

Incentive Model Banking: Balancing Penalties with Rewards in Private Sector Banks - A Customer-Centric Framework for Sustainable Banking in Madurai District

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Abstract

This helps Indian private sector banks maintain repayment discipline, safeguard asset quality and recover their opportunity cost of operating GST- credit-card delays, EMI defaults, cheque dishonours and lapses in recurring payments. Now, whilst the penalty model is required it is structurally incomplete because it penalizes customers for delinquency, but only offers a minuscule reward to customers who do pay on time every month. The paper presents the theoretical and empirical development of a framework for Incentive Model Banking (IMB) in Private Sector Banks-Madurai District, Tamil Nadu IMB suggests that a definable portion of penalty revenue be directed into an incentive pool with transparent guidelines, redistributed as tiers of recognition, vouchers, fee waivers, loyalty credits and symbolic awards at the branch level for well-behaved customers. The paper draws on behavioural reinforcement theory, relationship banking, service-dominant logic and models such as customer engagement value (CEV) and customer lifetime value (CLV). An incentive compliance index is constructed, along with a fueled reward pool of penalties and a logistic churn model and discounted customer life time value equation. We used a small study of illustrative numerical dataset of 60 retail customers to test the mechanics of the model and to show how budget feasibility. The results indicate that RRs worth a suggested Rs 3,000 can be provided for around 250 customers (assuming an annual penalty revenue base of Rs 50 lakh) if 15% of the stipulated penalty amount is allocated each year, maintaining the other Rs 42.5-plus lakh per annum in disposal to meet whatever operating and risk reservation are necessary. Reward recognition reduces predicted customer churn among high-compliance customers and raises indexed customer lifetime value 114 from its base condition of 100 in the 15% allocation scenario, according to scenario calculations. It is regulator-aligned because the proposed framework does not change the interest rate, waives any legitimate dues and keeps penalties as a deterrent. It adds a positive reinforcement layer instead with potential goodwill that further augments retention, trust, referrals and sustainable relationship banking.

Keywords: Incentive Model Banking; Madurai District; private sector banks; penalty charges; relationship banking; customer loyalty; behavioural reinforcement; customer lifetime value; retail banking sustainability.

1. Introduction

Retail banking in India has moved rapidly from branch-centred intermediation to a hybrid model of mobile banking, credit cards, automatic EMI recovery, UPI-linked repayment, recurring deposits, SIP mandates and digital customer relationship management. This transition has improved access and efficiency, but it has also increased the number of automated compliance points at which customers can be charged for delay or non-performance. Private sector banks usually maintain structured schedules for late credit-card payment, overdue EMI, cheque dishonour, mandate failure, minimum balance non-maintenance and other operational exceptions. These charges do not happen by chance: they're built into modern banking's risk-control and contract-enforcement architecture. Further, the Reserve Bank of India has also reiterated appropriate disclosure as well as reasonability and fairness in respect of penal charges including through its guidance dated 2023 and 2024 on penal charges in loan accounts & card-related charges (Reserve Bank of India, 2023, 2024).

As a result penalty systems are asymmetrical, inherently so. If customers fail to pay, they are immediately issued a monetary signal. Even customers who keep years of clean repayment often only get a lack of punishment. This is bad design from a behavioural perspective, as it treats compliance as assumed and hidden. The core of reinforcement theory postulates that behaviour can be made to occur (or become pronounced) as a result of positive reinforcement and punishment (Skinner, 1953). Morgan and Hunt (1994) state that trusting partners establish reciprocal recognition in relationship marketing, rather than enforcing contractual terms. In banking, timely and loyal customers ensure predictability of liquidity, minimize collection cost, safeguard asset quality create referral value. So an acceptably ethical and economically rational system acknowledges disciplined customers.

Madurai District should be an ideal context for building such a model given the large retail banking population: salaried employees, small traders and professionals, educational institutions, micro-enterprise borrowers as well as household swiping gold-loan offerings to vehicle-loan customers on pay-day loans and digitally-active families. In the private sector, banks have a competitive edge over one another in terms of their technology used, speed of service, quality of service and relationship keeping prowess. Simply putting forth interest-rate competition does not work, as the products offered keep rolling together due to regulation. Service innovation, transparency and customer appreciation are differentiators. Consequently this paper poses a key research question central to the initiatives enacted by policymakers which is how can private sector banks mix penalties with formal incentives without undermining credit discipline or raising costs?

The contribution of this paper is fourfold. First, it formalises Incentive Model Banking as a customer-centric framework that does not remove penalties but uses a small percentage of penalty revenue to reward disciplined behaviour. Second, it builds an Incentive Compliance Index (ICI) to classify customers into tiers based on repayment consistency, cheque behaviour, mandate continuity and account discipline. Third, it presents a self-funded reward model using penalty-pooling mathematics, churn modelling and customer lifetime value calculations. Fourth, it provides a small-scale numerical demonstration using 60 illustrative customers and a scalable annual model based on 1,000 penalty cases and Rs 50 lakh penalty revenue.

The paper is conceptual and numerical rather than a claim of completed field intervention. The small-scale data are used as an illustrative dataset to demonstrate model mechanics, not as a population estimate of all private sector banks in Madurai. This limitation is made explicit because a ready-to-submit conceptual paper must separate validated empirical findings from model-based calculations. Nevertheless, the

numerical analysis helps management and researchers understand how the proposed framework could be piloted, measured and refined.

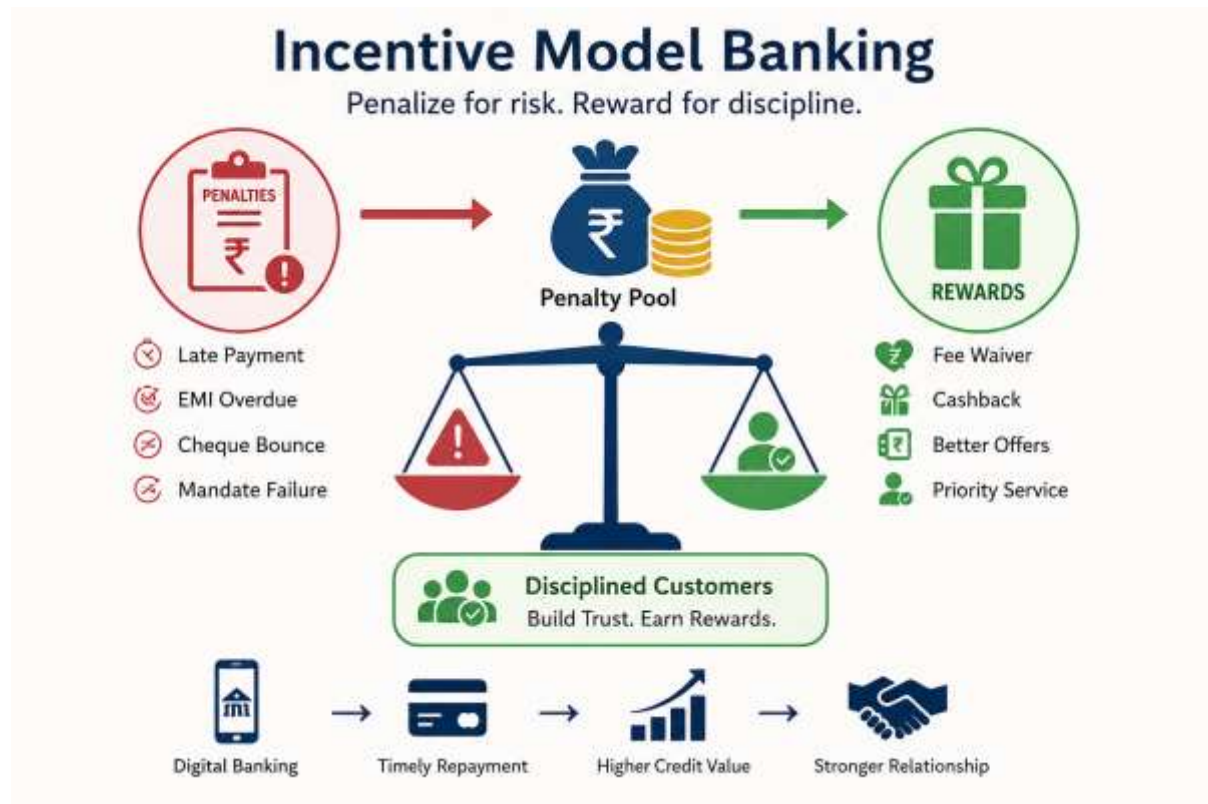


Table 1. Proposed tiered incentive framework for sustained compliance

Compliance duration	Tier name	Indicative reward	Approximate value
Year 1	Bronze	Movie voucher / fee waiver credit	Rs 1,000
Year 2	Silver	Food coupon / digital voucher	Rs 2,000
Year 3	Gold	Shopping voucher / cashback-equivalent credit	Rs 5,000
Year 4+	Platinum	Premium recognition / capped cashback / resort voucher	Rs 10,000

