

M U R M U R A T I O N

From Collections To Prevention

A data-led approach to reducing credit-union delinquency and improving member outcomes

White paper · August 2026

White paper proposition

How Murmuration can help credit unions lend more accurately, identify financial stress sooner, communicate more effectively and provide sustainable alternatives before missed payments become long-term arrears.

Prepared for discussion with credit unions, associations and sector partners

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SECTION 1

Executive summary

UK credit unions are facing a material rise in delinquency and credit losses. Loans in arrears increased from approximately £110.7 million in 2021 to £234.8 million in 2025. Over the same period, bad-debt provisions and write-offs rose from £34.1 million to £100.8 million.

In 2025, arrears represented 8.8% of loans outstanding, compared with 6.6% in 2021. The annual cost of provisions and write-offs represented 3.8% of the outstanding loan book, compared with 2.0% four years earlier. These measures are not identical – arrears are balances overdue at year-end, while provisions and write-offs are an annual expense – but together they show a clear increase in financial pressure.

The opportunity

Credit unions can improve outcomes by moving from reactive debt collection to a full-lifecycle model: lend better, detect stress earlier, intervene constructively and learn continuously.

Murmuration is proposed as a member intelligence and engagement platform that connects underwriting, Open Banking, credit-reference information, account behaviour, communications and repayment support. It would not replace human judgement. It would help credit-union teams make earlier, more informed and more consistent decisions.

- Use real-time income and expenditure information to strengthen affordability decisions at origination.
- Combine Open Banking, current-account behaviour and credit-reference data to identify emerging risk.
- Use explainable predictive models to flag members who may need support before a payment is missed.
- Communicate through the channel, timing and tone most likely to generate constructive engagement.
- Offer sustainable alternatives such as payment-date changes, reduced payments, term extensions and carefully assessed consolidation.
- Monitor outcomes across the full member journey, including vulnerable members and failed arrangements.
- Create anonymised, aggregated sector intelligence so participating credit unions can learn collectively.

The central proposition is straightforward: technology should not be used to pressure members more effectively. It should be used to identify need sooner, understand circumstances better and enable affordable solutions that protect both the member and the credit union.

SECTION 2

The scale of the challenge

The 2025 Credit Union Annual Statistics show that arrears and credit-loss costs have risen much faster than the underlying loan book. Total loans outstanding increased by approximately 60% between 2021 and 2025, while arrears more than doubled and provisions and write-offs almost tripled.

Year	Loans in arrears	Annual change	% of loans outstanding
2021	£110.7m	-	6.6%
2022	£125.0m	12.9%	6.5%
2023	£158.6m	26.9%	6.8%
2024	£192.3m	21.3%	7.5%
2025	£234.8m	22.1%	8.8%

