



Dec 18

MICRO ∞ DIVE

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- Microdive is a new series from MFIN which aims to support the micro-credit industry in understanding critical industry issue(s) by providing a more granular examination of issues based on evidence/data. This will be an occasional series, focusing on topical and the most-relevant issues for the industry.
- This being the inaugural issue, we thought it pertinent to begin our line of enquiry on vexed questions which continue to confound the industry :
 - › Are new customers being added by the industry ? We examined this by looking at sourcing in the last three quarters and vintage of the customers
 - › Are customers over-leveraged? This was looked at by profiling customers on the basis of multiple lending (active loan accounts, number of distinct lenders) and indebtedness (loan amount outstanding and disbursed amount). We tried deriving and using customer profiling on EMI, however, the relevant data fields i.e. number of instalments, repayment frequency and instalment amount not being a standard and compulsory field in the data submitted to CICs; quality was not quite reliable. However, an estimation of monthly debt servicing obligation has been done based on common terms of loan (interest rate, tenure and repayment schedule)
 - › Quality of customers in terms of delinquency ? Here we explored delinquency buckets and captured the relationship, if any, between customer's delinquency to the number of loan accounts, number of distinct lenders, indebtedness and disbursed amount.
 - › Are delinquent customers being funded by the industry ? We tried to understand this by seeing disbursements to delinquent customers, pre-demonitization and post-demonitization period
- This report, for the first time, is bringing a customer-level analysis on the full customer base (~4.8 Cr) available in microfinance segment of the credit bureau. So, if any of the evidence brought out through this exercise does not seem to be in sync with your own data or common-sense understanding, request you to reach out to us so that we can examine further. We also request your ideas about possible areas/themes for this kind of examination to be taken-up in the future.
- We take this opportunity to thank the Equifax team for supporting us with our requirement and giving us required data to work on. It took a plenty of time and efforts to arrive at right data-sets and analysis.

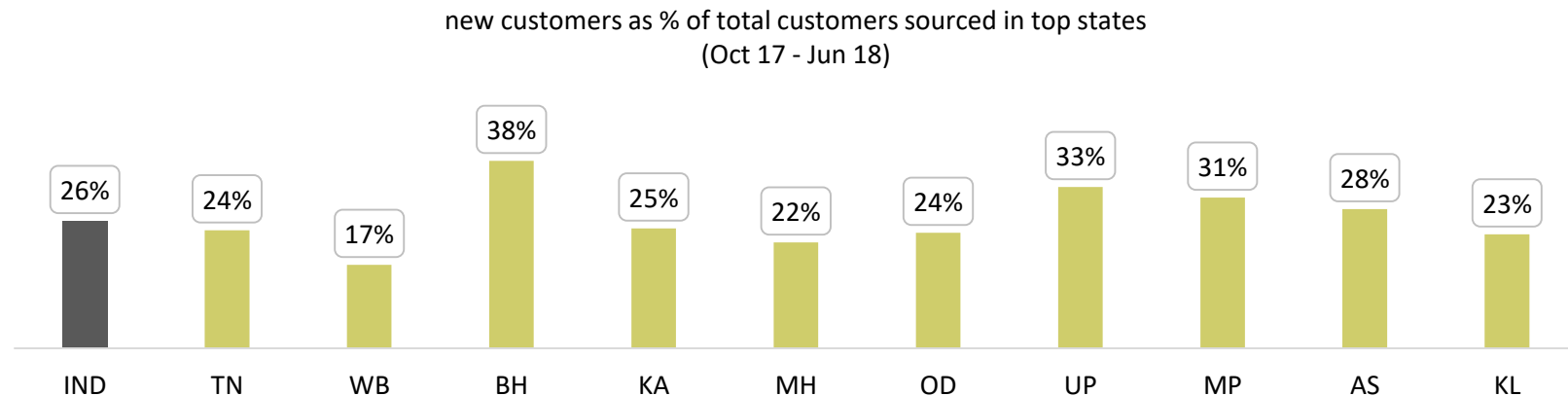
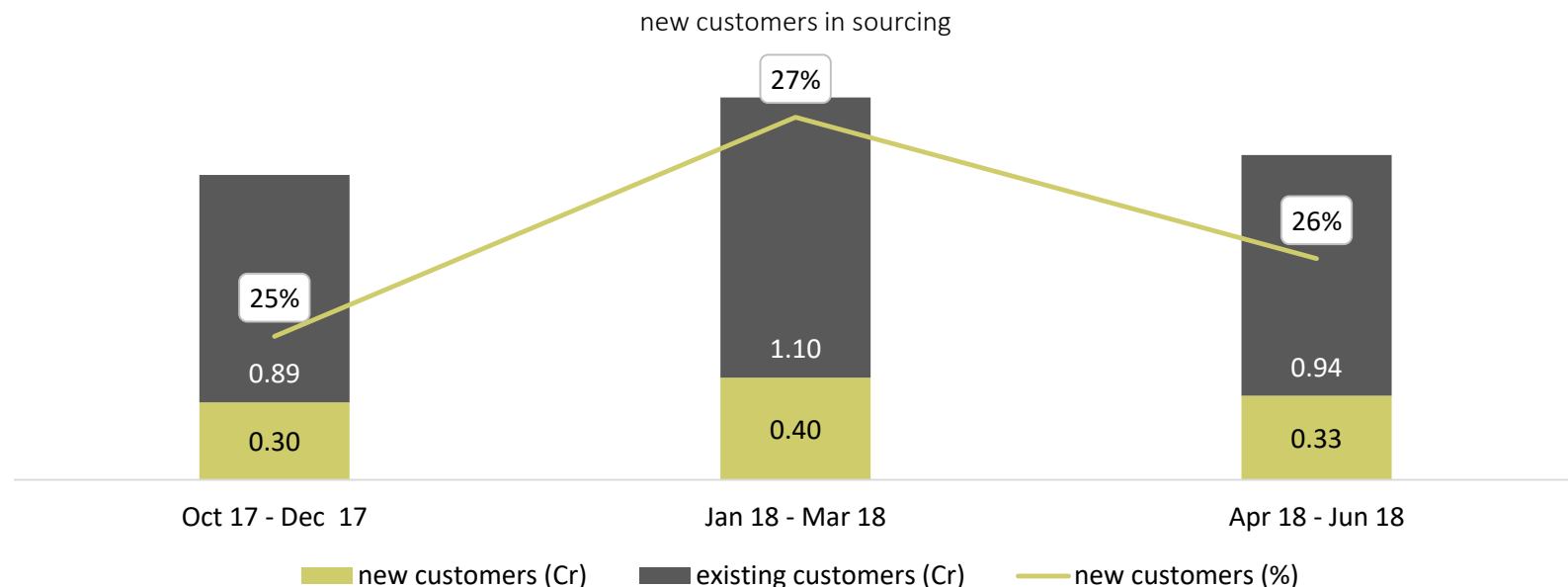
- Customer-level data for this report is extracted from Equifax Credit Information Pvt Ltd
- Data and analysis presented in this report gives a unique customer-level view in volume terms and includes data for all micro-credit lending submitted to the micro-finance segment of the credit bureau. Therefore, this analysis is for the entire universe i.e. all customers getting micro-credit from all lenders (Banks, NBFC-MFIs, NBFCs, SFBs and others). *Customer's credit records on consumer segment of the credit bureau are, however, are not accounted for.*
- For new customers, data on disbursements (or sourcing) to customers is taken. Customers who opened their first trade-line during that quarter (i.e. these customers had no trade-line previously, either active or closed with micro-credit with any lender) were tagged as new customers.
- For data on vintage, unique customers sourced since Jan 13 were taken as a data set, totalling over 7.5 Cr customers. As of Aug 18, these customers were bucketed into inactive (not having any open account as of Aug 18) and active (having an open account as of Aug 18). It may be noted that only customers sourced since 2013 were included in the data-set and not the customers who may have an active account before Jan 13.
- For data on loan accounts per customer, distinct lenders per customer, indebtedness and disbursed amount, the active customer (having an open account) view was taken as of Aug 2018. However, only trade-lines opened since Jan 13 were considered.
- A customer's delinquency status has been taken from her worst dpd for all her open loan accounts. So if a customer has indebtedness of Rs 10,000 and she has 3 open loan accounts with dpd =12, dpd=30, dpd=90, then her account status is tagged on the basis of her worst dpd account i.e. dpd =90. It may be noted that closed and written-off accounts are excluded from analysis in delinquent account status.
- For lending to delinquent customers, a sample of customers (> 1.6 Cr) who were sourced by MFIN member NBFC-MFIs between Jan 17 – June 18 was considered. For these customers, their most recent trade-line (or account) was analysed to check the delinquency status of this customer (at the time of disbursement) when she was disbursed this loan.
- Data is aggregated at all India and state levels.