The table 1 converts the core IMB idea into a phased reward design. Exact rewards should be determined by bank policy, customer segment and applicable tax and disclosure rules.

2. Literature Review and Theoretical Foundation

The first foundation of IMB is behavioural reinforcement. Classical reinforcement theory argues that behaviour followed by rewards is more likely to recur, while behaviour followed by unpleasant consequences is less likely to recur (Skinner, 1953). The first half of this logic has been somewhat at odds with how the banking systems have traditionally worked: late payments lead to fees, delinquent accounts lead to penalties and dishonoured instruments lead to charges. It works to ensure repayment but is less helpful in encouraging the right behaviour. Behavioural research has also established that, depending on context, financial rewards and punishments can influence overt behaviour, although these types of incentives are less likely to affect attitudes (Bischofberger et al., 2025).

Foundation 2: Prospect Theory As Kahneman and Tversky (1979) demonstrate, people tend to seek to avoid losses more than they seek equivalent gains. It is for this reason that consumers may view late fees - even if legally disclosed - as hostile or punitive. Thus such a penalty-only architecture would arguably evoke greater negative affect than the bank hopes to achieve. The loss for non-compliance is unchanged in a balanced model, but the gain for compliance is introduced therefore bettering the emotional framing of the banking relationship. This follows the logic of nudges to some extent, as choice architecture helps channel desirable choices without detaching freedom (Thaler & Sunstein 2008).

The third pillar is relationship banking/relationship marketing. Trust and Commitment Morgan & Hunt (1994) - trust and commitment are at the centre of durable exchange relationships. Verhoef (2003) demonstrated the impact of customer relationship efforts on retention and customer share development. Banking is not a product which can be sold once in their life; it is a portfolio relationship starting from payroll accounts, savings accounts, credit card, car loans and home loan to investment products, insurance and digital payments. For a bank, a customer who pays on time for several years gives it stable cash flows, lower collection risk and better cross-selling opportunities. IMB turns this abstract reliability into an actual relationship asset.

The service quality and customer satisfaction is the fourth foundation. From the modals SERVQUAL and its later application performance reliability, responsiveness assurance, empathy and tangibles are key components that form customer satisfaction and behavioural intention (Zeithaml et al., 1996) In Indian banking studies, the SERVQUAL concepts are modified to fit public and private sector contexts (Shetty et al., 2022; Jagadeesan & Karunakaran, 2026). Likewise, service quality, satisfaction and trust has been identified consistently as significant predictors of customer loyalty in banking through a systematic review (Kim et al., 2024) and meta-analytic evidence. For instance, in multi-channel banking over channels (branches, mobile apps, calls and digital statements); overall customer satisfaction mediates the relationship between service quality and loyalty (Mugova et al., 2025)

Fifth is service-dominant logic and value co-creation According to the publications, Vargo and Lusch (2004) stated that value is not embedded in the products; rather, it is co-created through the use of interaction. A customer who pays EMI on time, keeps mandates and doesn't write cheques which get bounced, co-creates operational efficiency with the bank. This customer would be classified in traditional accounting as simply normal. IMB treats disciplined compliance as a case of value co-creation. Together they create higher risk, fewer friction and better relationship stability.

Foundation 6: Research of Loyalty Programmes It is true that loyalty programmes can build behavioural loyalty if designed with attention to detail (Leenheer et al., 2007; Liu, 2007; Meyer-Waarden, 2008), however, analytical studies have shown that these programmes may attract loyal consumers or may create costs without any incremental benefit of such customers. This is precisely why IMB is not another indiscriminate loyalty programmes. This is not a run of the mill rewards points program. Funded with penalty revenue and designed around caps, it is associated with concrete financial discipline. Based on behaviour that reduces banking risk, so are then eligible for reward. Which means IMB is a lot closer to risk-adjusted recognition exercise than an incentive campaign.

Foundation seven: customer lifetime value, customer engagement value Long-life customers are not always inherently profitable, but disciplined customers may be important in the context of cross-buying, referral, and service cost reductions (Reinartz & Kumar 2000; Kumar et al. 2010). A high compliance retail customer may have a low cost of collection, high product holding, an increasing tendency for referral and a decreasing intensity of complaint. For IMB, success is therefore gauged not solely by the cost of

immediate reward but in terms of retention, influencer net promoter potential or returns based on increased lifetime customer value and reduced churn.

Finally, the regulatory context matters. There is nothing in the RBI guidance that prohibits banks from providing rewards or loyalty benefits to customers if such benefits are clear, transparent, non-discriminatory, disclosed fairly and do not contravene anything in prudential rules. RBI's guidance on penal charges reinforces that banks should treat penalties as charges, not compounding penal interest, and should disclose methodology clearly. The proposed IMB framework operates within this logic: it does not waive default charges, it does not restructure debt automatically and it does not discriminate on prohibited grounds. Instead, it uses pre-announced eligibility rules to recognise timely behaviour.

Incentive Model Banking (IMB): balancing deterrence with positive reinforcement

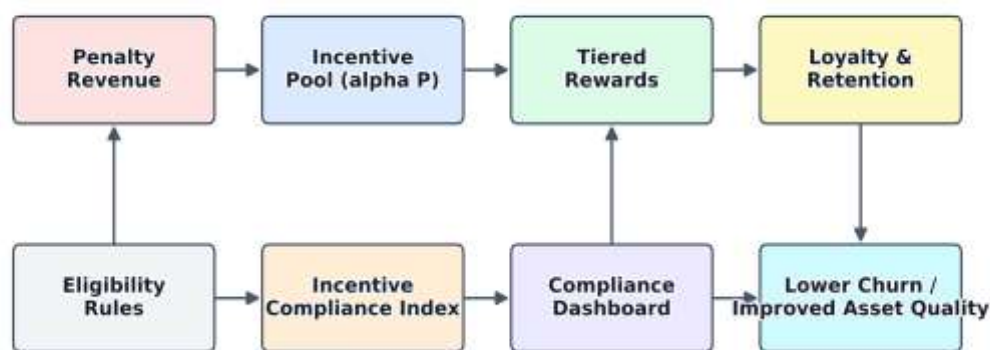


Figure 1. Conceptual framework of Incentive Model Banking.

Penalty revenue is not removed; a defined share is routed through an incentive pool and converted into visible rewards, dashboards and retention benefits.

3. Research Objectives, Questions and Propositions

The overall objective is to design a mathematically transparent and financially sustainable incentive framework for private sector banks in Madurai District. The first specific objective is to define measurable eligibility criteria for disciplined customers. The second is to develop a self-funded penalty-pooling model. The third is to estimate the possible retention and customer lifetime value implications of recognition. The fourth is to propose an implementation architecture that can be piloted at branch or district level.

The study addresses four research questions.

RQ1: As members of the private sector, how can we measure customer compliance in a way that is operationally relevant? RQ1: How able are you to exploit data as a lever for growing margins?

