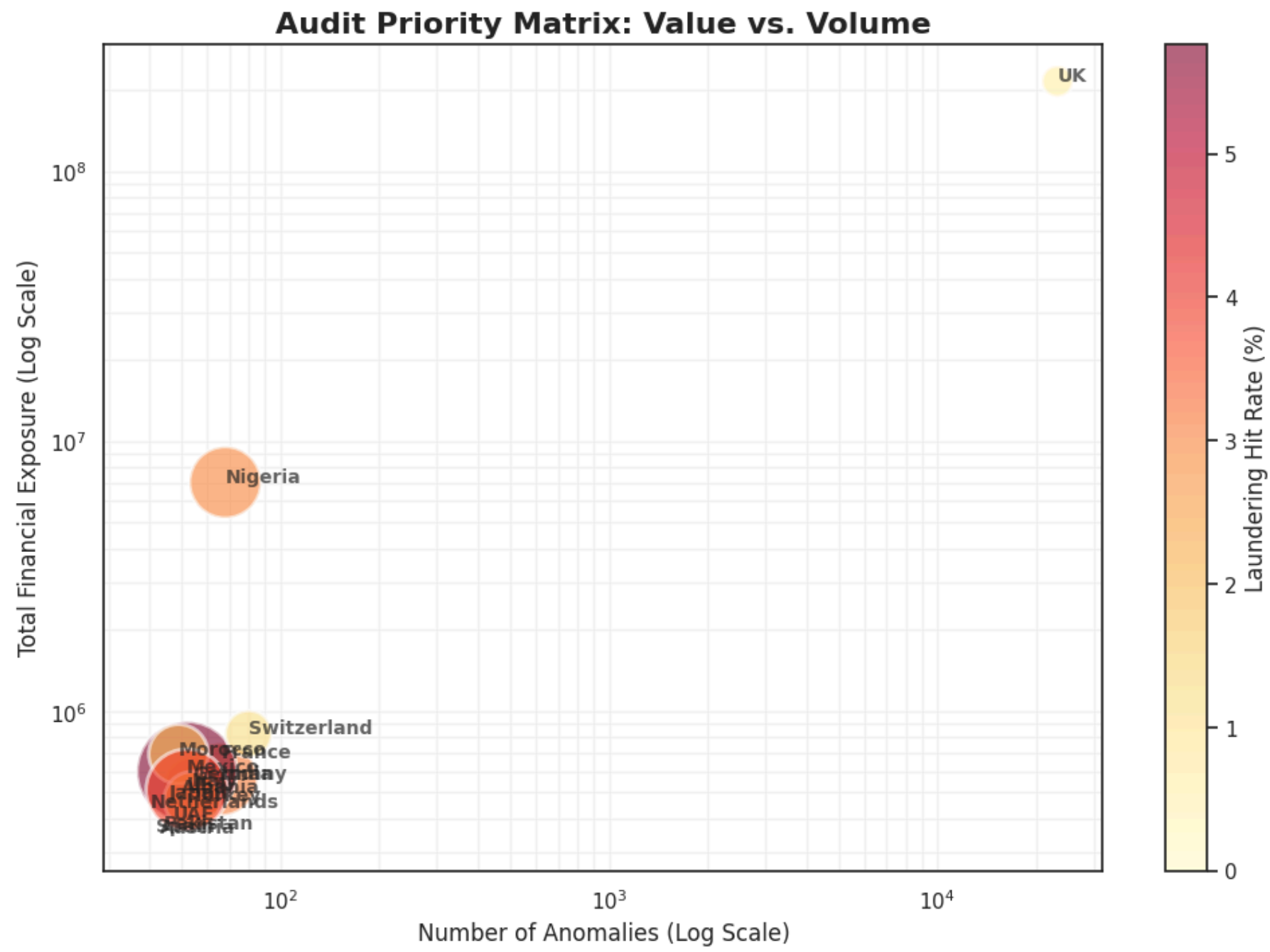


JURISDICTIONAL RISK DENSITY: DISTINGUISHING SIGNALS FROM NOISE

- Validated Indicators
- High-Yield Corridors:
Mexico (5.8%), USA (3.8%)
- Hub Complexity



AUDIT RESOURCE ALLOCATION: PRIORITIZING MATERIAL FINANCIAL EXPOSURE



- High-Value: UK and Nigeria
- Actionable intelligence: Mexico and India
- Cost Reduction: 0.0% hit rate