- **New customers:** In the three quarters considered, about 26% loans were disbursed to new customers (those who didn't have any tradelines with any lender earlier).
- **Vintage:** On active customer base (those having at least one open account), about 76% customer have < 3 years of vintage, meaning they accessed their first microfinance loans less than 3 years back. Share of high-vintage customers, those between 3-4 years is 14% and those > 4 years is only 10%. Clearly after 3-4 years most customers fall-off from micro-credit lending. This may be due to graduation or higher loan size requirement, we don't know exactly.
- **Multiple lending:** 7% customers have more than 4 loan accounts and 3% customer have more than 3 distinct lenders (4 and more).
- **Indebtedness:** About 3% customers have loan amount os > Rs 100k, half of these come from West Bengal and Assam with West Bengal alone accounting for one third of this customer base. Of 8% customers with disbursed amount > Rs 100k, about one fifth (21%) come from West Bengal. If it is assumed that customers with higher disbursement amounts (> Rs 100k) have a higher tenure (24 months), about 8% customers are paying more than Rs 5,000 towards their monthly debt service obligations.
- **Delinquency:** 84% customers are current (dpd =0), 4% have dpd < 30, 2% are in dpd >30-179 and 9% customers are have dpd > 180+. Amongst the customers under soft delinquency buckets, over half are from Kerala, which is a result of floods in the state during July/Aug. Amongst the customers under hard delinquency buckets, most are from states which were very adversely affected post demonetization and a large number of customers have failed to repay in these states.
- **Relationship of delinquency with multiple lending and leverage:** Delinquency does not show clear co-relation with higher-lending amount (indebtedness or disbursement amount) and is high at both extremes i.e. lower and higher indebtedness. However, customers with higher count of loan accounts and distinct lenders definitely have higher delinquency. Analysis of NPA customers (dpd > 180 days) shows that they don't necessarily have higher multiple lending and/or indebtedness.
- **Lending to delinquent customers:** In pre-demo period only 3% loans were given to delinquent customers. The period after demo saw a sharp increase in such lending with the average for the post-demo period (Nov 16 – Sep 18) being 10%.

Reaching new customers

Based on sourcing data for three quarters (Oct 17 – Jun 18), about 26% customers are new to micro-credit, i.e. these customers have opened their very first tradeline with micro-credit during the quarter. Remaining 75% are customers who already had a running micro-credit.

There are variations across states. Amongst the top states (in terms of micro-credit business volume), West Bengal, Maharashtra, Kerala and Tamil Nadu have a lower ratio of new customers in sourcing. Bihar, Uttar Pradesh, Madhya Pradesh and Assam where outreach of micro-credit compared to market potential is still low, ratio of new customers in sourcing is high.

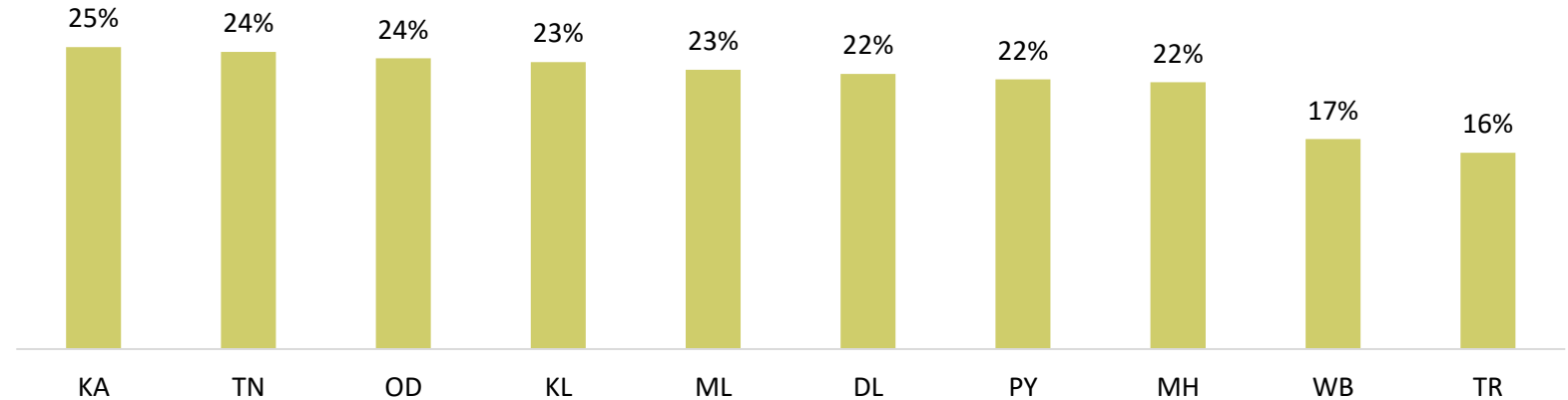


Reaching new customers

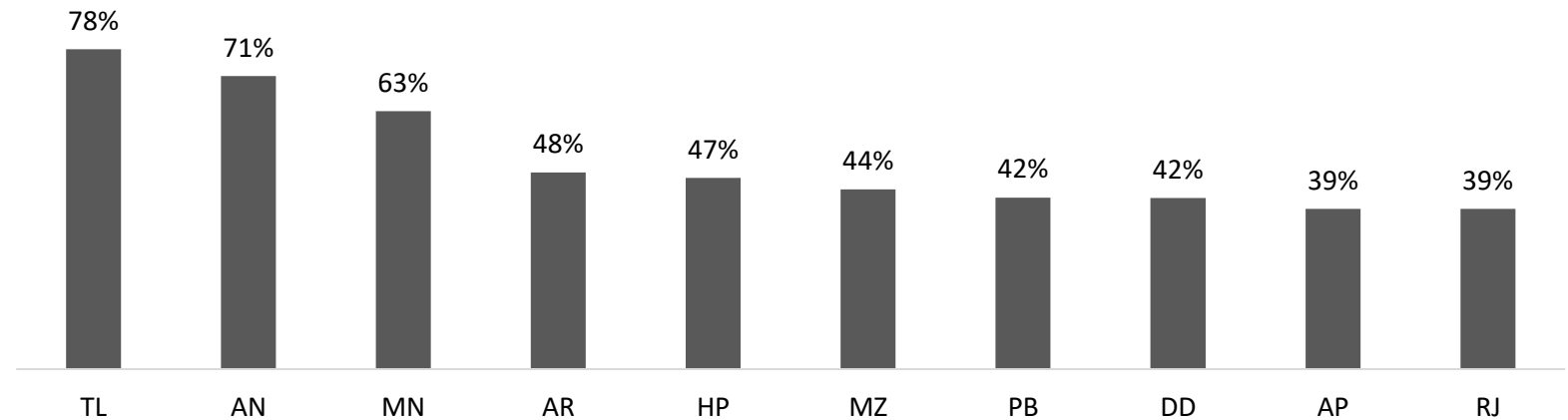
States with low ratio of new customers and states with high ratio of new customers are shown in charts here.

