WoWyrd

CONFIDENTIAL

WOWYRD · RULE REVIEW

Rule review: extended management report

Prepared for **Demo client (aml-hi, synthetic)**

Client: Demo client (aml-hi, synthetic). Data: 2022-09-01 to 2022-09-18 (daily periods). Cut-off: 2022-09-18 (set for this run). Generated: 2026-11-20 10:02 UTC.

Demo run. The unit costs are demo values, not a client's costs. The transactions and labels are synthetic.

Internal report. Do not share it outside your firm.

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> This is the extended management report. The short management report is management.html; the technical report is technical.html.

Headline numbers

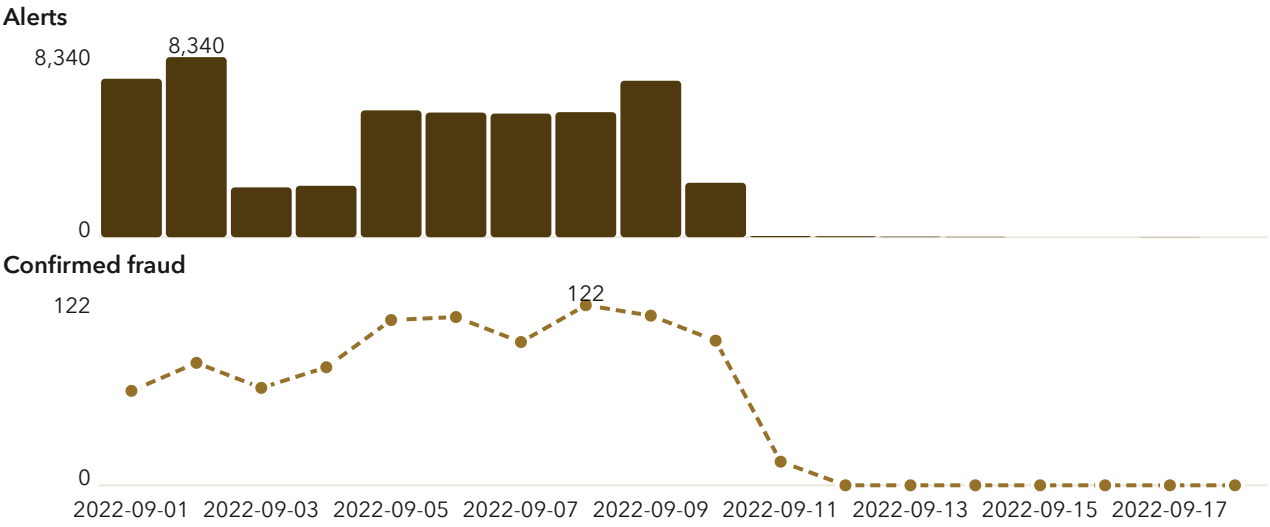
58,331 **Transactions reviewed** Transactions file, 2022-09-01 to 2022-09-18	**53,483** **Alerts** Rule-hit log, 2022-09-01 to 2022-09-18	**967** **Confirmed fraud** Labels file, known by 2022-09-18	**50,302** **False alarms** Rule-hit log and labels, mature hits, 2022-09-01 to 2022-09-18
249,889.60 USD **False-alarm cost (estimate)** Your unit costs, 2022-09-01 to 2022-09-18	**96.0%** **Share of fraud with a rule hit** Labels and rule-hit log, 2022-09-01 to 2022-09-18		

Value in your own costs

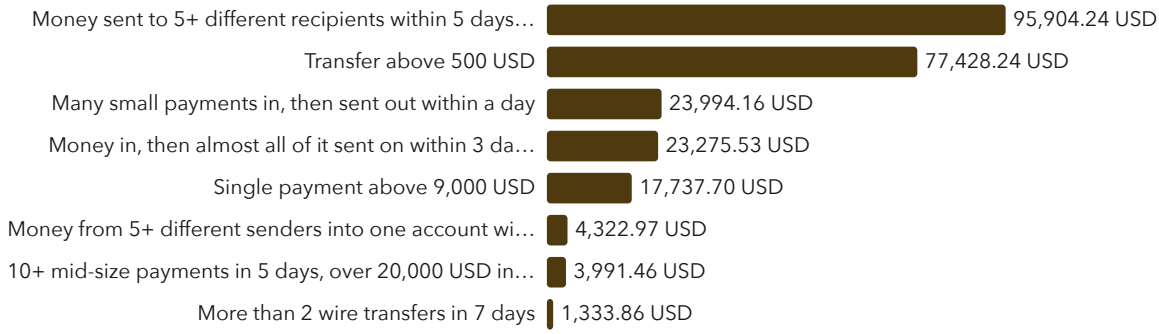
In 2022-09-01 to 2022-09-18, false alarms took 5,030.2 analyst hours and cost 249,889.60 USD. Source: your unit costs and the rule-hit log.

