



Using advanced analytics to protect the UK from financial crime

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Introduction and objective



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Money laundering in the UK

Annual Impact of money laundering in UK financial sector



*NCA 2019 National Strategic Assessment of Serious and Organised Crime



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FCA's money laundering remit

Firms are required to monitor activity at the **transaction level**.

For large firms required to scrutinise billions of transactions annually **automated monitoring is the only feasible approach**.

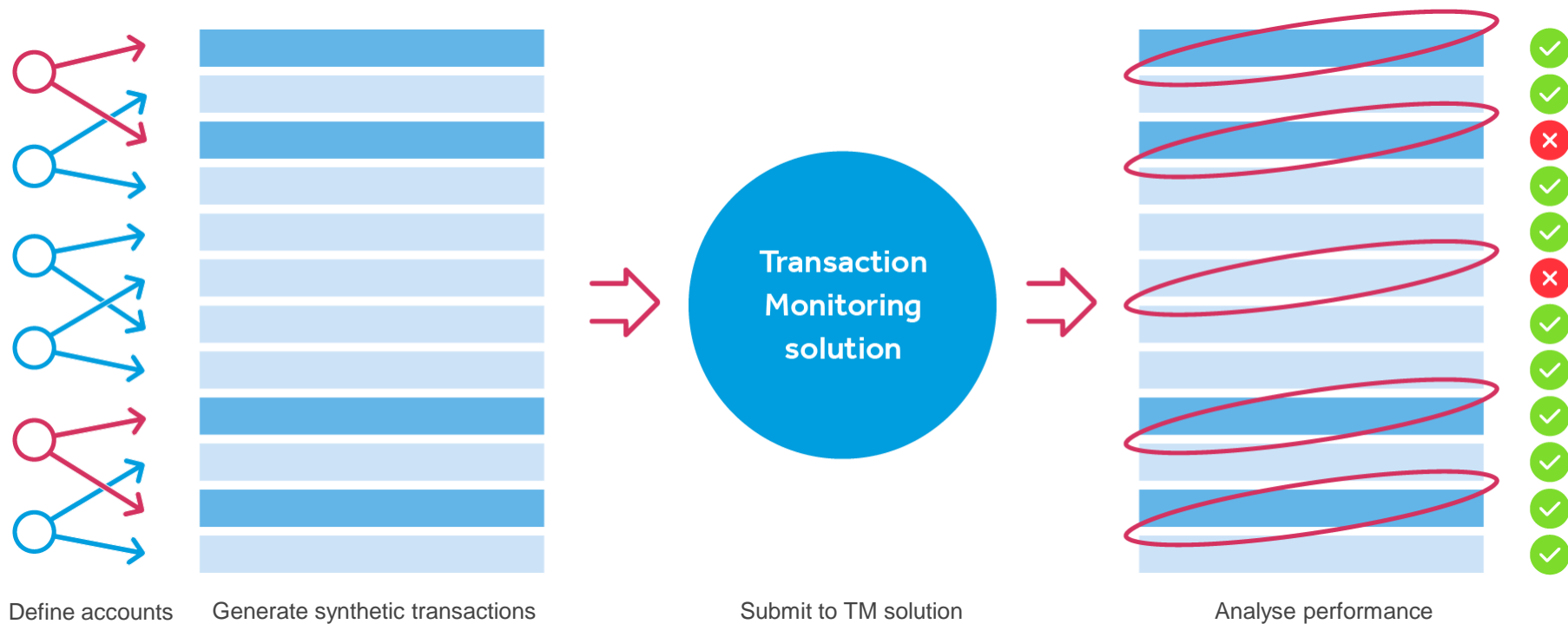
The FCA is responsible for ensuring the effectiveness and of regulated firms' **Transaction Monitoring (TM) systems**.