Clearly, states where micro-credit is new and relatively small (compared to market potential), a much higher percentages of new customers are added. On the other hand, for states with mature micro-credit market, share of new customers is relatively low.

states that have low ratio of new customers
(Oct 17 - Jun 18)

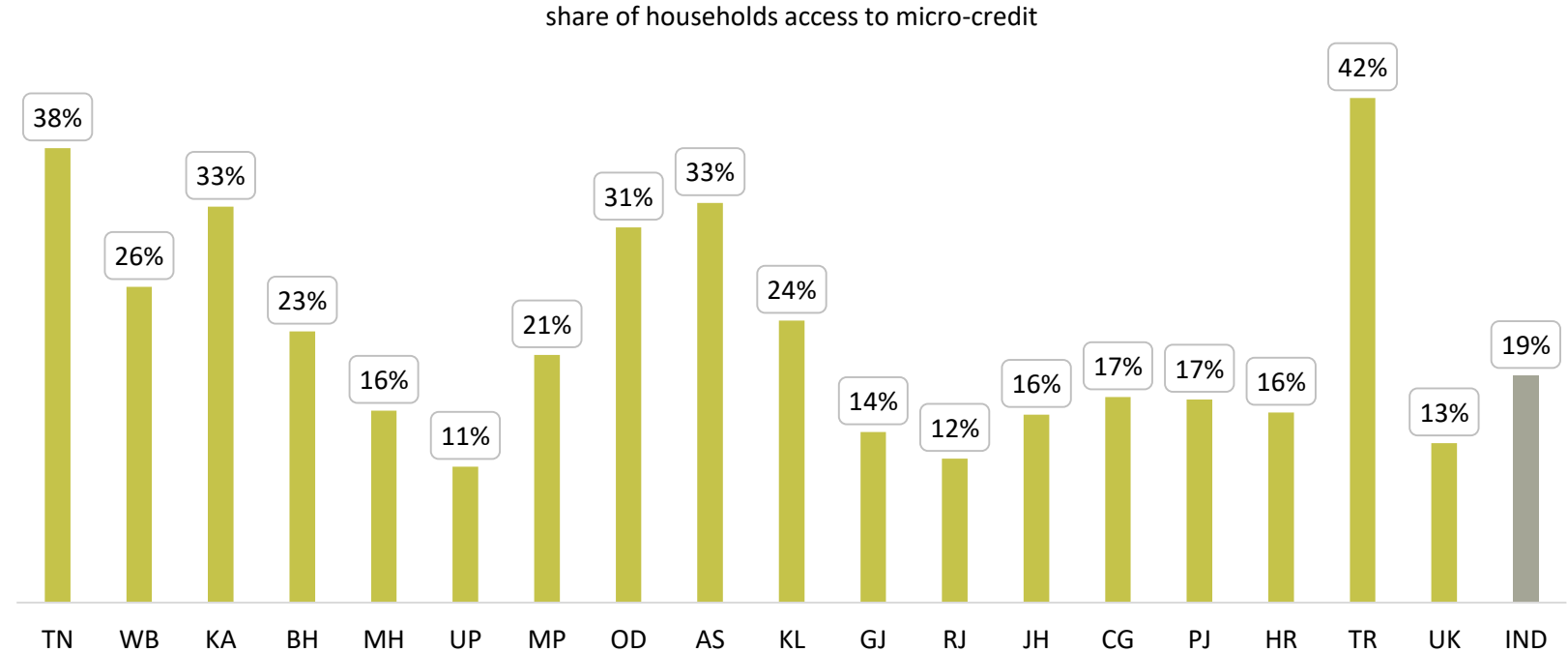


states that have high ratio of new customers
(Oct 17 - Jun 18)



Based on Aug 18 data for 4.8 Cr customers, household coverage ratio across top key states is given in the chart here.

Considering that some states like Tamil Nadu, Karnataka and Odisha have reasonably deep coverage of micro-credit, it is intriguing that such states are still adding about 25% of the new customers. See the previous page.



Household coverage ratio here is calculated assuming one customer per household and potential market being 80% of the number of households at the state level (for 2018 based on Census 2011).
 Example, household access to micro-credit in UP= (number of unique customers) /80% of total households in 2018

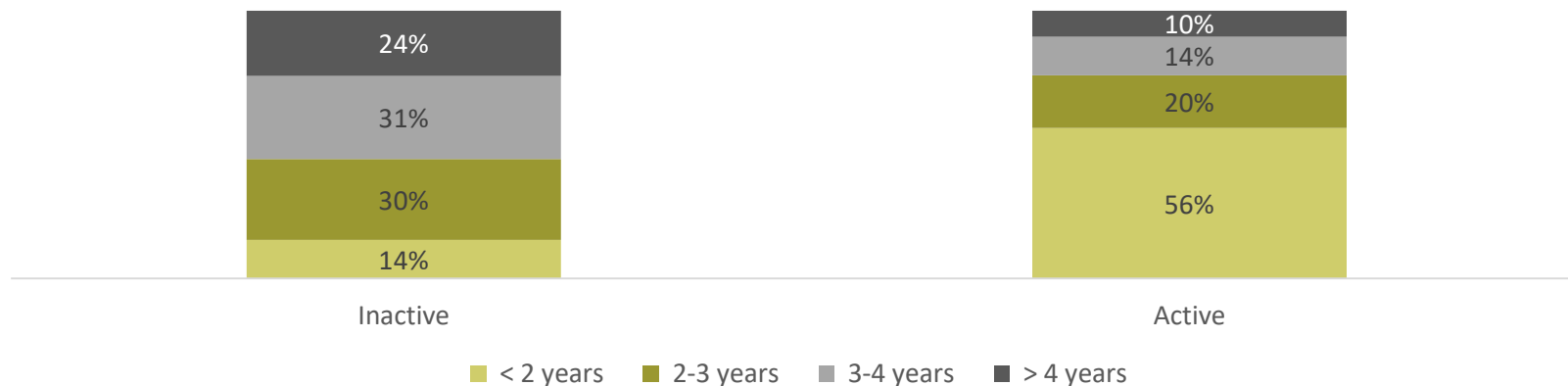
Vintage of customers

To further understand the customers of micro-credit, we looked at vintage of customers. For this purpose, all customers sourced since Jan 13, inactive (not having an open account or active tradeline) as well as active (having an open account or active tradeline), were taken.

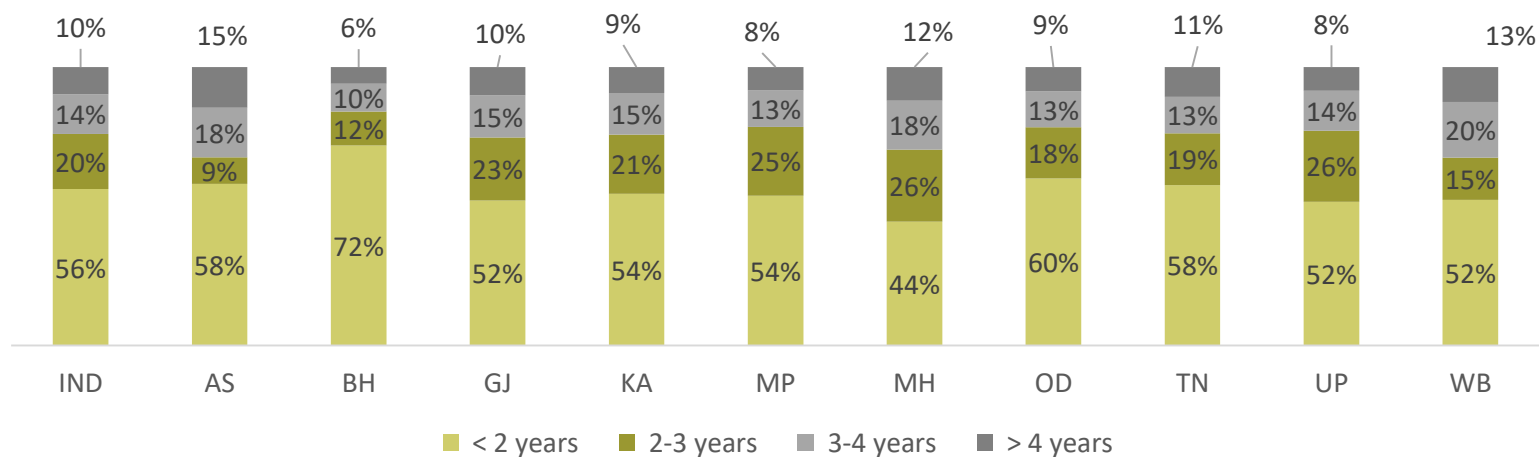
Amongst active customers, over half (56%) have vintage of less than 2 years, meaning they have taken micro-credit loan in last two years. Customers with higher vintage have lower share in active customers.