RQ2: How much of penalty revenues can be used for incentives while maintaining penalties' deterrence and recovery function?

RQ3: How will customer coverage, churn and lifetime value be affected by different reward allocations numerically?

RQ4: How can we do IMB provisioning in Madurai District without getting abjured by regulatory expectations of fairness, disclosure and prudence?

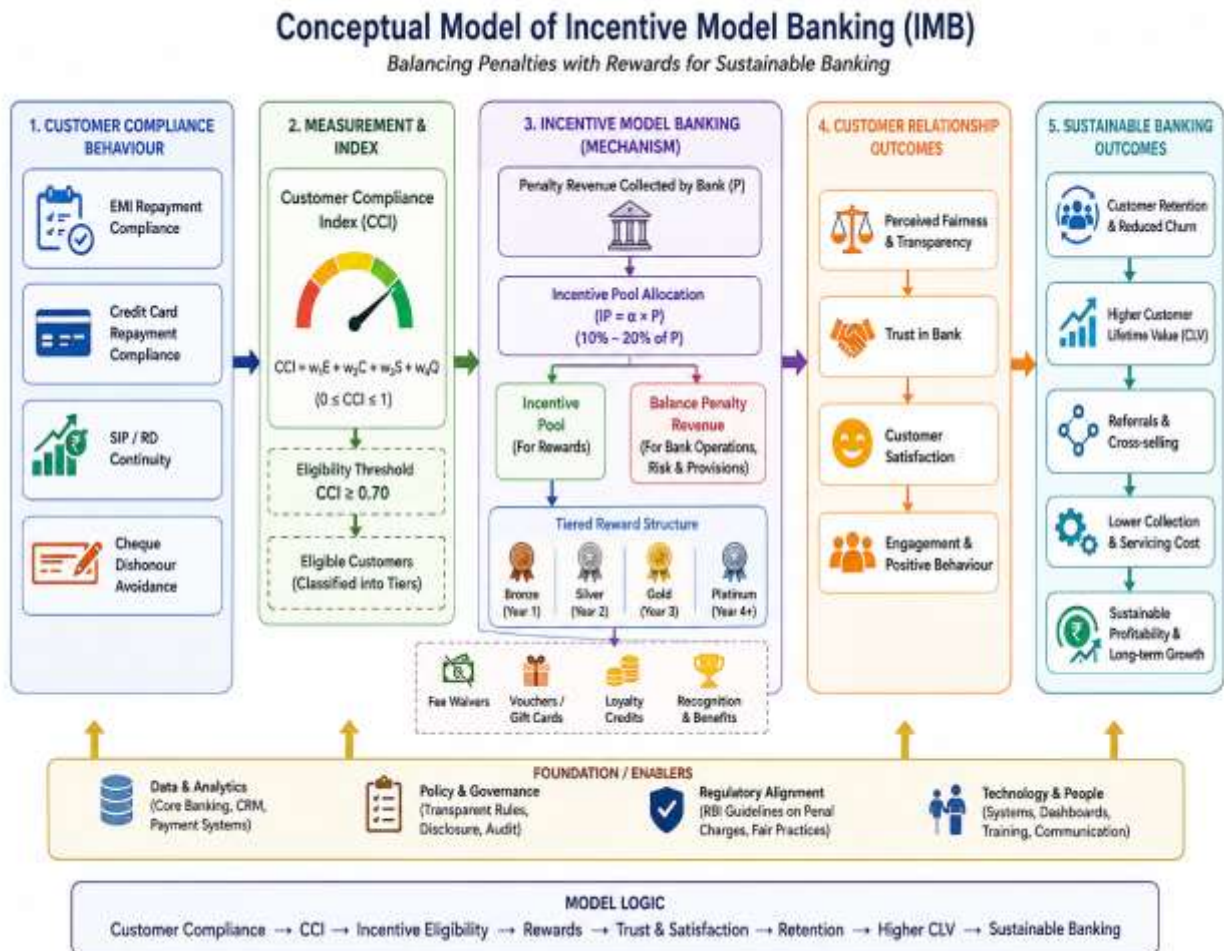
The conceptual propositions are:

P1: If the value of Incentive Compliance Index is high for a customer, then Probability of that Customer will not churn is low.

P2: A reward programme which is transparent will look fairer than a penalty-only model.

P3: 10% to 20% penalty-pool allocation pays for meaningful recognition without materially impairing net penalty revenue

P4: The greatest economic benefit comes not from the sole hit of reward value but rather stickiness impact of churn mitigation, product accumulation, referrals, and trust in the relationship.



4. Methodology and Data Design

Design/methodology/approach This paper adopts a conceptual modelling and numerical simulation design. Due to a lack of publicly available data on bank-level penalty revenues for very narrow branch-based financial so that extraction churns and ‘repayment histories’ are available to the level of detail used in this paper, the number section utilises an example small dataset. The dataset is descriptive and methodological: it demonstrates how a bank could use the model based on its own internal data. There are 60 customer account which are classified into relationship segment as -credit-card only, home-loan EMI, vehicle-loan EMI, personal-loan EMI and SIP/RD auto-debit and mixed relationship. Variables: round off to average balance, compliance score, number of late events, cheque bounce indicator, SIP/RD lapse indicator, annual penalty amount and observed churn.

The unit for modelling is a retail customer-year. This unit works because incentives can be granted on an annual basis: a customer must receive recognition for maintaining compliance over a complete review cycle. Annual recognition but keeps monthly signals for operational dash-boards to reduce administration and encourage on-going behaviour. The proposed data structure is compatible with standard core banking,

card management and mobile banking systems. Late payment, cheque bounce and failed mandate events already exist in transaction and exception logs. The new requirement is to aggregate them into a transparent compliance index.

The analysis includes descriptive segmentation, reward-pool budgeting, sensitivity analysis, logistic churn modelling and customer lifetime value indexing. The numerical values are conservative and illustrative. For example, the annual penalty revenue scenario assumes 1,000 delinquency cases producing Rs 50 lakh in penalty revenue and a reward-pool allocation of 10% to 20%. The user-provided conceptual guideline suggested an allocation of 10% to 20%, and the present paper mathematically evaluates the feasibility of that range.

Table 2. Variables in the study of customer-year dataset

Variable	Definition	Operational source
Customer_ID	Anonymised customer identifier	Core banking / CRM
Segment	Main product relationship category	Product master
Avg_Balance_Lakh	Average relationship balance in Rs lakh	Deposit and loan ledgers
Compliance_Score	Simulated ICI score between 0 and 1	Derived from repayment events
Late_Events	Number of delayed repayment or card events	Payment logs
Cheque_Bounce	Binary indicator for cheque dishonour	Clearing exception report
SIP_RD_Lapse	Binary indicator for investment/recurring deposit lapse	Mandate records
Annual_Penalty_Rs	Annual penalty charges recorded	Fee and charge ledger
Observed_Churn	Whether customer closed/left in next cycle	CRM / account status

The model can be implemented with fields already available in private sector banks. In this paper, the records are illustrative and anonymised by construction.

5. Mathematical Model

This section develops a quantitative framework for the proposed Incentive Model Banking (IMB) system. The model is designed to balance the existing penalty-based banking structure with a reward-oriented mechanism for financially disciplined customers. In essence, a portion of the penalty revenue earned through delayed payments, cheque dishonors, EMI defaults, SIP/RD lapses and other penalties related to service is allowed to be re-distributed among customers who exhibit sustained financial discipline.

Let the total number of customers considered in the study be denoted by:

n = total number of customers

For each customer i , where $i = 1, 2, 3, \dots, n$, the banking behaviour is measured using four major compliance indicators:

E_i = EMI repayment compliance score of customer i

C_i = credit card repayment compliance score of customer i

S_i = SIP/RD continuity compliance score of customer i

Q_i = cheque dishonor avoidance score of customer i

Each score is measured on a normalized scale from 0 to 1,

where: 0 = poor compliance; 1 = full compliance

5.1 Customer Compliance Index

To identify disciplined customers, a Customer Compliance Index (CCI) is introduced. The CCI combines repayment discipline, credit card discipline, investment continuity, and cheque discipline.

$$CCI_i = w_1 E_i + w_2 C_i + w_3 S_i + w_4 Q_i$$

where: w_1, w_2, w_3 , and w_4 are the weights assigned to each compliance factor.