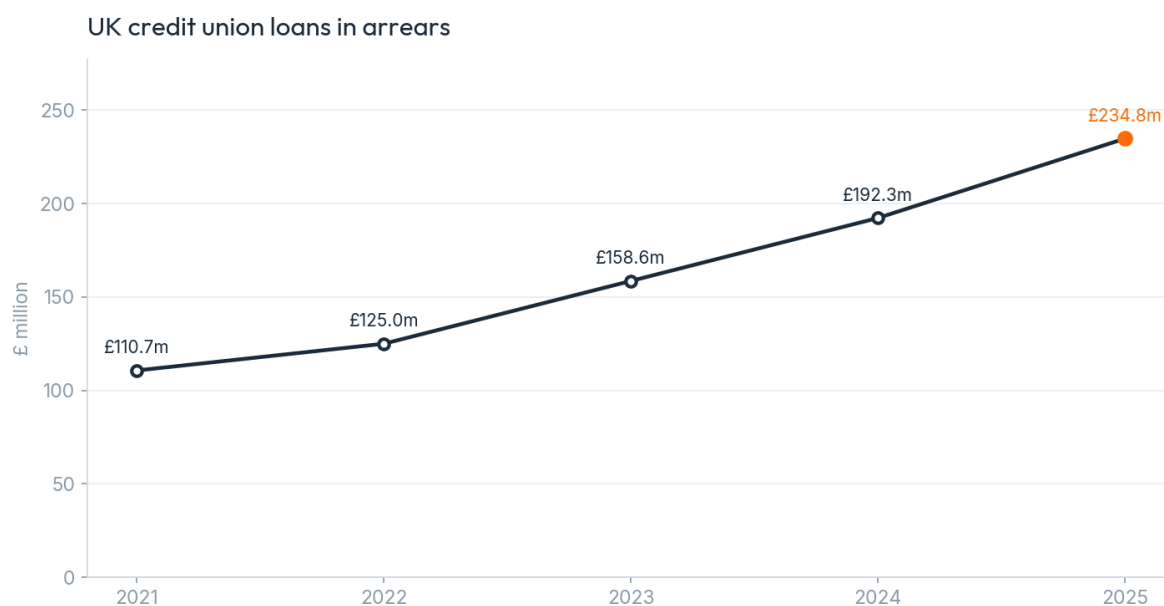


Figure 1. UK credit-union loans in arrears, 2021-2025.

Year	Provisions and write-offs	Annual change	% of loans outstanding
2021	£34.1m	-	2.0%
2022	£37.6m	10.2%	1.9%
2023	£58.9m	56.6%	2.5%
2024	£88.4m	50.1%	3.4%
2025	£100.8m	14.1%	3.8%

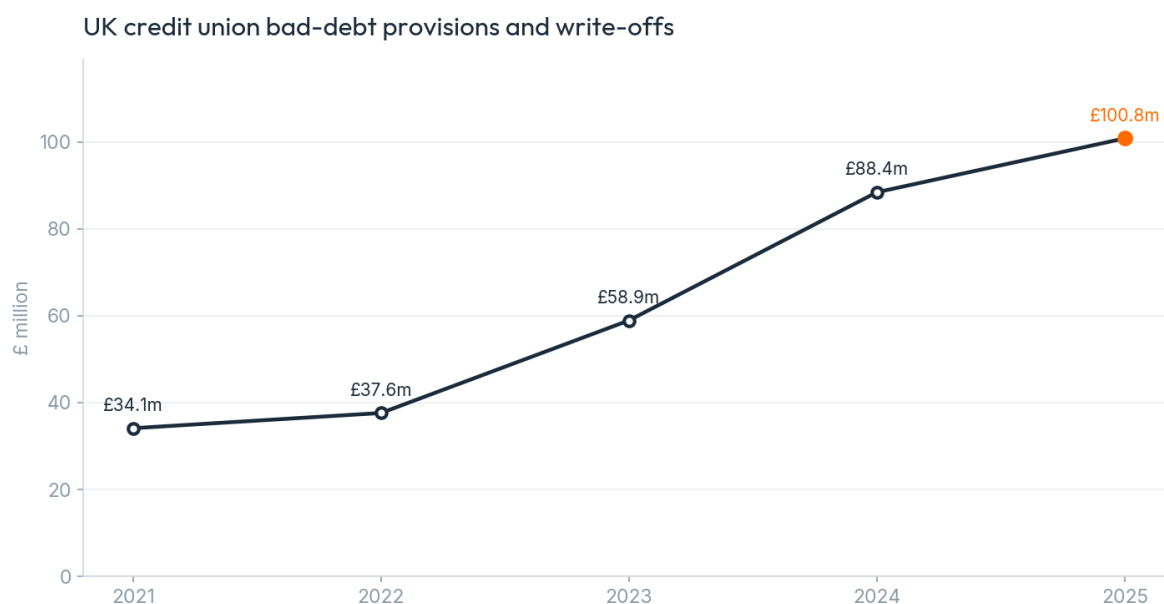


Figure 2. UK credit-union bad-debt provisions and write-offs, 2021-2025.

Northern Ireland provides an important contrast

Northern Ireland arrears fell from approximately £27.2 million in 2024 to £24.9 million in 2025 while loans outstanding continued to grow. This does not remove the need for innovation, but it suggests there are regional practices and member behaviours worth understanding and sharing.