However, position is quite different amongst inactive customers. Share of relatively new customers (vintage less than 2 years) is low. It appears that many customers after a 2-3 years of micro-credit loan, don't access or don't need micro-credit, or possibly are not served by the microfinance loans due to regulatory limitations. However, we can not give firm explanation for this phenomenon.

vintage of customers
(based on customers sourced since Jan 2013)



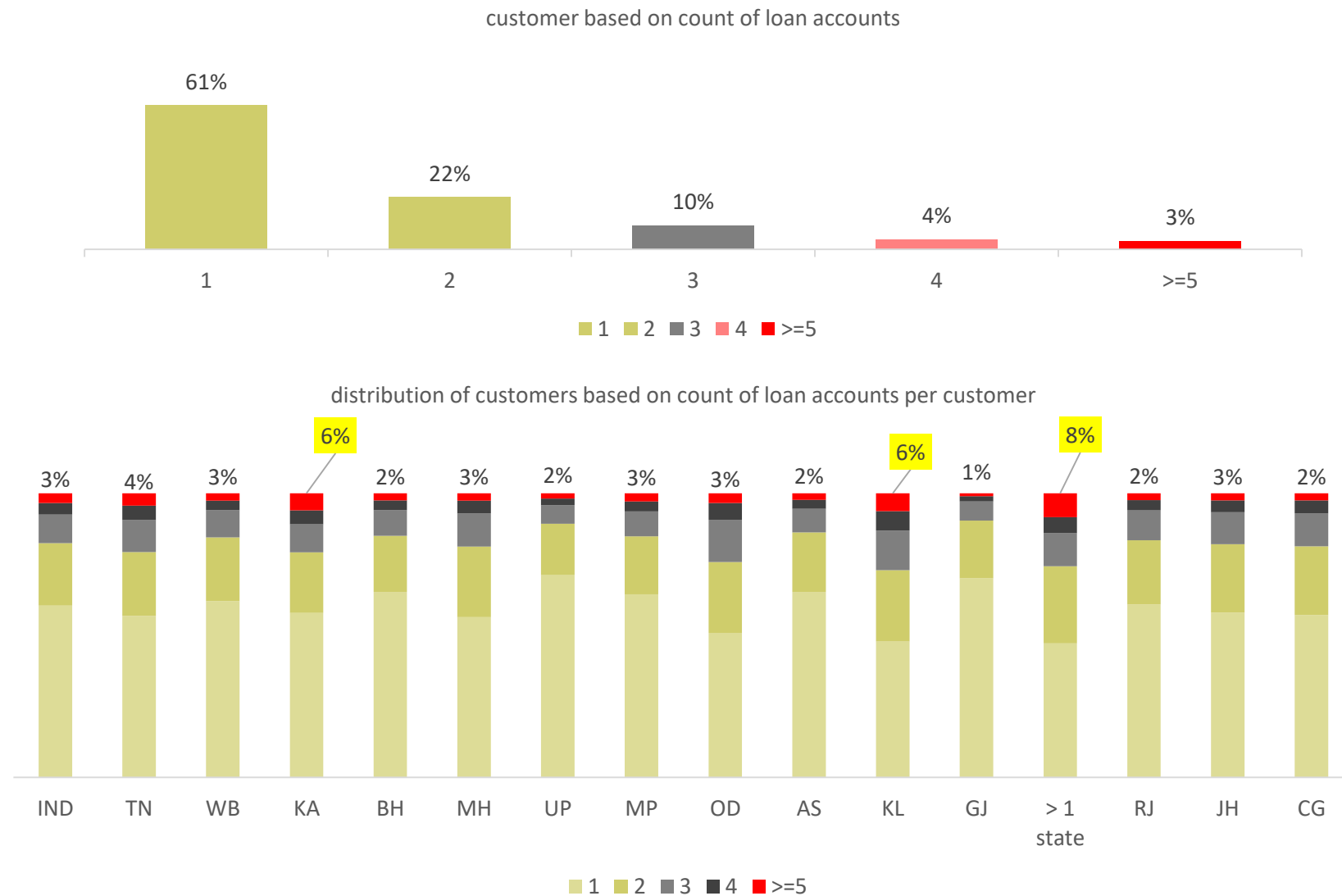
vintage of active customers across states



Multiple lending: loan accounts per customer

Customer profiling based on loan account per customer (these are active loans) shows that 83% customers have only two loan accounts and 61% customers have only single loan account.

There are 7% customer who have 4 and more loan accounts, around 3% customer have ≥ 5 active loan accounts. Across states there are slight variations. Karnataka and Kerala have about 6% customers with ≥ 5 loan accounts. Tamil Nadu also have 4% customer with ≥ 5 loan accounts. It may be noted that there are about 17 lakh customers which are tagged with multiple states (as their address reported with multiple accounts fall in different states) have much higher levels of multiple lending (loan accounts per customer). Amongst this group of customer, about 8% of customers have ≥ 5 loans.

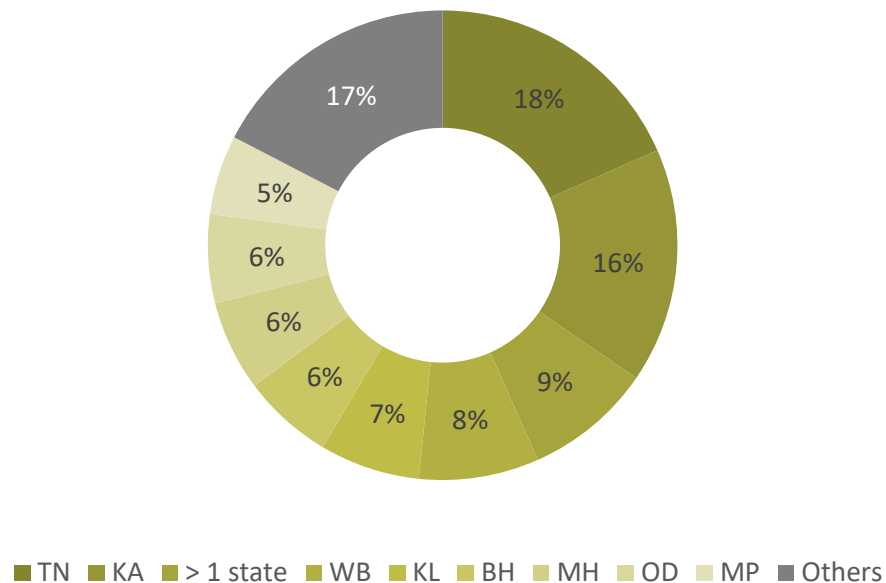


Multiple lending: loan accounts per customer

Of about 3% customer with ≥ 5 loans accounts, more than one third are from Tamil Nadu and Karnataka.

Spread of these customers (with ≥ 5 loans accounts) across states is shown the chart here. Percentages here show the share of that states in such customers (who have ≥ 5 loans accounts).