The weights must satisfy the condition: $w_1 + w_2 + w_3 + w_4 = 1$

For the present study, equal importance is assigned to all four compliance variables. Therefore:

$$w_1 = 0.25, w_2 = 0.25, w_3 = 0.25, w_4 = 0.25$$

Hence, the Customer Compliance Index becomes: $CCI_i = 0.25E_i + 0.25C_i + 0.25S_i + 0.25Q_i$

A customer is considered eligible for incentive benefits when: $CCI_i \geq 0.85$

This implies that the customer has shown sustained banking discipline in terms of repayment, continuance of investment and transacting behaviour.

5.2 Penalty Revenue Pool

We can model the total penalty revenue collected by a bank branch in any given financial year in this way:

P = total annual penalty revenue

All of this charge income would be the penalty revenue from late credit card, EMI default, cheque dishonour, SIP/RD lapse and related services.

Proportion of the penalty revenue earmarked for customer rewards is what creates the Incentive Pool.

$$IP = \alpha P$$

where:

IP = incentive pool

α = proportion of penalty revenue allocated for incentives

P = total penalty revenue collected by the branch

In the proposed model, 15% of the penalty revenue is allocated to the incentive pool. Therefore:

$$\alpha = 0.15$$

$$\text{Hence: } IP = 0.15P$$

For example, if the annual penalty revenue is ₹ 50,00,000, then:

$$IP = 0.15 \times 50,00,000$$

$$IP = ₹7,50,000$$

Thus, ₹7,50,000 becomes available for rewarding disciplined customers.

5.3 Reward Allocation Model

Let the number of eligible customers be represented as:

m = number of customers satisfying $CCI_i \geq 0.85$

If the total incentive pool is distributed equally among eligible customers, the reward amount per customer is calculated as:

$$R = IP/m$$

where:

R = reward amount per eligible customer

IP = total incentive pool

m = number of eligible customers

For example, if:

$$IP = ₹7,50,000$$

$$m = 250$$

Then:

$$R = 7,50,000/250$$

$$R = ₹3,000$$

As a result, every eligible disciplined consumer is entitled to the incentives of ₹3,000.

5.4 Tier-Based Incentive Model

The IMB framework also suggests a reward structure similar to tier-based rewards. The longer the continuous compliance, the greater the reward value.

Denote the number of years that customer i has been fully banked by T_i .

A tier-based reward function is defined as: $R_i = f(T_i)$.

where:

R_i = reward value for customer i

T_i = continuous compliance duration in years

The proposed reward structure is:

If $T_i = 1$ year, then $R_i = ₹1,000$

If $T_i = 2$ years, then $R_i = ₹2,000$

If $T_i = 3$ years, then $R_i = ₹5,000$

If $T_i \geq 4$ years, then $R_i = ₹10,000$ or cashback subject to bank policy

This can be expressed as:

$$R_i = ₹1,000, \text{ if } T_i = 1$$

$$R_i = ₹2,000, \text{ if } T_i = 2$$

$$R_i = ₹5,000, \text{ if } T_i = 3$$

$$R_i = ₹10,000, \text{ if } T_i \geq 4$$

This model encourages customers to maintain continuous financial discipline for a longer duration.

5.5 Customer Loyalty Score

The study assumes that incentive-based recognition improves customer loyalty. Let the Customer Loyalty Score of customer i be denoted by:

$$CLS_i$$

The loyalty score is influenced by compliance discipline, reward satisfaction, and service satisfaction.

$$CLS_i = \beta_0 + \beta_1 CCI_i + \beta_2 RS_i + \beta_3 SS_i$$

where:

CLS_i = customer loyalty score

CCI_i = customer compliance index

RS_i = reward satisfaction score

SS_i = service satisfaction score

β_0 = constant term

β_1, β_2 , and β_3 = impact coefficients

For pilot-level numerical modelling, the assumed form is:

$$CLS_i = 0.20 + 0.40CCI_i + 0.25RS_i + 0.15SS_i$$

Here, all variables are normalized between 0 and 1.

For example, if:

$$CCI_i = 0.90$$

$$RS_i = 0.85$$

$$SS_i = 0.80$$

Then:

$$CLS_i = 0.20 + 0.40(0.90) + 0.25(0.85) + 0.15(0.80)$$

$$CLS_i = 0.20 + 0.36 + 0.2125 + 0.12$$

$$CLS_i = 0.8925$$

Thus, the customer loyalty score is 0.8925, or 89.25%.

5.6 Churn Reduction Model

Customer churn refers to the possibility that a customer may discontinue the relationship with the bank. In this study, churn probability is assumed to decrease when customer loyalty increases.

Let the churn probability of customer i be represented as: CP_i

The churn probability is calculated as: $CP_i = 1 - CLS_i$

where:

CP_i = customer churn probability

CLS_i = customer loyalty score

Using the previous result:

$$CLS_i = 0.8925$$

Therefore:

$$CP_i = 1 - 0.8925$$

$$CP_i = 0.1075$$

Thus, the expected churn probability is 10.75%.

This shows that a higher loyalty score reduces the probability of customer exit.

5.7 Incentive Compliance Improvement

The proposed IMB model assumes that structured rewards can improve customer compliance over time.

Let the initial compliance score be represented as: CCI_0

Let the improved compliance score after introducing the incentive model be represented as: CCI_1

The improvement in compliance is calculated as: $\Delta CCI = CCI_1 - CCI_0$

The percentage improvement is:

$$\text{Percentage Improvement} = (\Delta CCI / CCI_0) \times 100$$

For example, if the average compliance score before IMB is: $CCI_0 = 0.78$ and the average compliance score after IMB is: $CCI_1 = 0.86$

Then:

$$\Delta CCI = 0.86 - 0.78$$

$$\Delta CCI = 0.08$$

$$\text{Percentage Improvement} = (0.08 / 0.78) \times 100$$

$$\text{Percentage Improvement} = 10.26\%$$

Afterwards, the IMB model yields a compliance improvement estimate of 10.26%.

5.8 Numerical study of Incentive Pool Distribution

A numerical illustration below sets forth the financial viability of the proposed model.

Let us assume below given data for a Private Sector Bank branch in Madurai District:

Credit card late payment charges = ₹18,00,000

EMI default penalties = ₹20,00,000

Cheque dishonor charges = ₹7,00,000

SIP/RD lapse charges = ₹5,00,000

Therefore, total annual penalty revenue is:

$$P = 18,00,000 + 20,00,000 + 7,00,000 + 5,00,000$$

$$P = ₹50,00,000$$

The incentive pool is:

$$IP = 0.15P$$

$$IP = 0.15 \times 50,00,000$$

$$IP = ₹7,50,000$$

If the number of eligible disciplined customers is 250, then the average reward per customer is:

$$R = IP/m$$

$$R = 7,50,000/250$$

$$R = ₹3,000$$

This means that because the pool of rewards is based on a fraction of penalty earnings, the branch can reward 250 well-behaved customers without incurring any new expenses.

5.9 Sustainability Condition of the IMB Model

The total reward that has been distributed should never be greater than the incentive pool for the proposed model in order to keep it financially sustainable.

Let the total reward distributed be:

TR = total reward amount distributed

The sustainability condition is: $TR \leq IP$

If each eligible customer receives reward R , then: $TR = mR$

Therefore, the sustainability condition becomes: $mR \leq IP$

For example:

$$m = 250$$

$$R = ₹3,000$$

$$IP = ₹7,50,000$$

Then:

$$mR = 250 \times 3,000$$

$$mR = ₹7,50,000$$

Since: $₹7,50,000 \leq ₹7,50,000$ the model is financially sustainable.