HYPOTHESIS B

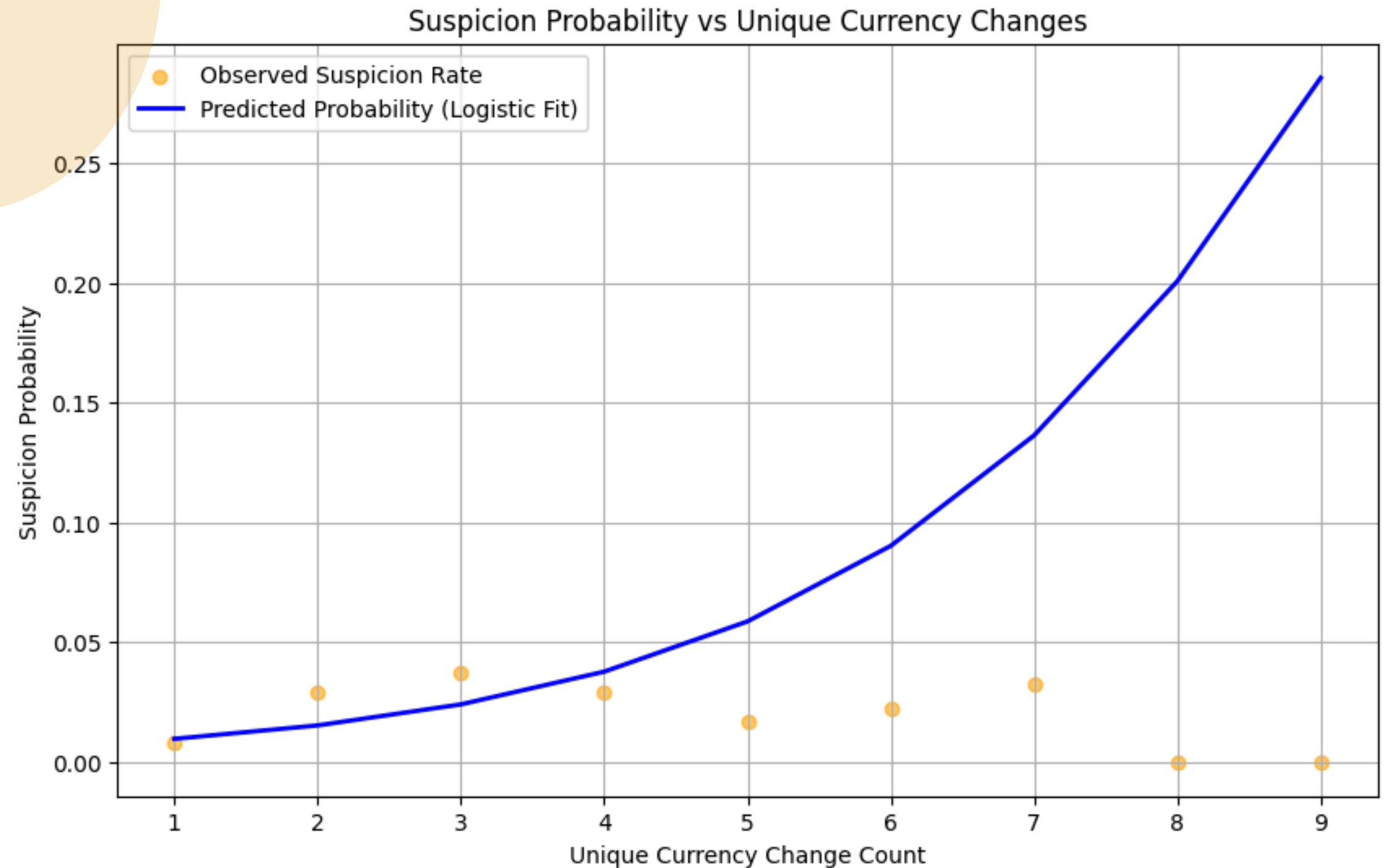
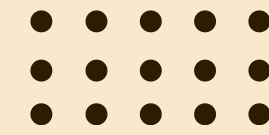
Customers with *higher-than-typical historical payment currency changes* have a higher probability at being involved in suspicious transactions.



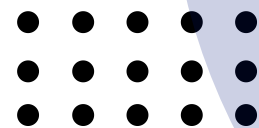
PREDICTION VERSUS REALITY

The logistic regression: Each additional unique currency **increases the odds** that an account is suspicious

But does the data say the same?



THE WHYS



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OUTLOOK

FUTURE DIRECTION:

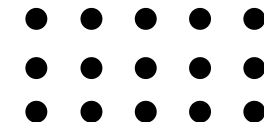
- KYC = Know Your Customer: verifies who is sending/receiving money

CONCLUSION:

- Geography matters: Bank location vs transaction currency
- Hypothesis B – inconclusive (neither accepted nor denied)



THANK YOU SO MUCH!



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