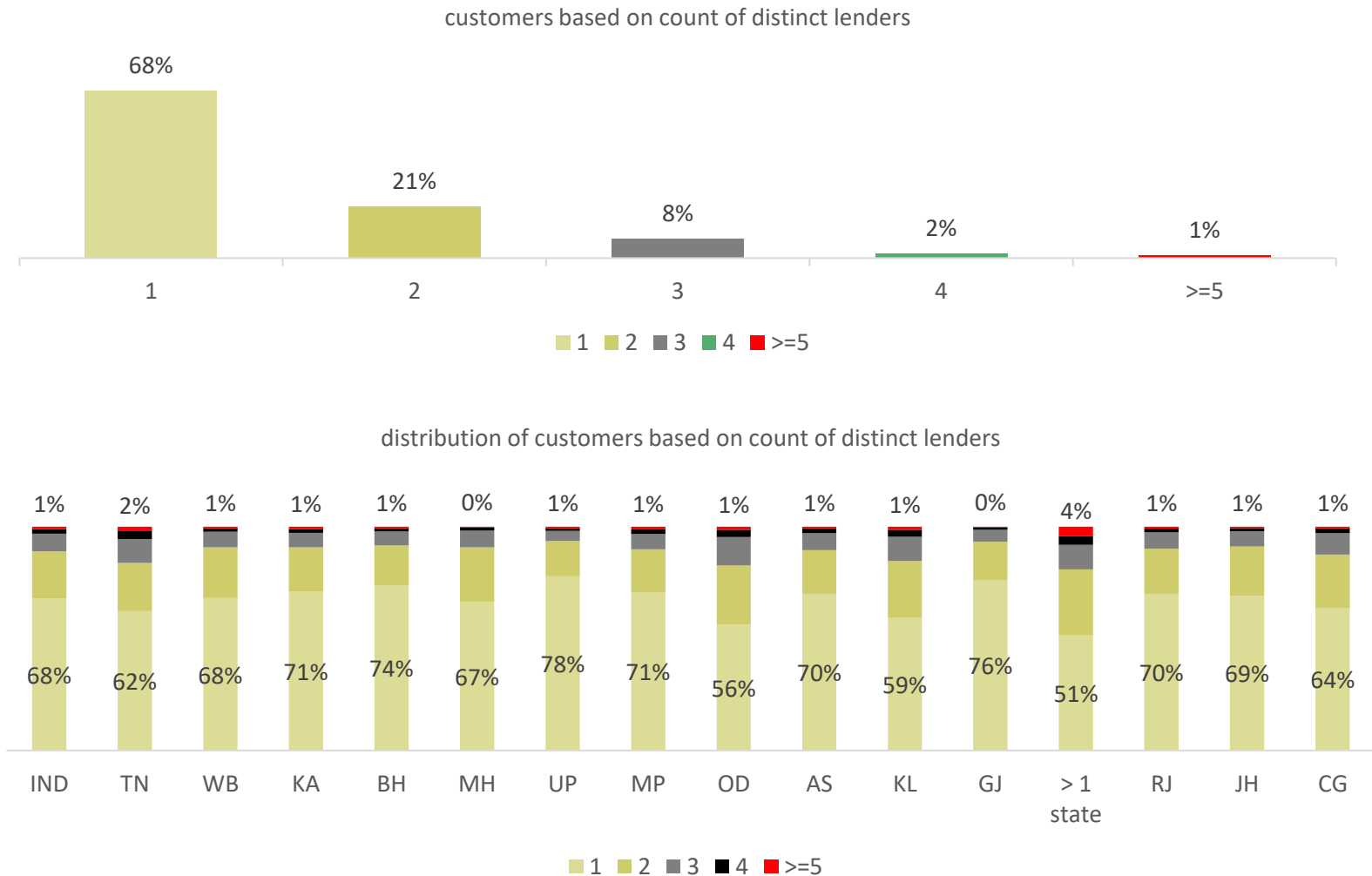
distribution of customers with ≥ 5 loan accounts



Multiple lending: distinct lenders per customer

Customer profiling based on distinct lender per customer (these are unique or distinct lenders to a customer) shows that 89% customers have only 2 distinct lenders. It is stressed that data set considered here is for entire universe (all customers in microfinance segment of the bureau from all lenders). There are 11% customers who have 3 or more than 3 distinct lenders. Share of customer who have 4 or more distinct lenders is 3%.

Across states, there are some variations as shown in chart below. Similar to loan accounts per customer, data for distinct lenders per customer also shows that customers mapped to multiple states have much higher multiple lending.

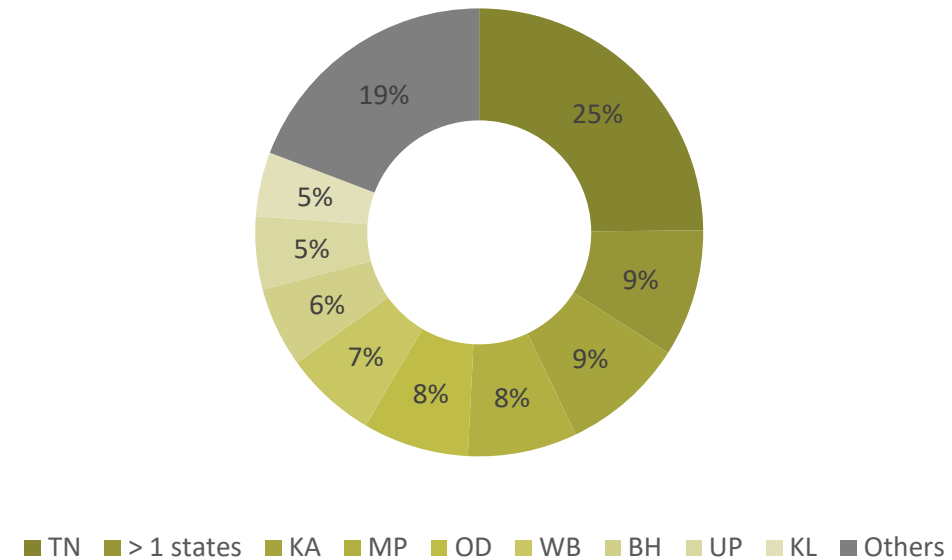


Multiple lending: distinct lenders per customer

Of about 3% customer with ≥ 4 distinct lenders, about one fourth come from Tamil Nadu.

Spread of these customers (with ≥ 4 distinct lenders) across states is shown the chart here. Percentages here show the share of that states in such customers (i.e those having ≥ 4 distinct lenders).

