WHITE PAPER

FINCRIME
TRANSACTIONAL DATA SHARING

Sharing industry transaction data to tackle financial crime. **It’s here at last!**

For years, the financial crime prevention community has been exchanging thoughts and ideas on how best to use data sharing for improved detection. This is a critical issue: money laundering alone is estimated to cost the UK around [£100m annually, and less than 1% of criminal activity is currently detected.]

Cross-sector collaboration is clearly going to be essential to drive meaningful improvement in startling figures like these.

Following recent major technological advances, in 2019 the FCA brought the industry together at its annual TechSprint to explore how new technologies such as homomorphic encryption could enable banks to share data while preserving customer privacy. The event focused on how encryption techniques known as privacy enhancing technologies (PETs) could allow information on money laundering and other financial crimes to be shared while supporting compliance with data-security laws.

This de-centralised approach requires industry players to work closely together and trust one another, while collectively capitalising on the latest advancements in technology.

Tech Launderers

Listen to Experian present at the Global AML and Financial Crime TechSprint on homomorphic encryption

Listen here

A long time coming...

The story of sharing data to tackle financial crime starts as long ago as 1803, when a group of London tailors began swapping information on customers who failed to settle their debts.

Forums like this quickly proliferated in the United Kingdom, and one in particular became a cornerstone of Experian's development almost 150 years later. The Society of Guardians for the Protection of Tradesmen against Swindlers, Sharpers and other Fraudulent Persons was formed in 1826 in Manchester. Its members included innkeepers, drapers, hatters and chandlers, who received a monthly circular with information on people who had failed to pay their debts. The Society decreed that, "*As a mutual protection from such fraudulent characters, it is imperative upon every member to give information upon obtaining knowledge of their practices*".

The collaboration being called for in the 2020s is a direct reflection and continuation of the Society's purpose all those years ago. Based on such thinking, helping organisations share data across the finance industry is central to everything we at Experian do today. As technology catches up with demand to meet the priorities of the future, the traditional approach of sharing centralised data as created by the Society remains essential today. As a result, we are delighted now to announce the next chapter in this story of collaboration: this is what we call 'industry transaction data sharing'.

The picture today

Today, most UK banks continue to use transaction monitoring as a key deterrent in their fight against financial crime. In doing so, they build and use complex rules to closely scrutinise each and every financial transaction. These rules primarily aim to uncover suspicious behaviours by leveraging the industry's deep insight into how criminals use and exploit banking facilities.

Despite their sophistication, the transaction monitoring (TM) systems of today have one fatal weakness: they don't capture a true cross-industry view – and making this happen presents a particular challenge. That is because, as the industry understands all too well, criminals tend to transfer money between a very high volume of accounts across multiple banks, aiming to obscure the origins of the funds and confuse even the most tenacious investigators.

We have carried out extensive market research over the last 12 months, delving into the characteristics of money launderers and how they use firms to help carry out their crimes. As part of this analysis, we looked specifically at the rules set up by banks to spot questionable transaction behaviour. Building on this, we have further looked at how we can use aggregated industry transaction data to identify concerns that might be overlooked by any individual TM system.

This short paper aims to raise awareness of the transactional data sharing that already exists today. More importantly, it highlights how banks can leverage this shared insight to improve the detection and prevention of financial crime.

Levelling the industry **playing field**

It was in March 2015 that the Small Business Enterprise and Employment (SBEE) Act was passed, with the goal of stimulating the economy by increasing the flow of lending to small and medium-sized enterprises (SME). To do so, the Act was designed to address one of the perceived barriers preventing SMEs from gaining access to the best finance options: the inequality of information available to banks of different sizes. While the established main banks held current account relationships with more than 90% of SMEs, and had the data to match, other smaller lenders had little or no access to information about current account behaviour.

That all changed as a consequence of the SBEE Act. Now, Current Account Turnover (Commercial CATO) data is available via the rules of Mandatory Credit Data Sharing (MCDS) that are set out in the Act. The Act mandates the nine largest banks (by market share of SMEs in the UK and Ireland) to share with Experian the data they hold on their SME portfolios.