5 of the top actions touch different rules. Together they remove 7,896 alerts and save 37,704.00 USD over the same period. They lose 41 caught fraud cases. This is a backtest on past data, not a forecast.

Charts



ALERTS (BARS) AND CONFIRMED FRAUD (DASHED LINE) PER PERIOD. TWO SCALES: FRAUD IS FAR SMALLER THAN ALERTS. SOURCE: RULE-HIT LOG AND LABELS, 2022-09-01 TO 2022-09-18.



FALSE-ALARM COST PER RULE IN USD. AN ALERT HIT BY SEVERAL RULES SHARES ITS COST EQUALLY. SOURCE: YOUR UNIT COSTS, 2022-09-01 TO 2022-09-18.

Top 5 actions

ACTION		TYPE	EXPECTED EFFECT (BACKTEST)	CONFIDENCE
01	`REC-a9097de7` Retire rule Money sent to 5+ different recipients within 5 days (fan-out): 0.5% of its 39,145 alerts with a known outcome were fraud `tp_u21_fan_out_5_benef_5d`: Finds one sender spreading money to many receivers in a short time.	Retire the rule	7,624 fewer alerts, 40 caught fraud cases lost, 36,403.20 USD saved (estimate)	medium
02	`REC-0e97fd0f` Retire rule More than 2 wire transfers in 7 days: 0.0% of its 528 alerts with a known outcome were fraud `tp_u21_wire_count_gt2_7d`: Finds a sender who uses wire transfers unusually often.	Retire the rule	132 fewer alerts, 0 caught fraud cases lost, 633.60 USD saved (estimate)	high
03	`REC-8623ab86` Retire rule 20+ small payments in 5 days, over 20,000 USD in total: 0.6% of its 324 alerts with a known outcome were fraud `tp_u21_stats_20tx_0_1k_5d`: Finds many small payments that together move a large sum.	Retire the rule	29 fewer alerts, 0 caught fraud cases lost, 139.20 USD saved (estimate)	high
04	`REC-5f92ad0d` Retire rule Money in, then almost all of it sent on within 3 days (layering): 0.9% of its 13,477 alerts with a known outcome were fraud `tp_u21_layering_10k_90pct_3d`: Finds an account that receives a large sum and quickly passes nearly all of it to other people.	Retire the rule	109 fewer alerts, 1 caught fraud cases lost, 518.40 USD saved (estimate)	medium

ACTION		TYPE	EXPECTED EFFECT (BACKTEST)	CONFIDENCE
05	`REC-c96ac8db` Retire rule Wire transfers above 4,999 USD in total within 7 days: 0.0% of its 368 alerts with a known outcome were fraud `tp_u21_wire_total_gt4999_7d`: Finds a sender who moves a large total by wire in one week.	Retire the rule	2 fewer alerts, 0 caught fraud cases lost, 9.60 USD saved (estimate)	high

Effects come from a backtest on 2022-09-01 to 2022-09-18. Selective labels: a declined payment has no outcome, so fraud a rule stopped by declining is not in "caught fraud cases lost". The technical report gives the evidence and caveats for each action. A rule name links to its entry in the rule glossary. Each action has a reference (REC-…). Quote this reference in your change record.

Your tools: what each one adds

Demo: the tool names and the tool map are made up. The rules are the demo's own rules.

Each rule belongs to one tool, from your tools.csv. Rules that are not in the map are grouped as "Not assigned". An alert's cost is shared equally among the tools that fired on it, so the tool costs add up to the total false-alarm cost. Catch rate = caught / all mature fraud with a known outcome (948 cases).