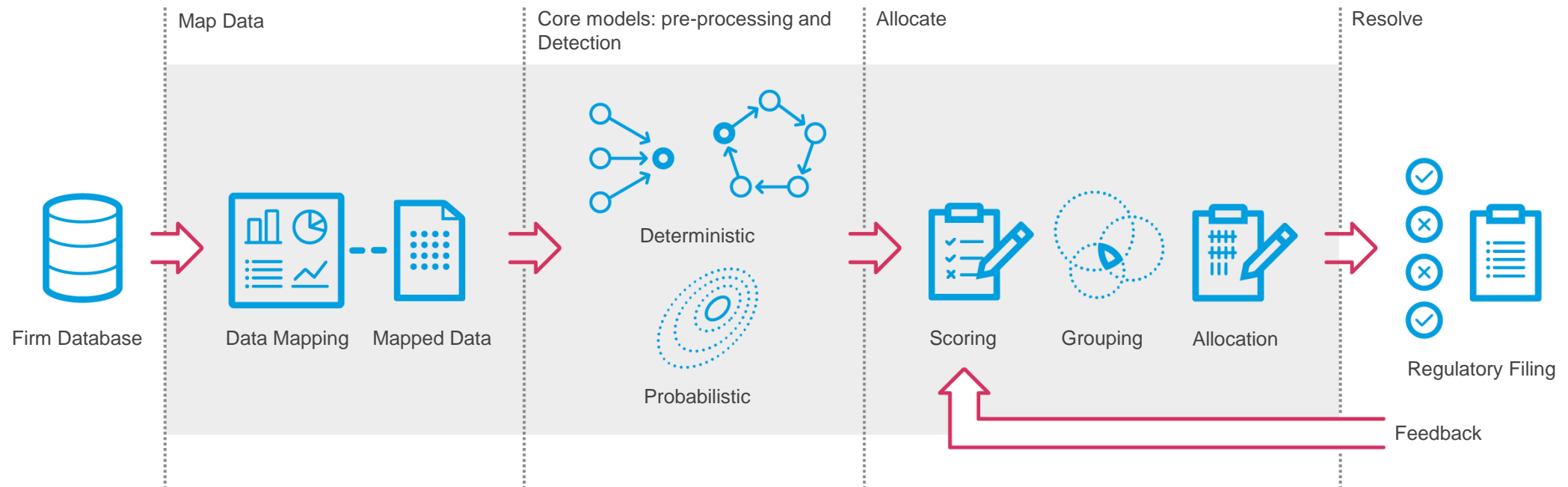
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Concept to prove

Is it possible to generate a synthetic transaction dataset with which to test firm TM solutions?

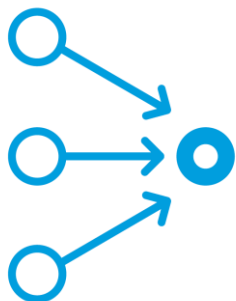


Transaction Monitoring system overview



Detection models / Suspicious behaviour

Example:



Fan in

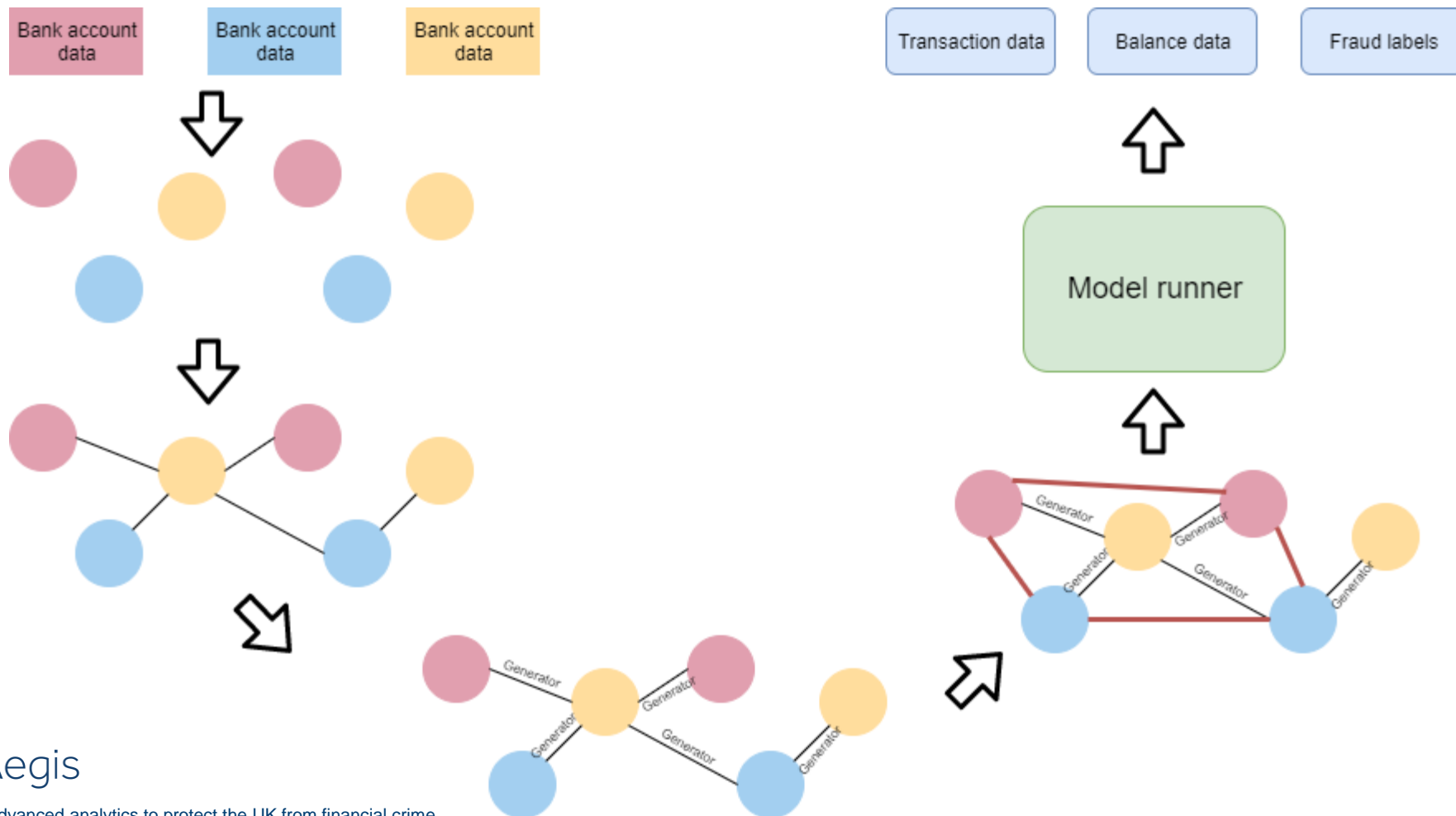
Detects multiple payments into single account within a short period of time, from many different originators. This transaction pattern is known to be associated with accounts that are part of a network of accounts engaging in illicit activities.