5.10 Interpretation of the Mathematical Model

The Incentive Model Banking mathematical model delineates a fiscal feasible (fiscally relevant), behaviourally salient and practically operable approach. The Customer Compliance Index uses measurable banking behaviour to help identify disciplined customers. For example, the penalty-pool model guarantees that the reward mechanism is self-funding. Loyalty score model impacts on customer satisfaction and reduce churn via incentives. Sustainability condition - Banks cannot disperse rewards in excess of the incentive fund.

So, the IMB framework does not eliminate penalties from the banks system. Instead, it sets up a system where penalties remain in place to dissuade irresponsible financial behaviour while rewards are ushered into encourage prudent banking practices over the long haul. It changes the paradigm of Banking relationship from a purely transaction based penal model to a customer centric sustainable relational model.

6. Proposed Incentive Model Banking Framework

There are seven components of the IMB framework. The first is eligibility measurement via ICI tucked and streamlined with The second is penalty-pool funding. The third is tiered rewards. The fourth is non-monetary recognition. The fifth one is mobile dashboard digital transparency. Sixth is regulatory and audit control. Seventh is outcome measurement (churning, NPS, complaints cross - sell, and asset quality)

You start reaping the benefits in small but noticeable ways—a tiered reward structure. Customers in the first year will get free movie vouchers or fee waiver credits worth ₹1,000. For Year 2 customers, things like food coupons, lifestyle vouchers or fee waivers (say Rs. 2,000) are expected. Shopping vouchers or the cash equivalent of Rs 5,000 may be issued to year 3 customers. Premium recognitions like resort-stay voucher, privilege of relationship manager, cashback up to 1% of dues or branch-level award worth Rs.10k, would be provided to customers who have completed four or more years with the bank. The specific reward must be allowed under bank policy and tax entities.

Why is it important to provide them with non-monetary recognition? Because many customers value status, appreciation and trust signals. Such a branch might issue Best Customer Certificate, publish anonymised recognition status, distribute mobile-app milestone badges or invite only the best-behaved customers to financial literacy workshops. Recognition is something that needs to be on opt-in basis, privacy Sensitive account information must never be disclosed on public display.

It also keeps moral hazard at bay. A customer cannot choose to default with the intention of generating penalty revenue only to later, receive rewards; the retribution can be for neither poor action nor bank-wide penalty revenues. Penalty revenue is collected at branch or district level, and rewards are paid out to qualifying customers. The idea is essentially good, but there cannot be a real correlation of a specific defaulter with one beneficiary. It keeps the ethical separation in place and mitigates (although we will never eliminate) reputational risk.

An annual governance cycle is proposed. The bank finalises last year's penalty pool and the eligible customers in April. May: Exclusions Validated by risk & compliance teams. This is carried out at the branch level recognition in June The app has a progress indicator visible to customers, from July up until March. It promises predictability and audit ability of how the programme works based on this cycle

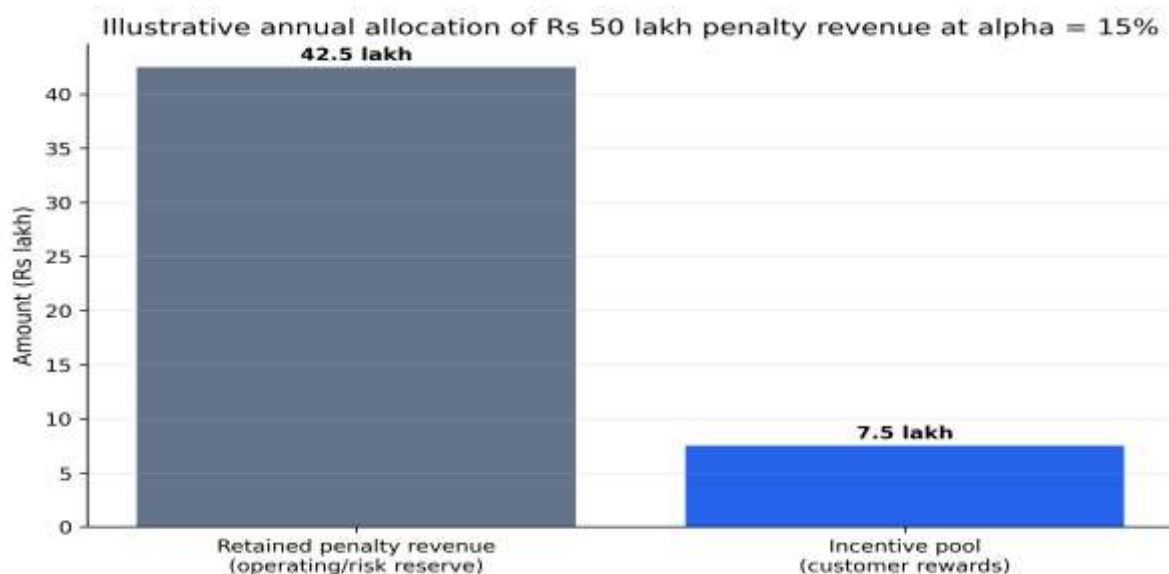


Figure 2. Penalty-pool allocation under a 15% IMB rule.

As per above figure 2 the model preserves most penalty revenue while creating a visible incentive pool for disciplined customers of this study.

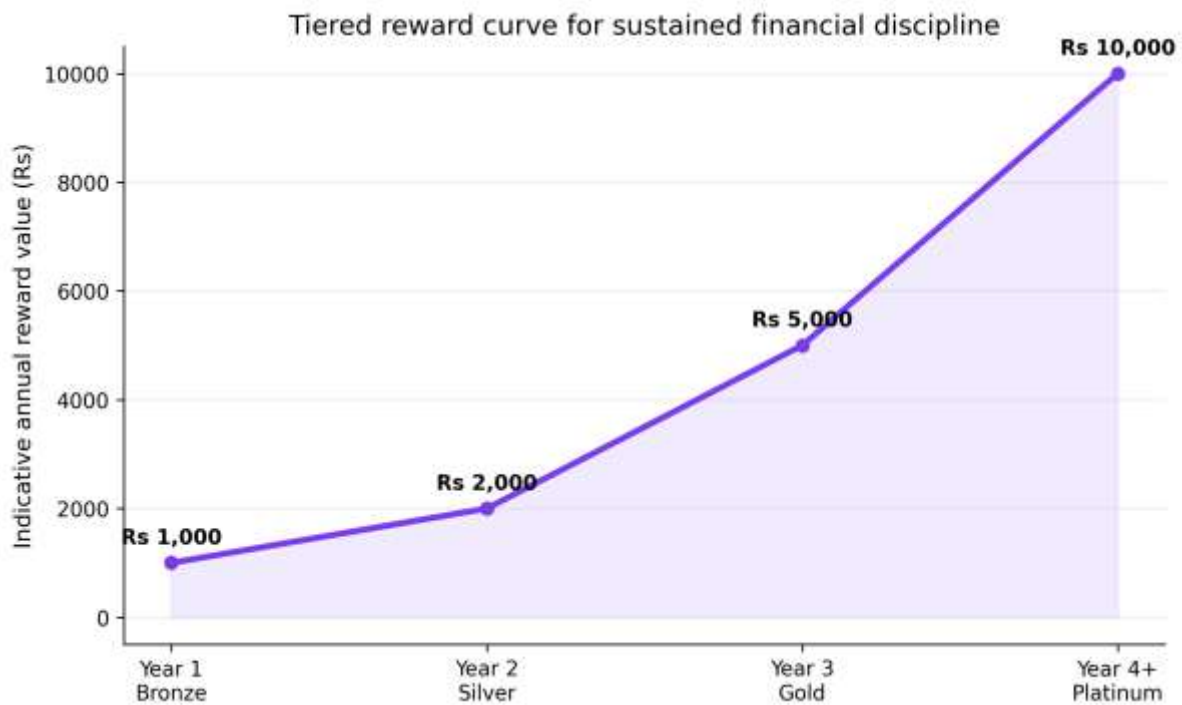


Figure 3. Tiered reward curve for sustained financial discipline.