TOOL	RULES	ALERTS	CAUGHT	CATCH RATE	FALSE ALARMS	PRECISION	FALSE-ALARM COST (ESTIMATE)	ONLY THIS TOOL CAUGHT
Transaction monitoring (example)	7	43,792	287	30.3%	41,342	0.7%	121,748.27 USD	50
In-house rules (example)	2	36,685	837	88.3%	33,595	2.4%	93,887.87 USD	508
AML monitoring (example)	2	17,421	166	17.5%	15,252	1.1%	34,253.47 USD	7

Overlap between tools

CAUGHT BY ↓, ALSO CAUGHT BY →	TRANSACTION MONITORING (EXAMPLE)	IN-HOUSE RULES (EXAMPLE)	AML MONITORING (EXAMPLE)
Transaction monitoring (example)	–	77.4% (222)	18.1% (52)
In-house rules (example)	26.5% (222)	–	17.2% (144)
AML monitoring (example)	31.3% (52)	86.7% (144)	–

Each cell: the share of the row tool's caught fraud that the column tool also caught, with the count. A tool with fewer than 10 caught cases shows "too few to compare".

Fraud types per tool

FRAUD TYPE	TRANSACTION MONITORING (EXAMPLE)	IN-HOUSE RULES (EXAMPLE)	AML MONITORING (EXAMPLE)
no type given	129 (48 only)	329 (223 only)	65 (7 only)
BIPARTITE	8 (0 only)	47 (34 only)	8 (0 only)
CYCLE	10 (0 only)	41 (29 only)	5 (0 only)
FAN-IN	11 (0 only)	50 (20 only)	21 (0 only)
FAN-OUT	54 (2 only)	75 (21 only)	17 (0 only)
GATHER-SCATTER	24 (0 only)	81 (40 only)	19 (0 only)
RANDOM	8 (0 only)	40 (32 only)	2 (0 only)
SCATTER-GATHER	19 (0 only)	94 (56 only)	22 (0 only)
STACK	24 (0 only)	80 (53 only)	7 (0 only)

Caught fraud cases per fraud type in your labels; in brackets, the cases only this tool caught.

If one tool were off (backtest on past data, not a forecast)

TOOL	ALERTS REMOVED	CAUGHT FRAUD CASES LOST	COST SAVED (ESTIMATE)
Transaction monitoring (example)	10,868	50	51,918.40 USD
In-house rules (example)	7,562	508	33,451.20 USD
AML monitoring (example)	584	7	2,764.80 USD

Only the payments where this tool alone fired change. Cost uses the same either/or rule as the rest of the report: analyst time when not declined, friction when declined.

- Transaction monitoring (example) fired on 2,129 payments that were declined. Fraud stopped by a decline has no outcome, so this tool's real value may be higher than shown.
- In-house rules (example) fired on 2,112 payments that were declined. Fraud stopped by a decline has no outcome, so this tool's real value may be higher than shown.
- AML monitoring (example): on your history, almost all fraud this tool caught was also caught by your other tools (7 of 166 only by this tool). Before you change anything, check what this data cannot show (see the limits).

- AML monitoring (example) fired on 1,976 payments that were declined. Fraud stopped by a decline has no outcome, so this tool's real value may be higher than shown.
- Card scheme score (example): no hits in this export. It cannot be measured here.
- On this history, your current tools together caught most of the fraud: they missed 39 of 948 mature fraud cases with a known outcome. The proposals in this report are fine-tuning, not a gap.

Your tools over time

The technical report compares each tool's precision and catch rate between 2022-09-05 to 2022-09-07 and 2022-09-08 to 2022-09-10, with the counts and the changes larger than our limit. This page shows none of them, so that no small window count can be worked out from this page.

What this data cannot show

1. A tool whose score or decision is not in your export cannot be measured here. Access to a tool is not use of it: this report measures only what your hit log recorded.
2. A tool that acts before the hit log is written (for example a decline at authorization) is not visible here.
3. A declined payment has no outcome, so a tool that declines payments gets less credit than it may deserve.
4. "Tool off" assumes your other tools would have acted the same. They may not: one tool's decision can change what another tool sees.
5. A score band is one cut-off. The same tool at another cut-off can catch more or less.
6. Two windows of three periods show a change, not its cause. A change in the tool's set-up, in your traffic or in your labels can each move the figures. A window counts periods that hold data, not calendar periods: a gap in your export makes a window span more time, and the table per period shows it.