SECTION 3

Why reactive collections are not enough

A member rarely moves from financial stability to serious delinquency without warning. The warning signs may be visible in payment behaviour, income patterns, account use, credit commitments or engagement with the credit union. Yet many collections processes begin only after a contractual payment has been missed.

- A payment is made later than usual or only partially.
- A Direct Debit is returned, cancelled or repeatedly retried.
- Regular income falls, becomes less predictable or stops.
- Overdraft use, high-cost credit or Buy Now Pay Later commitments increase.
- Essential expenditure rises and disposable income narrows.
- The member stops opening messages or avoids telephone contact.
- Repeated short-term arrangements fail because the underlying affordability issue remains.

The failure cycle

Financial pressure leads to a missed payment; generic collections contact increases anxiety; engagement falls; arrears deepen; and the probability of write-off rises.

A more effective model starts before origination and continues throughout the loan. It combines prevention, early detection, personalised support and continuous learning.

SECTION 4

The Murmuration credit lifecycle model

Stage	Murmuration capability	Intended outcome
1. Origination	Real-time affordability, bureau data, fraud checks and assisted underwriting	More sustainable lending decisions
2. Active loan	Ongoing behavioural monitoring and early-warning indicators	Intervention before missed payments
3. Engagement	Personalised channel, timing, tone and self-service journeys	Higher member response and understanding
4. Resolution	Affordable payment options and human escalation	More arrangements that remain sustainable
5. Learning	Outcome monitoring and aggregated sector insight	Continuous improvement across credit unions

This approach positions Murmuration as an intelligence layer across the entire credit lifecycle rather than as a collections system. It can integrate with existing loan-management, core banking, CRM, Open Banking and credit-reference services rather than requiring all systems to be replaced.

SECTION 5

Better lending at origination

The most effective delinquency strategy begins with the quality of the original lending decision. Traditional assessments based on self-declared income and expenditure, payslips, uploaded statements and a credit score can be useful, but they are often static and incomplete.

5.1 Real-time income and expenditure

With the member's informed consent, Open Banking can provide a current and evidence-based view of affordability. Murmuration could categorise transactions and identify recurring income, essential expenditure, existing repayments and the variability of the member's cash flow.

- Net income, frequency and stability of salary or benefit payments.
- Housing, utilities, food, transport and other essential expenditure.
- Existing credit repayments, overdraft use and recurring commitments.
- Discretionary spending and realistic residual disposable income.
- Returned payments, unpaid items and signs of persistent cash-flow pressure.
- Seasonality, irregular work patterns and income volatility.

This should support, not mechanically determine, the affordability assessment. Transaction categories can be wrong, exceptional spending can be misunderstood and an account may not represent the member's full financial position. The system should therefore explain its findings and allow both the member and underwriter to correct them.

5.2 Current-account behaviour

Where the credit union operates or can access a member's current-account data, transactional behaviour can provide an additional and timely risk signal. Examples include repeated overdraft use, declining balances before payday, returned Direct Debits, increasing cash withdrawals or an unexplained break in regular income.

Current-account data should not be used to penalise ordinary lifestyle choices. Its purpose is to assess repayment sustainability and identify where a smaller amount, different payment date or alternative product may lead to a better outcome.

5.3 Credit-reference and fraud information

Credit-reference agency information remains important because it adds liabilities and conduct that may not appear in the connected account. Murmuration could combine bureau and Open Banking information to reduce blind spots.

- Existing balances, repayment commitments and credit utilisation.
- Recent applications and rapid increases in indebtedness.
- Defaults, judgments, insolvency markers and debt arrangements.
- Address and identity consistency, fraud indicators and application anomalies.
- Thin-file applicants whose current cash flow may be stronger than their traditional credit record suggests.

5.4 Assisted underwriting and personalised offers

A binary approve-or-decline process can miss opportunities to structure a safer loan. Murmuration will recommend options for human consideration, including a lower amount, a payment date aligned with income, a longer but still reasonable term, a staged advance, savings-linked lending or consolidation where it clearly lowers cost and monthly commitments.