distribution of customers with ≥ 4 distinct lender per customer

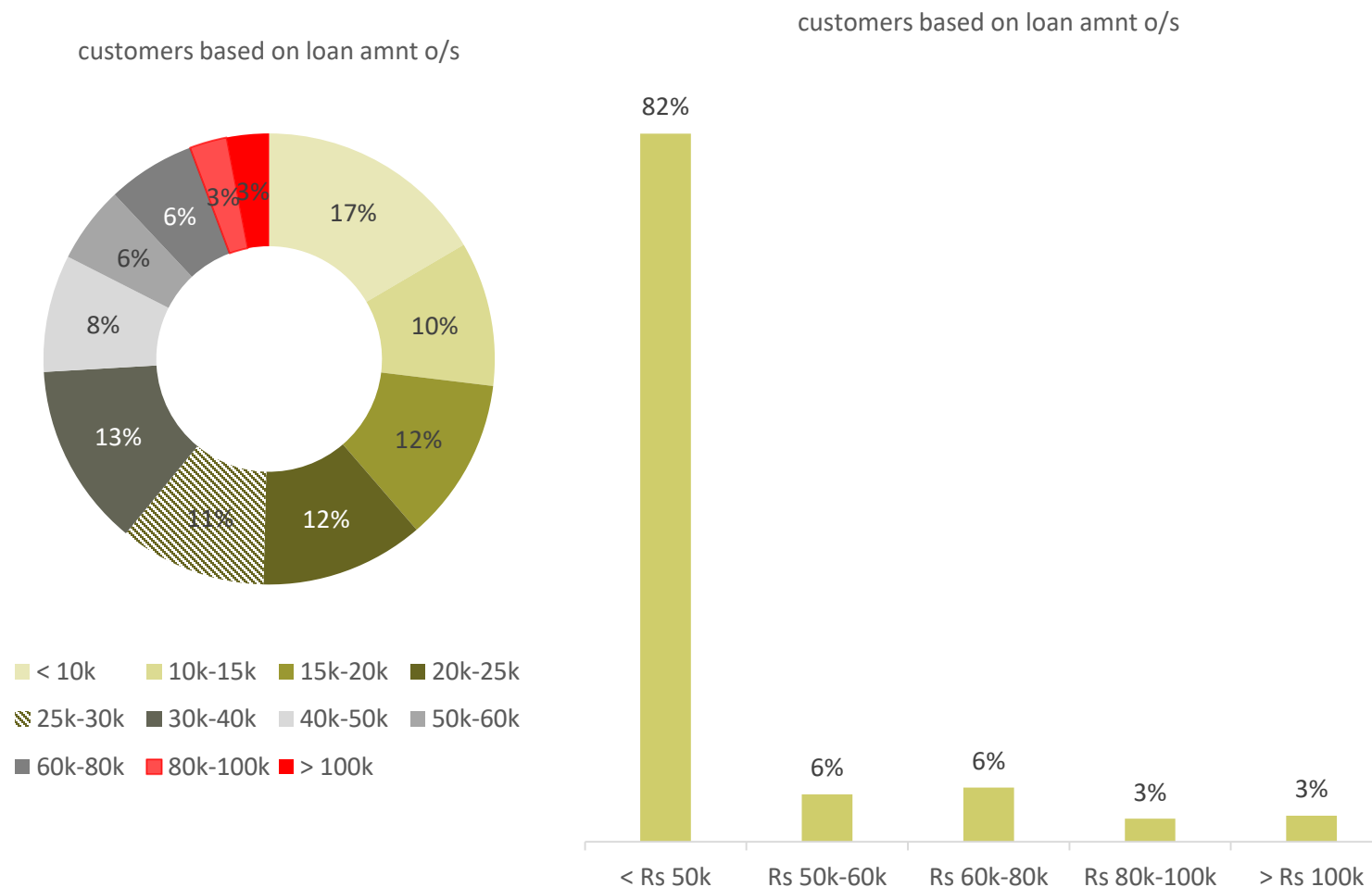


Indebtedness: loan amount outstanding per customer

Indebtedness measured based on loan amount outstanding across customers is fairly distributed, with highest percentage of customers having indebtedness < Rs 10k.

Of total active customer base, 82% have indebtedness < Rs 50k. 6% customers within indebtedness of Rs 50k-60k and a further 6% of Rs 60k-80k.

Around 3% customers have indebtedness > Rs 100k.

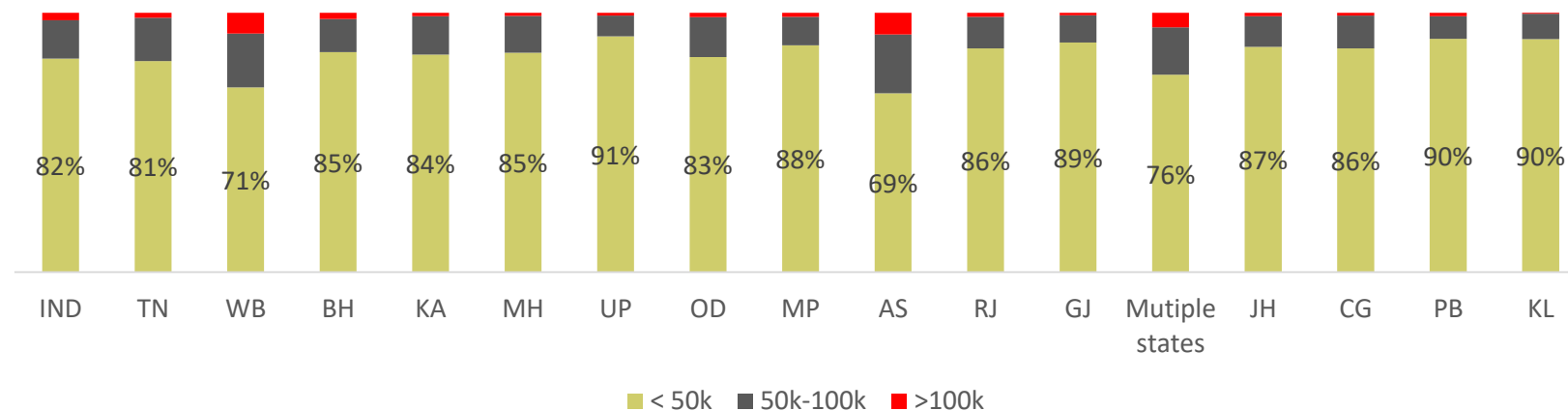


Indebtedness: loan amount outstanding per customer

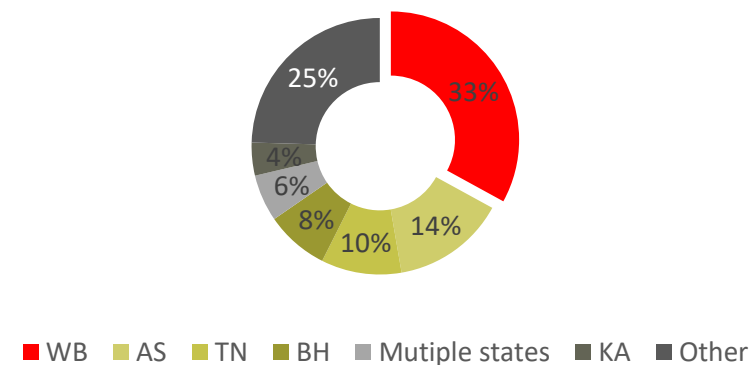
Across the states, there are slight variations in customers distribution in terms of indebtedness. West Bengal and Assam have lower share of customers in sub Rs 50k indebtedness level.

It is noteworthy that from customer who have indebtedness level > Rs 100k, half come from West Bengal and Assam. West Bengal alone account of one third of customers who have indebtedness > Rs 100k. Amongst the customers who have loan amount outstanding > Rs 100k, 25% customers are mapped to multiple states.