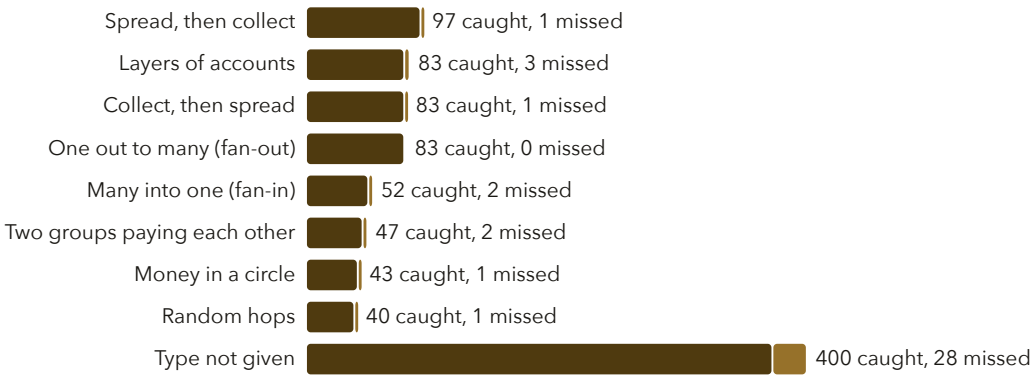
> For internal use. Check your vendor contracts before you share tool-level numbers outside your firm.

What changed since the previous report

No previous report was given, so this report is treated as the first one. There is nothing to compare with yet. The next run can compare with this one.

Coverage by fraud type

Fraud types present in your labels



LABELLED FRAUD CASES PER TYPE. BLUE: A RULE FIRED ON THE PAYMENT. ORANGE: NO RULE FIRED. SOURCE: LABELS FILE AND RULE-HIT LOG, LABELS KNOWN BY THE CUT-OFF.

FRAUD TYPE	LABELLED CASES	CAUGHT	MISSED	WOWYRD
Spread, then collect	98	97	1	WoWyrd rule available: Money leaves soon after it arrives
Layers of accounts	86	83	3	WoWyrd rule: planned
Collect, then spread	84	83	1	WoWyrd rule available: Money leaves soon after it arrives; Many small credits, then one large payout
One out to many (fan-out)	83	83	0	WoWyrd rule available: One account pays many different payees
Many into one (fan-in)	54	52	2	WoWyrd rule available: Many senders pay one account; One payee shared by several customers
Two groups paying each other	49	47	2	WoWyrd rule: planned
Money in a circle	44	43	1	WoWyrd rule: planned
Random hops	41	40	1	WoWyrd rule: planned
Type not given	428	400	28	WoWyrd rule: planned

Not in this dataset, so it cannot be measured here

Your labels hold no case of these types, so this data cannot show whether your rules catch them. This is not a gap in your rules.

- **One user holds many more accounts or cards than similar users**
  WoWyrd rule: planned.
- **One type of operation makes up an unusual share of a user's activity**
  WoWyrd rule available: One type of operation dominates an account.
- **Many operations of one type in a short time, incoming or outgoing**
  WoWyrd rule available: Many requests from one account in an hour, then a payout; A burst of operations of one type.
- **Balance stays low although large amounts pass through**
  WoWyrd rule available: Large amounts pass through an account that keeps a low balance.
- **Large loans are taken and repaid again and again**
  WoWyrd rule available: Large loans taken and repaid again and again.
- **Gambling winnings arrive with no deposits, then card transfers follow**
  WoWyrd rule available: Gambling winnings with no gambling deposits.
- **Regular transfers to a personal account look like business activity**
  WoWyrd rule available: A personal account paid by many payers.
- **A new merchant's volume is far above similar merchants, then the merchant closes**
  WoWyrd rule available: A merchant with little history suddenly busy.