Reward value rises with consecutive years of clean compliance, creating a goal-gradient mechanism.

7. Numerical Analysis

The illustrative small sample study example is based on a district-level numerical model. Consider for example, the private sector bank branches in Madurai recorded 1,000 cases related to delinquency within a year. Assuming penalty revenue of Rs 5,000 per case then total penalty revenue is Rs.50,00,000. In an entire penalty-only model, the full portion gets to remain in revenue area as a punishment. Incentive Pool under IMB for $\alpha = 15\%$ - Rs.7,50,000 Retained Penalty Revenue under IMB - Rs.42,50,000 For example, the average reward is 3,000 rupees; in that case, the bank can reward two hundred and fifty customers. It can reward 375 customers if the average reward is Rs 2000. It can reward 150 customers if the average reward is Rs 5,000.

The model is therefore self-funded. It does not compel the lender to raise interest rates on loan, curtail prudential provisioning or waive charges. All it does is transfer a visible minority of penalty revenue. 5 lakh is generated with 10% allocation, and 10 lakh by a 20% allocation. Whether it's 10 per cent, 15 per cent and 20 percentage issue depends on the bank's strategic focus. A conservative pilot may begin at 10%. A district-level retention programme that is more competitive may use 15%. If the churn is expensive, a high-competition segment like salary accounts or credit cards may even use 20% as well for a shorter period.

The example 60-customer dataset is what the eligibility would be calculated on. SIP/RD auto-debit and mixed-relationship customers emerge with the highest mean compliance scores both in simulated data. Customers whose EMIs are solely for personal loans and credit-card only exhibit lower average compliance but higher attrition rates. It is a plausible pattern, given that customers whose propensities to have transactional products ranged from one to four might have lower relational commitment, while

customers with more than four products tend to have higher switching costs and greater contact with the bank. But that perspective will need to be backed up by actual data before any management decisions can be made.

One other numerical insight is provided by logistic churn modelling. Y-axis of the illustrative curve (x3), a penalty-only model displayed significantly higher churn probability for a customer with an ICI = 0.70 when compared to a customer with an ICI = 0.95. Including IMB recognition causes churn to fall for high-compliance customers because they are given a reason to stay and continue accumulating status. The effect is intentionally modest. In fact, no sensible model just regards a voucher as something that changes the behaviour of existing customers. The stronger claim is that recognition, transparency and relationship attention together can minimize avoidable churn.

The Third Insight: Indexing Customer Lifetime Value In the illustrative scenario, if the index value of 100 is allied to the penalty-only model, then for allocations of IMBs equivalent to 10%, it raises to 108; for such allocations equivalent to 15% and 20% respectively, it raises to 114 and 117. Increasing performance from 10% to 15% yields a greater marginal gain than increasing it from 15% to 20%, revealing diminishing returns. This informs current recommendations of a default alpha at 15% for pilot studies.

Table 3. Segment summary from this study with small-scale dataset (n = 60)

Segment	N	Mean Balance Lakh	Mean Compliance	Late Events	Annual Penalty Rs	Churn Rate
Credit-card only	12	7.91	0.713	15	9950	8.3
Home loan EMI	10	10.89	0.876	5	3400	20.0
Mixed relationship	10	12.71	0.924	6	2650	20.0
Personal loan EMI	8	6.28	0.665	16	11300	25.0
SIP/RD auto-debit	11	5.14	0.922	1	750	9.1
Vehicle loan EMI	9	7.98	0.787	15	10100	11.1

Table 3 study small scale of an example of how branch data may be summarized and incentive tiers assigned (made up here, for example purposes only). Values is for illustration and training model only.

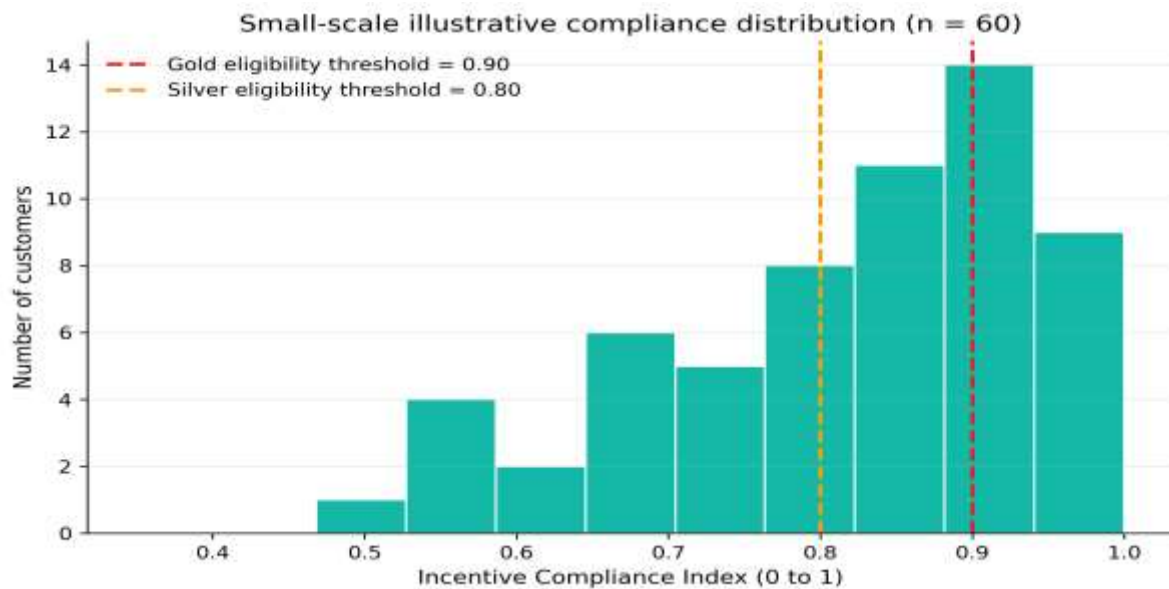


Figure 4. Compliance distribution in the illustrative customer dataset.

Customers 0.80 and above enter the reward consideration; 0.90 and above customers become even stronger contenders for higher recognition tier

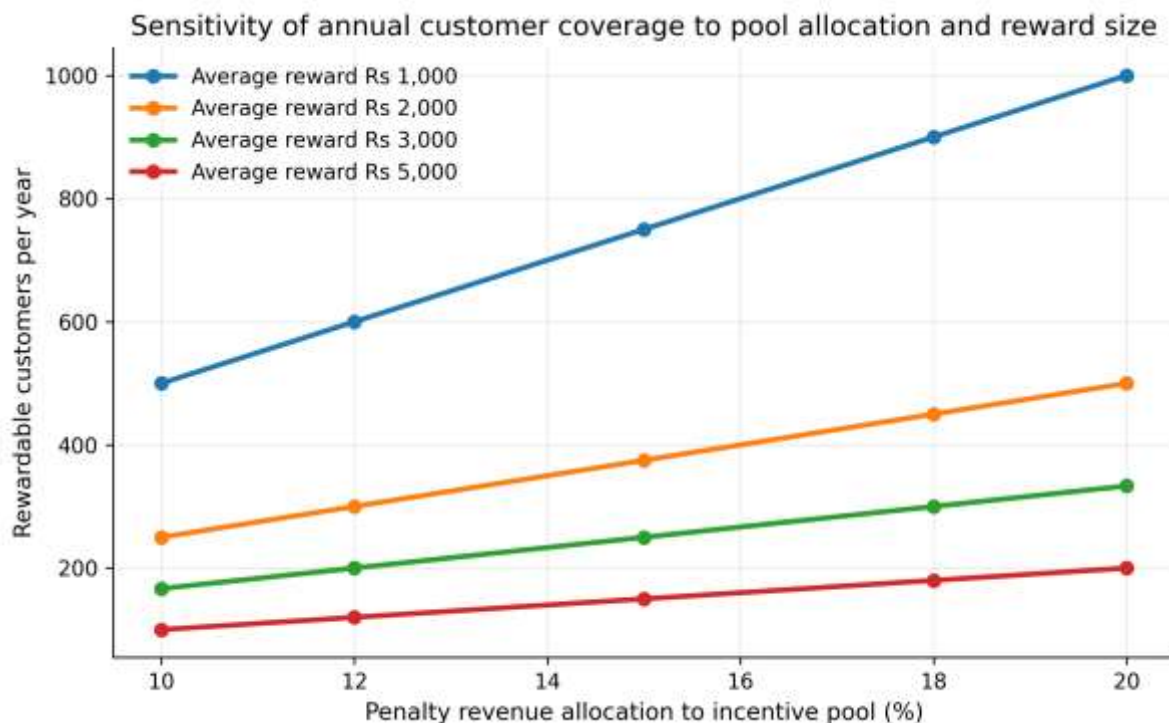


Figure 5. Sensitivity of annual reward coverage to pool allocation and average reward size.