Outline of data generating model



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Modelling stages



Why a network view is important

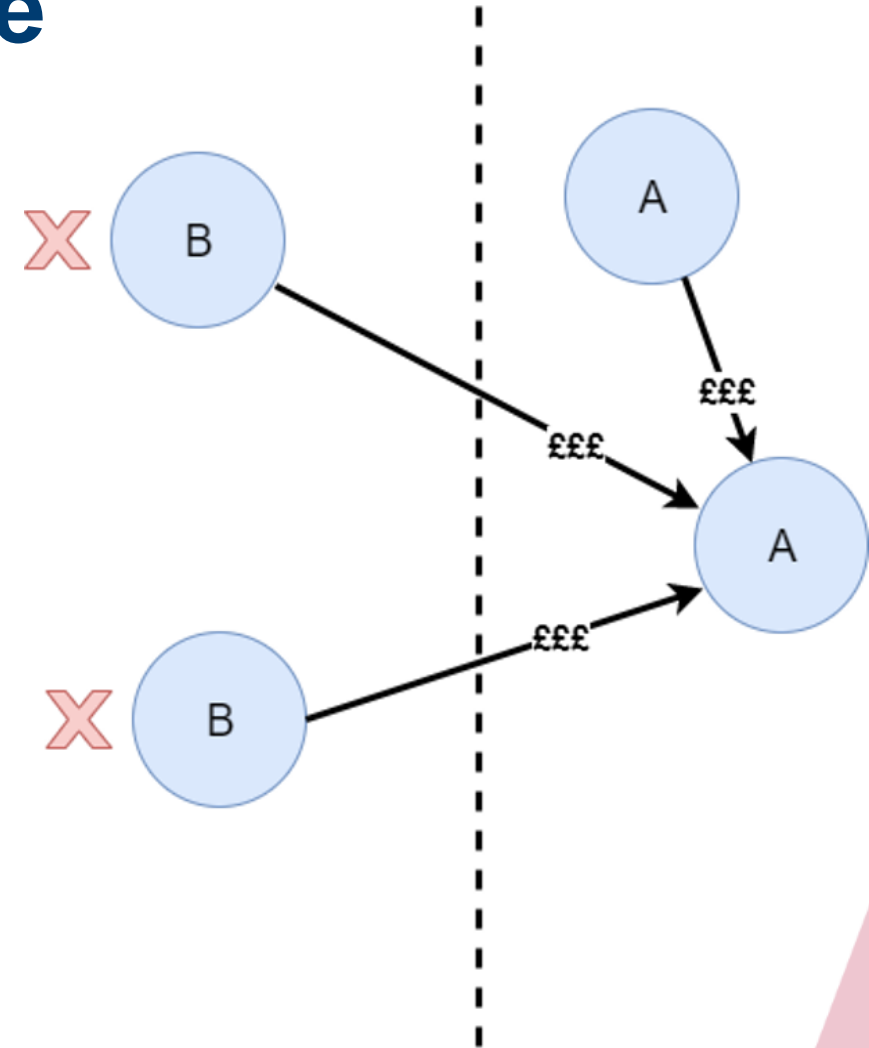


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Current issue: Fan-in case

Scenario

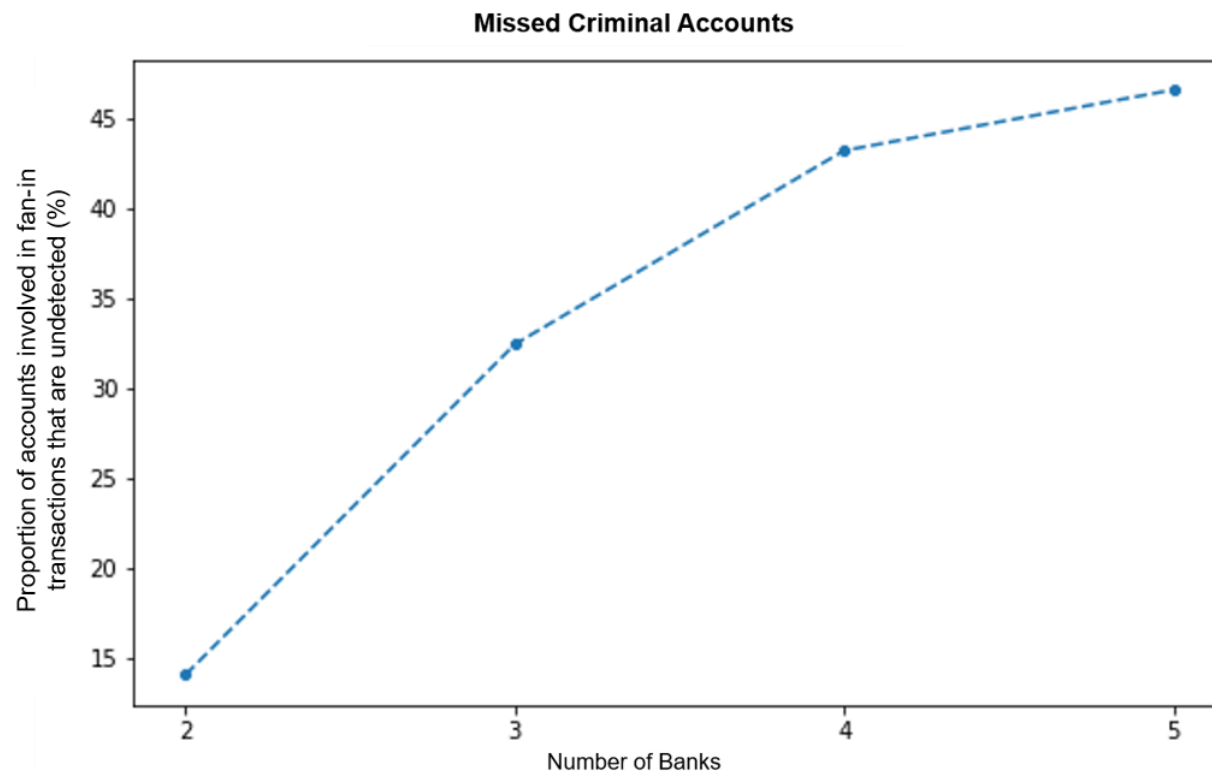
TM system threshold : At least 3 originators



Modelling the impact

We can use our model to estimate how many criminal accounts are missed **without a network view**.

The probability that fraud is split between accounts in different banks increases as the number of banks in the economy increases.





Thank you. Questions?



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