- **Merchant account inflows mirror its outflows (transit)**
  WoWyrd rule available: A business account pays out almost all it receives.
- **Payment purposes do not fit the merchant's category code**
  WoWyrd rule available: Payment purpose does not fit the merchant's business; Card payment to a person without category or purpose.
- **Contacts, device, apps, IMEI, operating system or network address change often**
  WoWyrd rule available: Payout right after an email or phone change; One session from several network addresses; One account used from many devices.
- **One device fingerprint is used by unrelated users**
  WoWyrd rule available: One device used by several customers.
- **Two operations are too far apart to travel between in the time**
  WoWyrd rule available: Locations too far apart for the time between them.
- **A new account gets large or many credits soon after opening**
  WoWyrd rule available: A new account receives a large credit; A new account paid by several people.
- **A dormant account suddenly moves large amounts**
  WoWyrd rule: planned.
- **Repeated amounts just under a reporting or limit threshold**
  WoWyrd rule available: Payments just under a limit; Many small payments from one account add up to a large sum; Many small payments to one payee add up to a large sum.
- **Repeated round amounts with no business reason**
  WoWyrd rule available: Several payments in large round amounts.
- **Outgoing payments per hour above the customer's usual level**
  WoWyrd rule available: More payments in an hour than the customer usually makes; Many requests from one account in an hour, then a payout.
- **A large first payment to a payee never paid before**
  WoWyrd rule available: A large payment to a payee added just before.
- **Many senders' accounts share one beneficiary**
  WoWyrd rule available: One payee shared by several customers.
- **An amount far above the customer's own history**
  WoWyrd rule available: A payment far above the customer's usual amount.
- **Credits from many different banks into one account**
  WoWyrd rule available: Credits from many different banks into one account.
- **Transfers to or from high-risk jurisdictions**
  WoWyrd rule available: A payment to or from a high-risk country.
- **Cash withdrawn right after a credit arrives**
  WoWyrd rule available: Cash taken out soon after money arrives.
- **The payee name does not match and the payment still goes**
  WoWyrd rule available: Paid although the payee name did not match.
- **The payment reference mentions investment, crypto or a 'safe account'**
  WoWyrd rule available: The payment reference uses common scam wording.
- **An older customer suddenly sends a large amount to a new payee**
  WoWyrd rule available: An older customer sends a large amount to a new payee.
- **Activity at hours unusual for the customer**
  WoWyrd rule available: Activity at an hour unusual for the customer.

New in our reference set since your last report

Our reference set: version v0.7.0, published 2026-11-18 (built into this collector).

This is the first report with a record of our reference set. The next report lists what is new since this one.

Incoming payments and money-mule signs

Incoming payments not measured: your transactions file has no direction column (for example direction, with values such as in and out).

Requirements changed since the last review

Your rules are mapped to current requirements. We flag when a new requirement affects them. We follow official publications of regulators in Ukraine, the EU, the UK and the US.

> **Not legal advice. This report maps your rules to requirements, in our own short wording. It is not legal advice. You decide how you comply.**

Requirements library read on 2026-11-11. No change file was given for this run, so no changed requirement is listed here.

Requirements still open since the previous report

No previous report was given, so this report is treated as the first one. There is nothing to compare with yet. The next run can compare with this one.

Requirements that showed a gap are followed up only when the two reports compare.

Not legal advice. Your compliance team decides how a requirement applies to you. Public cases show how regulators have treated the same kind of gap; they do not predict an outcome for you.

Regulatory checks by regulator

> **Not legal advice. This report maps your rules to requirements, in our own short wording. It is not legal advice. You decide how you comply.**

Regulatory statuses as of 2026-11-11 (library date). Check them again before you rely on this report.

Grouped by regulator. Our own short wording, not the regulator's text. The technical report gives each finding and its evidence.

Checks per NBU requirements

Rows citing the NBU draft of 17.07.2026 — draft, not in force: its text can change before adoption. Resolutions 51, 54 and 116 are in force. Bill 16013 is a Ukrainian bill, shown here with its status.