This threshold will help the bank's managers on choosing between wide low-value coverage and narrow premium recognition (shown in figure 5).

Table 4. Sensitivity matrix: number of customers who can be rewarded from Rs 50 lakh annual penalty revenue

Allocation	Rs 1,000	Rs 2,000	Rs 3,000	Rs 5,000	Rs 10,000
10%	500	250	167	100	50
12%	600	300	200	120	60
15%	750	375	250	150	75
18%	900	450	300	180	90
20%	1000	500	333	200	100

Customer coverage is calculated as IP_t divided by average reward value. For example, at $\alpha = 15\%$ and average reward Rs 3,000, coverage equals 250 customers.

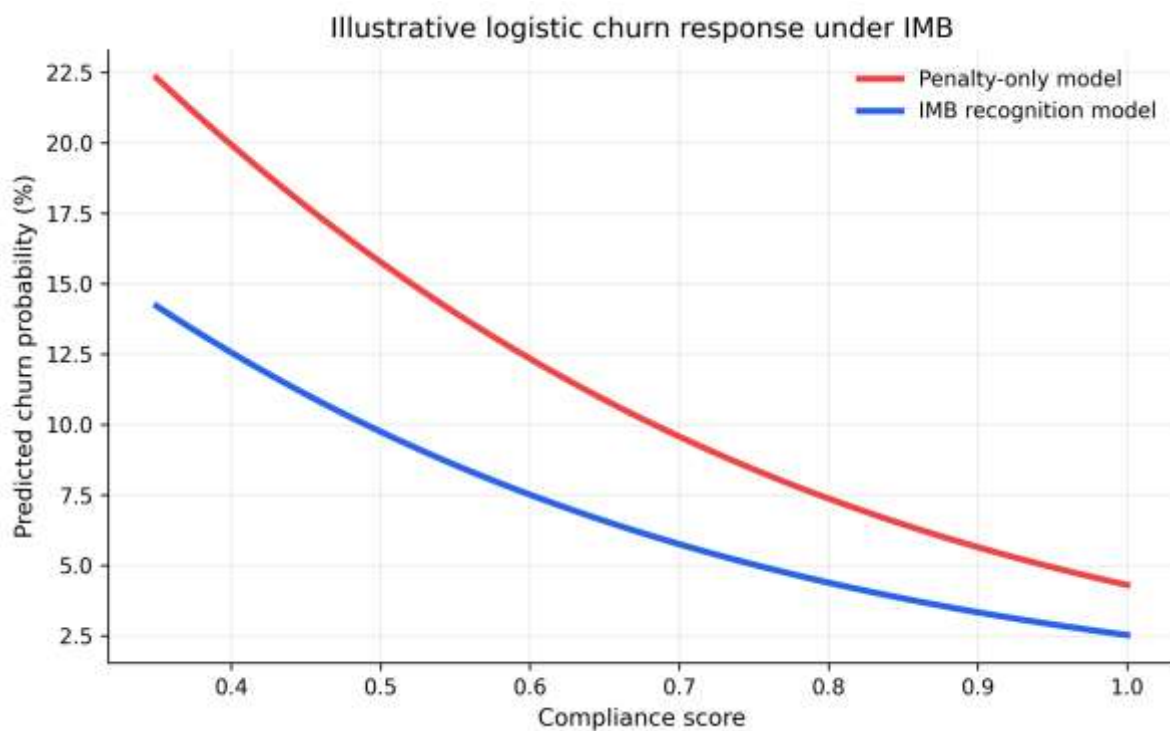


Figure 6. Logistic churn response under penalty-only and IMB recognition scenarios.

IMB is modelled as a modest negative shift in churn probability for eligible disciplined customers.

8. Results and Discussion

The first output is financial viability. And indeed, the penalty-pool equation indicates that even a minuscule allocation can yield visibility. This matters as so much banking innovation fails when new budget lines are involved. IMB takes an existing revenue band and pulls it further into loyalty. It retains most of that penalty revenue so once again banks will not lose the deterrent function of charges. Hence in this example after the incentive of Rs 7.5 lakh you are left with Rs 42.5 Lakh

The second result is behavioral consistency. Any penalty-only systems rely on negative reinforcement and loss aversion. Positive reinforcement and the goal-gradient dynamics of IMB played a significant role. Consumers can see where they are in the progression towards recognition, likely incentivizing them to keep their repayment clean. Kivetz et al. (2006) reveals that customers exerted effort as they close to a goal (towards reward). Alternatively, in the banking sector, a customer who has eleven clean months could

be considered less so in that twelfth month if the app indicates it is within qualifying distance for annual recognition.

Relation from our third result. Loyalty research says rewards only preserve customers who would have stayed in any case (Leenheer et al., 2007). IMB alleviates this problem by redirecting behaviour toward immediate operational gain. In fact, a customer who pays on time helps the bank save costs associated with collection calls, recovery efforts, and complaints handling along with risk of asset-quality problems. This programme may be justified as relationship insurance in competitive markets, although even where some eligible customers already loyally patronise the brand.

Fourth is Fairness and Transparency. If a customer believes that their bank is fair then they are more likely to accept any charge in the stride. A bank that does just that and imposes penalties, could be described as extractive. A positive recognition scheme is supported by a bank that advertises its use, and discipline is appreciated. Whereas service dominance worldview is clearly heavily underpinned by Vargo & Lusch, (2004) logic -Value co-creation Cannot be imposed. It also aligns with the customer experience theory which suggest a holistic view of journeys rather than independent transactions (Lemon & Verhoef, 2016). Fifth, you must deploy IMB as a risk-aware system and not as a marketing tool. Rules need to define eligibility and be audit-able. Do not provide deceptive claims in the context of conducting reward communication. Tax and accounting treatment needs to be clarified. Customer privacy must be protected. Most importantly, it did not encourage staff to increase penalty revenue for the purpose of funding reward raises. The separated notion of what governs a network is fundamental, this is to decouple the enforcement of penalty mechanisms from rewarding distribution semantics.