Better question

The decision should move from "Can this member be approved?" to "What structure, if any, is affordable, sustainable and likely to improve the member's financial position?"

SECTION 6

Early-warning intelligence

Affordability is not fixed. A loan that was affordable at origination can become difficult following reduced hours, illness, bereavement, relationship breakdown, caring responsibilities or rising household costs. Subject to consent, purpose limitation and suitable governance, Murmuration will monitor relevant changes during the life of a loan.

Signal group	Illustrative indicators
Payment behaviour	Late, partial or failed payments; changing payment dates; repeated retries
Income	Reduced value, missing salary, increased volatility or a new benefit pattern
Cash flow	Lower end-of-month balances, persistent overdraft use, rising essential expenditure
Credit stress	New borrowing, higher utilisation, more applications or expensive short-term credit
Engagement	Unopened messages, abandoned digital journeys or repeated requests for balance information
External context	Local employer shocks, seasonal pressures or cost increases affecting a community

The model will produce an explainable support flag, not an automatic declaration that a member will default. A credit-union colleague should be able to see the contributing factors, assess their relevance and decide the appropriate next step.

SECTION 7

Better member communications

Poorly timed, generic or threatening communications can reduce engagement. Murmuration will help credit unions communicate in a way that is supportive, proportionate and responsive to individual needs.

- Choose the channel most likely to be used: SMS, email, telephone, app, letter or face-to-face.
- Contact at a time when the member is more likely to respond.
- Differentiate a gentle reminder from an emerging-risk support message or formal arrears notice.
- Use plain language and clearly explain what the member can do next.
- Control contact frequency to avoid overwhelming or pressuring members.
- Capture accessibility, language and communication preferences.
- Offer a simple digital route while preserving telephone and face-to-face support.

Illustrative message

"We have noticed that your next payment may be difficult. Circumstances can change, and support may be available. You can review your options securely online or ask us to contact you at a convenient time."

The objective is to encourage disclosure early. FCA guidance requires firms to treat customers in or approaching arrears with forbearance and due consideration, and the Consumer Duty places emphasis on avoiding foreseeable harm, effective support and monitoring customer outcomes.

SECTION 8

Sustainable alternatives to non-payment

When a member cannot make the contractual payment, the choice should not be limited to paying in full or falling into arrears. Murmuration could support a structured decision process that matches options to the member's individual circumstances and affordability.

Option	Potential use	Key control
Change of payment date	Income arrives on a different date	Confirm that timing, rather than overall affordability, is the issue
Temporary reduced payment	Short-term income or expenditure shock	Set a review date and avoid an unaffordable catch-up payment
Term extension	Lower sustainable monthly payment is required	Explain total interest and ensure the extended term remains appropriate
Short deferral	Temporary and clearly time-limited disruption	Explain interest, term and credit-file consequences
Interest or charge concession	Balance would otherwise escalate during hardship	Apply consistently under an approved policy
Token payment	Very limited temporary capacity	Use alongside a fuller review or debt-advice referral
Consolidation loan	Multiple expensive debts can genuinely be replaced at lower cost	Repay creditors directly and avoid increasing total indebtedness
Specialist debt advice	Multiple creditors, priority debts or serious financial difficulty	Warm referral to an independent, free provider

A consolidation loan should never be the automatic answer to delinquency. It is appropriate only when it demonstrably improves affordability, reduces cost or simplifies commitments without extending unsustainable borrowing.

SECTION 9

Vulnerability and member support

Financial difficulty may be connected to poor health, bereavement, unemployment, caring responsibilities, domestic abuse, low financial resilience or limited digital capability. A good system must make it easier for members to disclose their needs and easier for staff to respond appropriately.

- Record communication and support needs with appropriate permissions and controls.
- Avoid asking members to repeat difficult circumstances unnecessarily.
- Provide additional time, alternative channels or trusted third-party support where appropriate.