REQUIREMENT (OUR WORDING)	RESULT	SOURCE STATUS	AS OF	OFFICIAL SOURCE
The acquirer passes payee (merchant) name and category code to the issuer. Check that these fields are filled in your data. Most time-relevant item: the deadline is about 20.11.2026.	Not measurable from these files	in force since 20.05.2026; 6 months to comply (about 20.11.2026)	2026-11-11	bank.gov.ua
Review every rule at least monthly by back-testing it.	Gap	draft (NBU draft resolution on control of payment operations, published 2026-07-17; not law)	2026-11-11	bank.gov.ua
Metric 1: compare how often each rule fired with how many payments were actually stopped.	Partly met	draft (NBU draft resolution on control of payment operations, published 2026-07-17; not law)	2026-11-11	bank.gov.ua
Metric 2: share of fraud value that was prevented, out of all fraud value.	Partly met	draft (NBU draft resolution on control of payment operations, published 2026-07-17; not law)	2026-11-11	bank.gov.ua
Set rule-effectiveness thresholds in writing. A rule under its threshold gets an immediate review.	Gap	draft (NBU draft resolution on control of payment operations, published 2026-07-17; not law)	2026-11-11	bank.gov.ua
Record a review decision for every rule: keep, adjust or cancel.	Partly met	draft (NBU draft resolution on control of payment operations, published 2026-07-17; not law)	2026-11-11	bank.gov.ua
Have evidence ready for a supervisor: documents, rules, risk markers.	Partly met	draft (NBU draft resolution on control of payment operations, published 2026-07-17; not law)	2026-11-11	bank.gov.ua
Show the acquirer's full name before an online payment; receipts show payee, commission, purpose and category code.	Not measurable from these files	in force since 20.05.2026; 6 months to comply (about 20.11.2026)	2026-11-11	bank.gov.ua
Reconcile payment operations every day.	Partly met	draft (NBU draft resolution on control of payment operations, published 2026-07-17; not law)	2026-11-11	bank.gov.ua
Acquiring for natural persons only for allowed categories, with the required data passed to the issuer.	Not measurable from these files	in force since 20.05.2026; 6 months to comply (about 20.11.2026)	2026-11-11	bank.gov.ua
Non-bank providers that acquire payments need an authorisation; the sanctions pause has ended.	Not measurable from these files	in force; grace period ended 02.09.2026	2026-11-11	bank.gov.ua
Remote verification of natural persons uses the updated procedure with credit-bureau data.	Not measurable from these files	in force since 10.10.2026; 3 months to align internal procedures (about 10.01.2027)	2026-11-11	bank.gov.ua
Reports to the State Financial Monitoring Service go only through the e-cabinet, with numbered registers.	Not measurable from these files	in force since 10.10.2026; 3 months to align internal procedures (about 10.01.2027)	2026-11-11	bank.gov.ua
Passing cards, account access or payment data to fraudsters becomes a crime. Detect and restrict accounts used as drops.	Not measurable from these files	adopted by the Rada 28.10.2026; presidential signature not confirmed	2026-11-11	itd.rada.gov.ua

Checks per EU requirements

REQUIREMENT (OUR WORDING)	RESULT	SOURCE STATUS	AS OF	OFFICIAL SOURCE
When a payee name check fails because of the payee's provider, that provider compensates the payer's provider. Keep evidence of the name check on received transfers.	Not measurable from these files	agreed, not adopted (EU Payment Services Regulation; adoption expected by 12.2026)	2026-11-11	oeil.europarl.europa.eu

Checks per UK requirements

REQUIREMENT (OUR WORDING)	RESULT	SOURCE STATUS	AS OF	OFFICIAL SOURCE
A claim may carry an excess of up to 100 GBP, never for vulnerable customers.	Not measurable from these files	in force	2026-11-11	psr.org.uk
Test and review rules; a poorly calibrated rule set the firm cannot explain is poor practice.	Partly met	guidance in force	2026-11-11	fca.org.uk

Checks per US requirements (FinCEN, NYDFS, FFIEC, Nacha, Federal Reserve)

FinCEN and Nacha items are not checked from your files in this run; the rows below are NYDFS and FFIEC items.

REQUIREMENT (OUR WORDING)	RESULT	SOURCE STATUS	AS OF	OFFICIAL SOURCE
Analyse scenarios, rules and thresholds on an ongoing basis.	Partly met	in force	2026-11-11	dfs.ny.gov
Test rules before and after they go live.	Not measurable from these files	in force	2026-11-11	dfs.ny.gov
Tune and validate monitoring; justify each threshold.	Partly met	guidance	2026-11-11	bsaaml.ffiec.gov

Fraud types in plain words

Each fraud type named in your labels, in one sentence. The word in small grey text is the label as your file gives it.

Collect, then spread `GATHER-SCATTER`	Money from many accounts is collected in one, then sent on to many others.
Layers of accounts `STACK`	Money passes through several layers of accounts in a row, so its origin is hard to trace.
Many into one (fan-in) `FAN-IN`	Many accounts send money into one account, which collects it.
Money in a circle `CYCLE`	Money passes along a chain of accounts and comes back to the account it left.
One out to many (fan-out) `FAN-OUT`	One account sends money out to many accounts, so it spreads thin.
Random hops `RANDOM`	Money hops between accounts along an irregular path with no fixed shape.
Spread, then collect `SCATTER-GATHER`	Money is split across many accounts, then collected again in one account.
Two groups paying each other `BIPARTITE`	One group of accounts pays a second group, with many payments crossing between them.
Type not given `no type`	Fraud labels in your file that do not say which kind of fraud it was.