loan amnt o/s across customers in states



distribution of customers with loan amnt o/s > Rs 100k across states

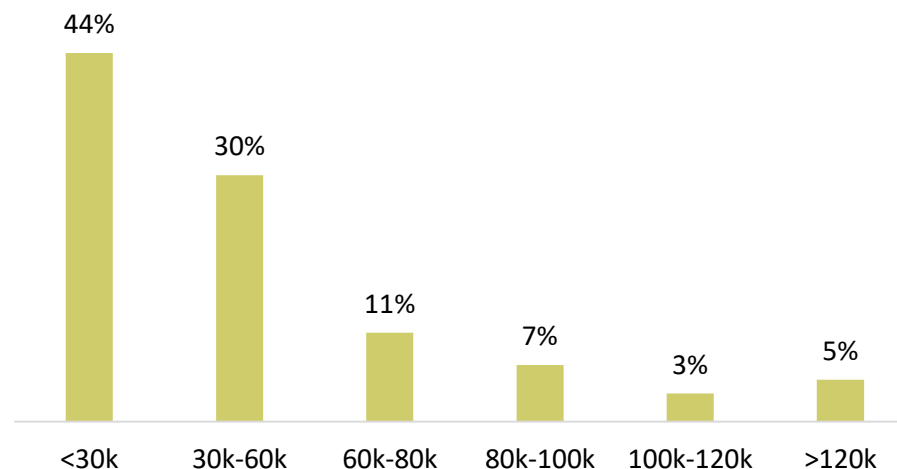


Indebtedness: disbursed amount per customer

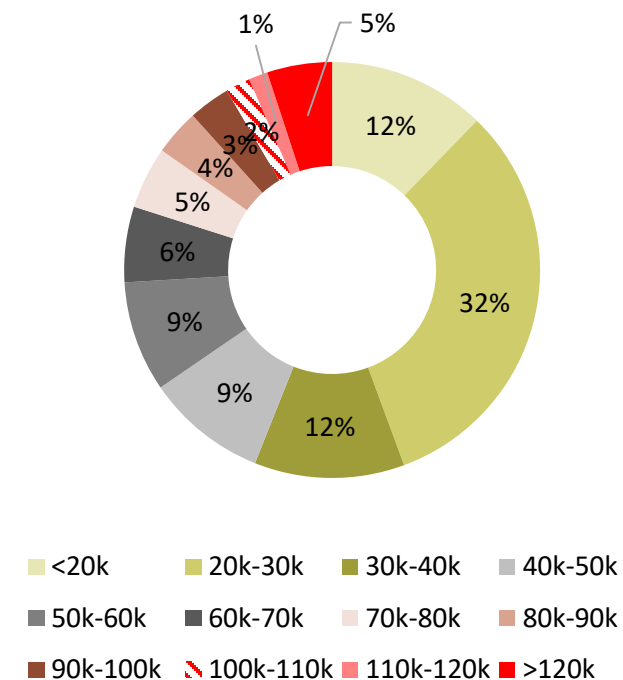
Indebtedness measured as loan amount disbursed to the customer from all sources across all active loan accounts, customer profile is fairly distributed, with 44% of customers having disbursed amount < Rs 30k. 74% customer have disbursed amount less than Rs 60k.

While only 3% customers cross the loan amount outstanding of Rs 100k, there are 8% customers crossing disbursement amount of Rs 100k. Customer profile based on disbursed amount across state varies and is shown in chart here.

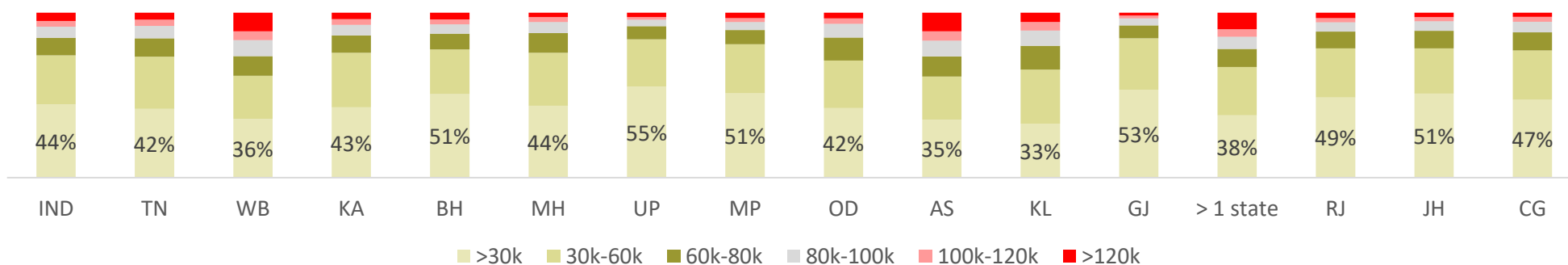
disbursement amount across customers



disbursed amount across customers



disbursement amount across customers in states

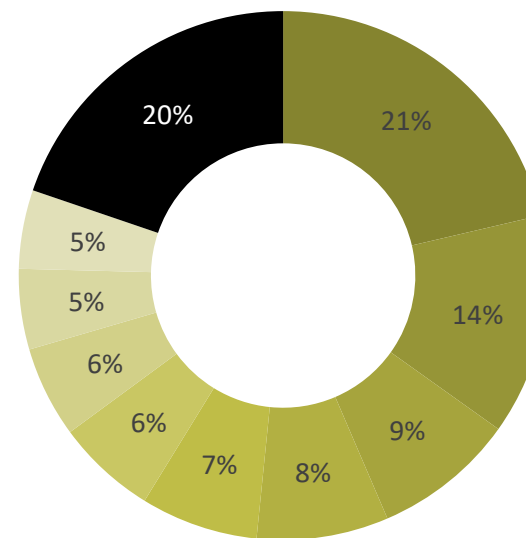


Indebtedness: disbursed amount per customer

Of about 8% customers with disbursed amount > 100k (these aggregate to 40 lakh customers) about one fifth (21%) come from West Bengal.

Spread of these customers (with ≥ 5 loans accounts) across states is shown the chart here. Percentages here show the share of that states in such customers.

customers with disbursement amount > Rs 100k



■ WB ■ TN ■ AS ■ KA ■ BH ■ > 1 states ■ MH ■ OD ■ KL ■ Others

Indebtedness: monthly debt-serving obligations (est)

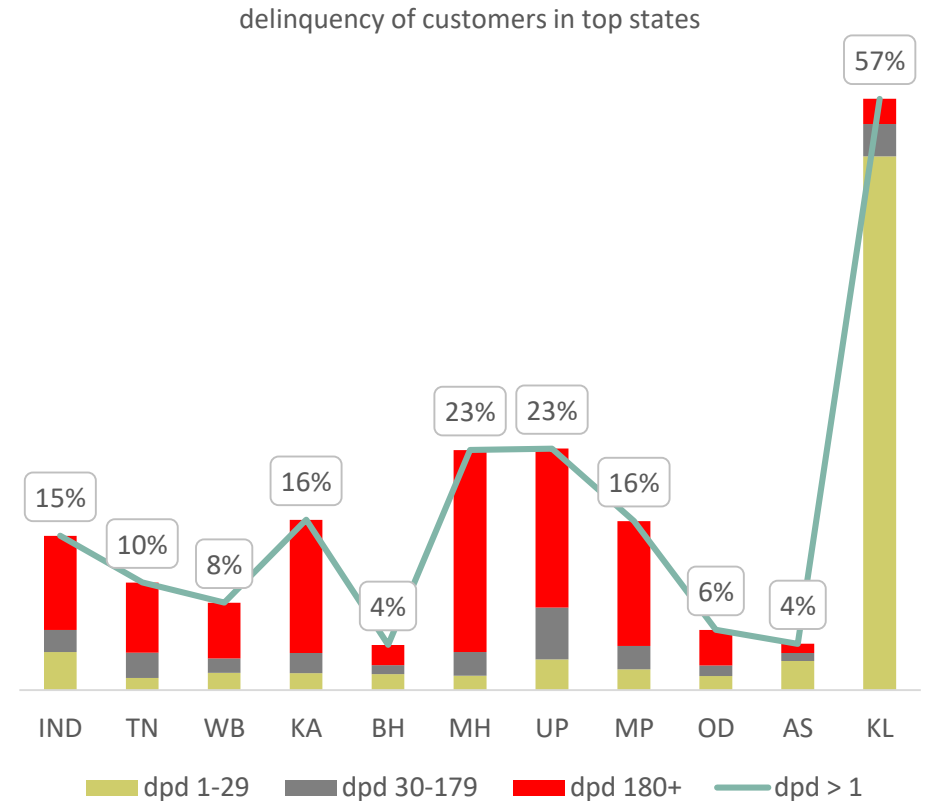
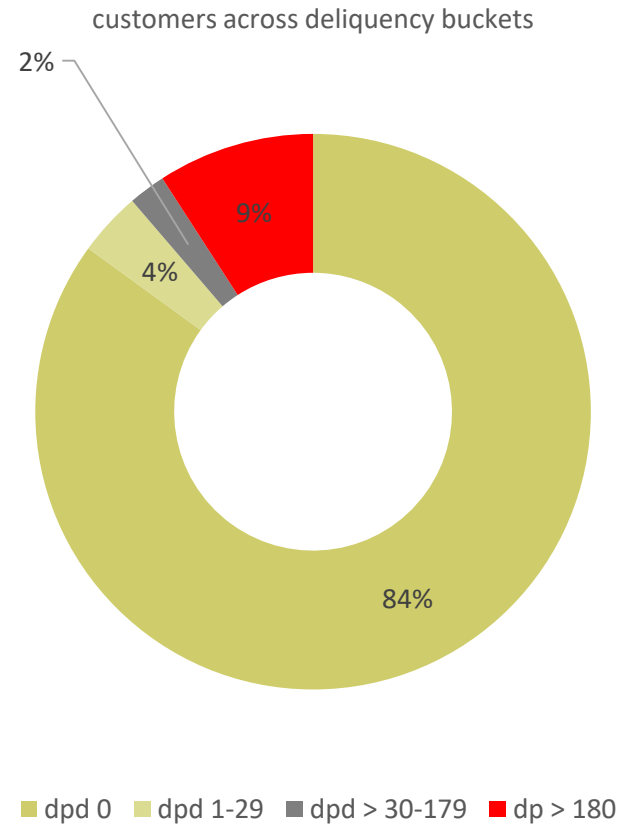
Based on disbursement amount per customer, an estimation has been made about the monthly debt obligation per customer in two commonly-prevailing scenarios.