- Escalate complex or sensitive cases to trained colleagues.
- Monitor whether vulnerable members receive outcomes as good as other members.
- Use digital tools as an option, not as a barrier to human help.

The FCA has highlighted the need for firms to identify customers in vulnerable circumstances, understand their needs, provide prompt and appropriate support and monitor the outcomes they receive. Murmuration can make those expectations operational by connecting disclosure, workflow, communications and outcome data.

SECTION 10

Collective intelligence across the sector

One of Murmuration’s strongest potential differentiators is the ability to generate anonymised and aggregated intelligence across participating credit unions. Individual member data would remain protected, while approved aggregate analysis could identify patterns too small to be visible within one organisation.

- Rising financial stress in a town, postcode or employment sector.
- Seasonal peaks linked to energy bills, school costs or holidays.
- Changes in the use of high-cost credit or Buy Now Pay Later.
- Loan structures associated with better or worse long-term outcomes.
- Communications and support options that produce sustainable cures.
- Emerging fraud or first-party fraud patterns.
- Differences in performance between regions, including lessons from Northern Ireland.

Network effect

Each participating credit union retains control of its member relationship, but the network becomes better at recognising emerging risks and effective interventions.

SECTION 11

Responsible AI, data and governance

Predictive technology in lending and collections requires strong governance. The platform is to be designed to support fair decisions and good outcomes rather than maximise short-term recoveries.

Principle	Required practice
Human accountability	Named owners remain responsible for lending, support and collections decisions
Explainability	Staff can see why a risk or affordability flag was generated
Fairness testing	Models are tested for bias, disparate outcomes and proxy discrimination
Data minimisation	Use only data necessary for a defined, lawful purpose
Consent and transparency	Explain Open Banking access, monitoring and data use in clear language

Principle	Required practice
Challenge and correction	Members and staff can correct categorisation or request human review
Security	Apply robust access control, encryption, audit logging and retention policies
Outcome monitoring	Measure sustainability, complaints and member outcomes, not only cash collected
Model governance	Validate performance, drift and limitations before and after deployment

Automated decision-making and profiling should be assessed carefully under data-protection law. High-impact decisions should not be delegated to opaque models, and the system should maintain a clear audit trail of data, recommendations, human decisions and outcomes.

SECTION 12

What Murmuration can achieve

Murmuration should be measured against outcomes rather than the volume of alerts, messages or automated decisions it produces. The relevant question is whether participating credit unions originate more sustainable loans, identify financial stress earlier, secure greater member engagement and ultimately reduce arrears and credit losses.

The available evidence strongly supports the direction of this approach. The FCA has found that many lenders miss opportunities to identify customers in difficulty before or during early arrears, and its current rules require tailored forbearance and due consideration. Open Banking Limited also documents how real-time transaction data can strengthen affordability assessments and identify customers in pre-arrears. However, there is no directly comparable, independently verified UK credit-union study proving that one combined platform will deliver a specific percentage reduction. The figures below should therefore be treated as transparent, testable planning targets rather than guaranteed results.

12.1 Recommended outcome targets

A sensible programme would use staged targets. Loss reduction will normally lag arrears improvement because provisions and write-offs reflect older lending cohorts as well as current interventions.

Scenario	Implementation stage	Arrears reduction target	Reduction in annual provisions and write-offs
Conservative	First 12 months	5%	3%
Base case	18-24 months	10%	7.5%
Stretch	Mature, well-adopted programme	15%	12%

These targets assume that Murmuration is deployed across the full lifecycle: improved affordability at origination, early-warning monitoring, personalised contact, workable repayment options, human escalation

and disciplined outcome measurement. A communications-only implementation should be expected to achieve less.