For the first time, we are able to leverage the valuable aggregate transaction data provided by the UK's largest banks to uncover previously hidden risks of financial crime.

How is it used in **detecting financial crime?**

We can assess the total inflows and outflows for a business, drawing on Commercial CATO data from every current account it has opened across any of the major UK banks. So now, armed with a complete picture of a company's transaction behaviour across the entire banking industry, we can profile all businesses to establish precisely what account activity is normal for each one.

More importantly, we can now also identify deviations from that norm.

We have created **peer group profiles** based on three key metrics which help determine a company's life stage:

Age

Sector

Number of Employees

For example

ABC Law Ltd
- Solicitors
- 3 Employees
- 6.2 years old

Peer Group
- Legal and accounting activities
- 1-5 employees
- 5-9 years old

Having established the peer group profiles, we then focus on three patterns which we have identified as key indicators of money laundering.

Sustained increase in credit turnover, out performing peers

Income always transferred out of the account

Low average balance as proportion of credit turnover

More on the next page

1 Sustained increase in **credit turnover.**

Money launderers know that immediately and aggressively ramping up the inflows and outflows going through an account will probably generate a TM alert, making it easy to identify suspicious behaviour. To address this, transaction value increases are purposely slow and gradual. This approach is known in the industry as 'boiling the frog'.

The premise is that if a frog is suddenly put into boiling water, it will immediately jump out. But if it's put into tepid water that's then brought slowly to the boil, the frog won't notice the danger before it's too late.

Similarly, if an investigator only notices a steady increase, they will probably gain false confidence from previous reviews, where the increase in account activity has been noted but disregarded owing to its gradual nature.

Table 1 illustrates a real example where the analysis of Experian Commercial CATO data allowed this pattern of behaviour to be observed.

Money IN £45.47m

Money OUT £45.50m

Date	Credit	Debit	Avg. daily balance
09/2019 - 11/2021	455,201	476,031	21,552
	710,679	732,173	33,055
	896,859	766,600	41,111
	973,328	1,111,379	30,457
	747,011	707,215	18,314
	950,619	969,694	62,444
	1,715,112	1,670,782	82,397
	2,527,476	2,486,688	74,746
	2,375,882	2,445,785	75,147
	3,076,345	3,064,608	71,357
	4,504,771	4,462,315	105,740
	5,016,075	5,094,119	111,729
	5,742,671	5,696,216	98,161
	6,628,474	6,658,974	146,192
	2,371,584	2,400,267	40,295
	1,463,951	1,445,569	31,753
	1,297,087	1,315,355	22,280
	1,398,481	1,392,990	30,971
	1,281,093	1,287,488	27,884
	246,650	199,324	9,282
	192,157	239,988	19,951
	227,525	222,547	8,582
	543,761	528,520	13,209
	124,143	125,855	14,888
	-	864	20,932
	-	9,982	15,993
	-	713	10,114

Table 1 **ABC Ltd.**

The company is so small that it files unaudited and abbreviated accounts. Experian has modelled the turnover at c.£2.2m

We monitor inflows and outflows closely for such behaviour and use the peer group profiles to understand whether or not an account is performing 'normally'.

In statistics, the standard deviation (SD) is a measure used to quantify the amount of variation or dispersion within a set of data values. We use the SD to measure variation, looking specifically for instances where account activity exceeds three times the norm. We can then calculate a value for each company in terms of standard deviation from the mean.

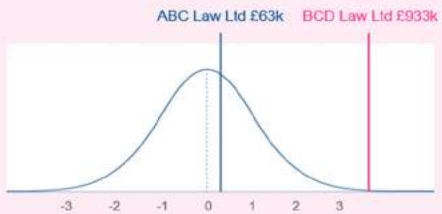
For example

Peer Group
- Legal and accounting activities
- 1-5 employees
- 5-9 years old

Average Credit Turnover
£17,000

Standard Deviation
£195,000

	Credit Turnover	Diff from peers Avg	Diff as % of SD
ABC Law Ltd	63k	46k	0.23
BCD Law Ltd	933k	916k	4.69



In this example, BCD Law is a clear outlier and is therefore worthy of closer scrutiny.