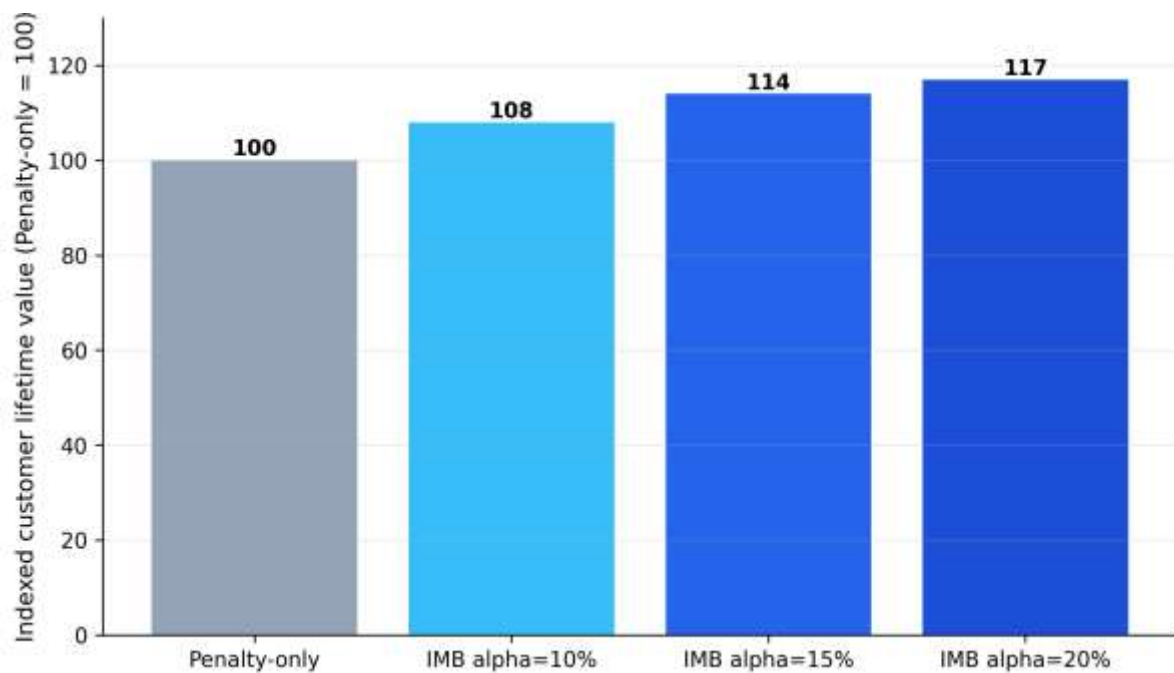


Figure 7. Indexed customer lifetime value across IMB allocation scenarios.

The 15% scenario provides an incremental improvement, while the 20% scenario is a case of diminishing marginal returns.

9. Implementation Roadmap for Private Sector Banks in Madurai District

Develop a meaningful pilot in six steps. Phase 1 is data mapping. Bank forgot about payments and recently

just labels internal fields like EMI due date(s), payment dates, credit-card days past due, cheque bounce details break-operative on the day being maintained cc for both products hold failed mandate (stops Gp). Phase 2 is index construction. The bank calculates ICI every month but only reports it in broad, customer friendly categories mechanic such as On Track, Needs Attention and Eligible. Legal and compliance review (phase 3). Respective terms and conditions are being drawn up, while the bank says that rewards are discretionary, capped and depend on compliance status.

Phase 4 is pilot launch. By targeting a few branches in Madurai city, Tirumangalam, Melur and the nearby areas you can also verify whether there is any variation with urban and semi-urban customers. Phase 5 is annual recognition. Some vouchers, fee credits or certificates are provided for customers who qualify. Phase 6 is evaluation. Churn, complaint rate, product holding, delinquency migration and NPS are compared to matched branches or to prior-year baselines by the bank.

The digital dashboard is central. A simple scorecard top for the customers - EMI paid vehicle on character, card payment bright, mandate energetic and no cheque bounce propel a little and reward tier now not be chargeable to receive. Very often, it is desired that the dashboard should not expose internal risk scores of too much complexity. Behavioural language use include "You are 10 months into Gold eligibility" or "One failed mandate may affect this year's reward". These are clear messages, delivered timely and on point.

Local significance, branch-level recognition in Madurai Financial discipline recognition can be combined with financial literacy sessions for all segments like senior citizens service days, women entrepreneur banking-workshops and MSME credit-awareness events by Banks-especially under the priority sector lending category. That secures IMB as a local bank rather than a mere publicly traded coupon programme. Training is required for staff. Relationship managers need to point out clearly that IMB is not a waiver scheme. Normal recovery processes should continue for overdue customer; = Collection teams Disputes over eligibility are subject to documented rules that customer service teams need to handle. Audit teams need to audit if reward has been duly approved. The programme needs a grievance mechanism, as customers can challenge rejection decisions.

10. Policy and Managerial Implications

The IMB shifts the debate from 'pay or be punished' to 'discipline and be rewarded'. A small change in language, tremendous relational impact. It gives banks a chance to differentiate themselves in an environment where products are increasingly commoditized. It further increases the quality of customer data, as customers learn to keep their mandates alive and tracked: create them regularly and update all necessary fields promptly.

IMB is a good-compliance index for fair-lending principles: from a regulatory stand point. Penalty does not lose its legitimacy and power by this. On one hand it is bank that may be strict with defaulters but on other, thanks the customers well managed. Governments should encourage transparency standards for such programs: clear regarding eligibility, not swayed by vested interests, no misrepresentation and no gaming of fine revenue and specific tax treatment.

IMB brings transparency in financial discipline for client. This could be very advantageous to salaried customers and first-time borrowers and small traders while forming their credit histories. It reinforces habits that will generally raise your credit scores and lower the cost of borrowing ahead. However, it will be up to banks not to let those rewards for their efficient funding only go on benefiting high income customers. An ICI design premised on income, but not size, would compensate based on timing.

This gives researchers the opportunity to empirically work on this model. Future studies can conduct difference-in-differences analyses between branches, conduct logistic churn coefficient estimates, test for changes in NPS, measure complaint severity and discern whether IMB affects migration of delinquency. By comparing monetary against non-monetary rewards researchers can see which offers stronger retention at lower cost.

11. Limitations and Future Research

The first limitation is that, the data used were for illustrative purposes. The dataset is deliberately small and synthetic to showcase the calculation of IMB. One cannot treat it as evidence of genuine customer behaviour in Madurai District. The results from the field study would be based on primary data first hand gathered from the private sector bank customers and anonymised bank records. The second constraint is that the penalty revenue can only be partially reallocated by the model. Banks might treat this revenue differently for accounting and internal policy purposes to limit its use. Thirdly, there is a treatment effect (age, income, occupation, recommended product and financial literacy) The treatments also affect how customers respond to rewards across different types of products.

Proposed research: triangulate IMB via a randomised branch-level pilot. Separate communication can be allocated as penalty only, non-monetary recognition, low-wallet monetary reward and mixed recognition on branches. This outcome could be measured on a 12–24 month basis. Researchers should also design an incentive compliance index scale with psychometric testing, including reliability and predictive validity. A second beneficial route is to predict the ideal reward amount instead of plug-in different CLV bands. Qualitative interviews with customers, on the other hand, can determine whether recognition creates perceived fairness or just hopes for freebees.

12. Conclusion

Penalising systems are needed in retail banking, but a system that only penalises indiscipline yet never acknowledges discipline is an incomplete one. The other imbalance that is corrected by Incentive Model Banking, which uses a percentage of the penalty income in full transparency, with customers who continue to fulfil their financial duties in full. It is statistically valid, behaviourally plausible and strategically significant for Private Sector Banks in Madurai District.

Under the proposed IMB framework, repayment discipline is not undermined; it fortifies deterrence with positive enforcement. It does not require lenders to refrain from charging, or giving up rights under the contract. It asks the banks to realise that disciplined clients are value creating and, that's value must be acknowledged in an orderly fashion. Brought together with compliance index, penalty-pool funding, tiered rewards, app-based dashboards and audit controls; IMB could be an even more customer-centric innovation.

The numerical example indicates that 15% of Rs 50 lakh received from penalty revenue can help create a Rs 7.5 lakh incentive pool (to be used to pay incentives) and fund around 250 customers at Rs 3,000 each which may lead to better retention and ultimately improve customer LTV (lifetime value). These numbers are for illustration of small scale only, but they demonstrate that the concept is feasible from an operational point of view. Empirical Validation - This is the process we must move onto next. A district level pilot of the same in Madurai can test if recognition improves loyalty, reduces churn and enables sustainable banking. Today, when banks compete for the customer not just on price but on trust we offer a way out of punitive compliance to relational partnership – an Incentive Model Bank.

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