12.2 Potential impact across the UK credit-union sector

Using the 2025 sector baselines of £234.8 million in loans in arrears and £100.8 million in annual provisions and write-offs, the target scenarios imply the following potential impact:

Scenario	Arrears balance reduced	Annual loss expense reduced	Combined interpretation
Conservative	£11.7m	£3.0m	Credible first-year proof of value
Base case	£23.5m	£7.6m	Meaningful sector-level improvement
Stretch	£35.2m	£12.1m	Mature adoption with strong execution

The arrears figure represents balances prevented from entering, or successfully moved out of, delinquency. It is not the same as immediate cash profit. The loss figure is the more direct income-statement opportunity, although the timing of benefit will depend on provisioning policy, recoveries and the age of each credit union's arrears book.

12.3 Illustration for a credit union with 8,000 members

For illustration, an 8,000-member credit union operating at the 2025 UK sector average per member would have an estimated loan book of approximately £9.3 million, around £820,000 in loans three months or more in arrears and approximately £352,000 of annual provisions and write-offs. Actual credit unions will differ materially according to lending penetration, average balances, product mix and local member circumstances.

Scenario	Arrears balance reduced	Annual loss expense reduced	Illustrative reality
Conservative	£41,000	£10,600	Early proof with limited deployment risk
Base case	£82,000	£26,400	Practical planning case for a scaled rollout
Stretch	£123,000	£42,300	Strong adoption and sustained model performance

For an individual credit union, even the conservative case can matter. Lower arrears release staff capacity, improve liquidity and reduce the volume of difficult collections activity. Lower provisions and write-offs protect surplus and capital, giving the credit union greater capacity to lend, invest in member service or absorb future economic shocks.

12.4 How Murmuration would create the improvement

- **Better origination:** Real-time income and expenditure, current-account data, credit-reference information and assisted underwriting reduce avoidable affordability errors and first-payment defaults.
- **Earlier identification:** Behavioural and cash-flow indicators identify members approaching arrears before a contractual payment is missed.
- **Higher engagement:** Channel, timing, tone and self-service journeys increase the chance that a member responds while more options remain available.
- **More sustainable resolutions:** Reduced payments, date changes, term extensions, concessions and appropriate consolidation address affordability rather than repeatedly requesting an impossible payment.

- **Continuous learning:** Outcome tracking shows which interventions cure arrears sustainably, which arrangements fail and where policy or underwriting should change.

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SECTION 13

Conclusion

Rising delinquency is not simply a collections problem. It is a lending, data, communication, affordability and member-support problem that develops across the full credit lifecycle.

Credit unions are well placed to respond because they already have trusted relationships with members and a purpose built around financial wellbeing. Murmuration can strengthen those relationships by bringing together better origination, real-time affordability, early-warning intelligence, personalised engagement and sustainable support options.

The strongest proposition is not “AI-powered debt collection”. It is AI-supported, human-led delinquency prevention.

The Murmuration promise

Lend better. See stress earlier. Engage members sooner. Offer sustainable choices. Learn across the sector.

Delivered responsibly, this model can create three outcomes at the same time: better outcomes for members, lower arrears and credit losses, and more resilient credit unions.

References and methodology

Primary data source

- Bank of England, Credit Union Annual Statistics: 2025, tables 1.2, 1.3, 1.4 and 5.4; last updated 31 July 2026. Figures in this paper are rounded from values reported in £ thousands.

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Methodological notes

- The reduction scenarios are management planning benchmarks, not forecasts or contractual commitments. They should be validated through controlled pilots and adjusted for each credit union's starting portfolio quality, product mix and implementation scope.
- The 8,000-member illustration applies UK sector-average values per member to a hypothetical credit union. It is not a benchmark for any named institution and should be replaced with the credit union's actual loan book, arrears and loss data when preparing a business case.
- "Loans in arrears" refers to total net liabilities of loans reported as three months or more in arrears at the financial year end.
- "Provisions and write-offs" is an annual income-statement expense and is not equivalent to the amount permanently lost from the year-end loan book.
- Percentages of loans outstanding divide the relevant reported value by loans to members outstanding at the financial year end. They are directional indicators and should be interpreted with the timing difference above.
- The proposed Murmuration capabilities are a target operating model and product proposition, not a statement that every capability is currently available.
- Any implementation would require legal, regulatory, data-protection, model-risk and credit-policy review by participating organisations.