2 Income **always transferred** out of the account

Money launderers don't like leaving their money in an account for very long – in many cases, not even as long as overnight. If laundered money is spotted, it can be seized. Sleight of hand, transferring money in and out of an account almost immediately, is therefore the preferred option.

Additionally, some banks' TM systems reconcile account data in batches every night. By ensuring the money is transferred in and out on the same day, it can avoid being picked up and an alert generated.

In *Table 1*, you can see how low the average daily balance is when compared with the monthly credit and debit balance. Imbalances like this provide an excellent opportunity to spot suspicious behaviour through the use of aggregated data.

The example to the right illustrates the value of how Commercial CATO can capture the inflows and outflows of money across linked businesses. In this example we can see a director linked to 16 businesses with a combined total of more than £41m flowing through 23 current accounts. You may note that round balances exist even when the data is aggregated. Round balances are a commonly recognised red flag in the industry, where criminals transfer exact values (£9,999 or £900,000 for example), which are often below those transaction thresholds likely to trigger an alert. In this example, you can see £1.3m, going through two separate but linked businesses.

Linked Businesses Cashflow Flags

To further aid detection of suspicious activity, we've also developed a low average balance 'flag', which assesses when the remaining balance is low given the company's scale and profile.

What does the data include and **who can access it?**

The data includes:

Credit turnover

Debit turnover

Balances (high, low, average)

Returned items

Days in excess

See the diagram to the right for a more precise illustration of what data is available:

Summary

Account Type	Current Account
Current Balance	£5,000
File Last Updated	01/01/2016
SME (Yes/No)	Yes
Minimum Balance	£150
Maximum Balance	-£3,300
Mean Average Balance	-£1,500
Credit Turnover	£4,000 (Net)
Debit Turnover	£5,400 (Net)
Number of Rejected Payments	0
Days in excess of agreed facility	5
Facility	Single / Multiple

As with most data-sharing agreements, access is governed by the rules of reciprocity. If you wish to receive the wider industry view, you need to be a provider of current account facilities and contribute your data for the greater good. This scheme looks specifically at SME businesses with a turnover of below £25m.

Last 6/12 months

Balance	Jan 16	Dec 15	Nov 15	Oct 15	Sep 15	Aug 15
	£5,000	£5,500	£4,000	-£1,500	£3,000	£500
Minimum Balance	£150	£200	£500	£200	£400	-£300
Maximum Balance	-£3,300	-£4,300	£200	-£300	£200	-£3,300
Average Balance	-£1,500	-£1,500	-£1,500	-£1,500	-£1,500	-£1,500
Credit Turnover	£4,000 N	£4,000 N	£4,000 N	£4,000 N	£4,000 N	£4,000 N
Debit Turnover	£5,400 N	£5,400 N	£5,400 N	£5,400 N	£5,400 N	£5,400 N
# Rejected Payments	5	0	0	1	3	0
# Days in Excess	5	0	0	3	1	2

A gateway to **collaboration** and **data sharing**

At Experian, we believe this new ability to leverage shared and aggregated transaction data across the industry will be truly transformational. With UK banks today hampered by a constricted view of their customers' transaction behaviour, and any attempt at creating peer group profiles restricted to internal data alone, this new service offers a gateway to collaboration and data sharing never before seen in the financial crime community. With the UK government and industry focused on driving financial crime out of the UK economy, this development offers players an immediate opportunity to turbocharge their FinCrime detection and prevention capabilities.

What next?

In our next paper, we'll look more closely at the characteristics of money launderers and how they use UK firms to carry out their crimes. We have leveraged this understanding to build a number of adverse markers to help you spot the signs. We'll then explore how, by bringing these together with industry transaction data, we can support the industry in its efforts to improve the detection of money launderers.

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