1. Disbursed amount is priced at 24% and is for a tenure of 12-month tenure with monthly instalments.
2. Disbursed amount is priced at 24% and is for tenure of 24-months with monthly instalments.

If it is assumed that customer with higher disbursement amounts (> Rs 100k) have higher tenure (24 months), more than 8% customers are paying more than Rs 5,000 monthly to service the debt obligations.

Disbursed amount (Rs)	Share of customers	Monthly debt servicing obligation (24% interest rate, 12-month tenure, monthly repayment schedule)	Monthly debt servicing obligation (24% interest rate, 24-month tenure, monthly repayment schedule)
<30k	44%	2836	1586
30k-60k	30%	2836-5637	1536-3172
60k-80k	11%	5637-7564	3172-4229
80k-100k	7%	7564-9455	4229-5287
100k-120k	3%	9455-11347	5287-6334
>120k	5%	> 11347	> 6334

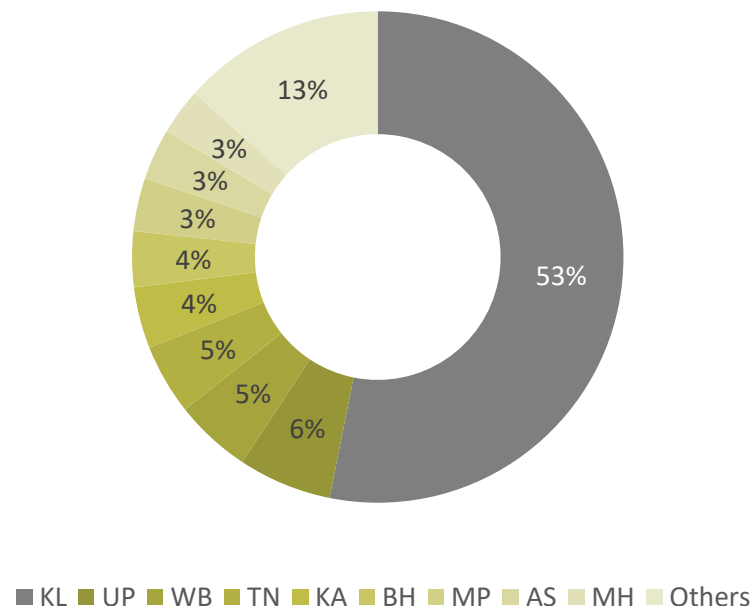
Based on data for 4.8 Cr customers for Aug 18, 84% are current (dpd =0), 4% have dpd < 30, 2% are in dpd >30-179 and 9% customers are have dpd > 180+. For top 10 states, distribution of delinquent customers is shown in chart.



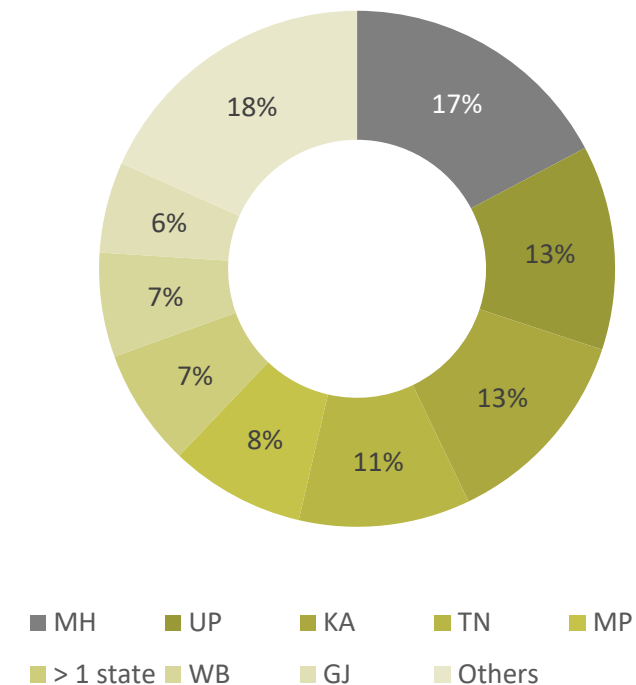
Data shows that amongst the customer under soft delinquency buckets, over half of them are from Kerala, which is a result of floods there a few months back.

Amongst the customers under hard delinquency buckets, most are from states which were very adversely affected post demonetization and a large number of customers have failed to repay in these states.

delinquent customers (dpd < 30 days) across states



delinquent customers (> 180 days) across states



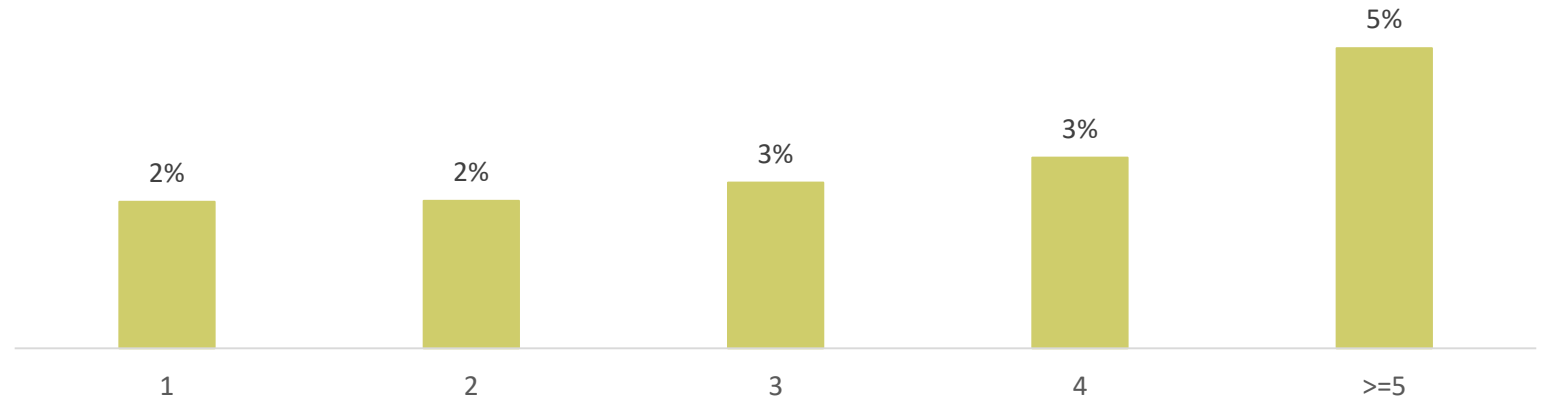
Delinquency: multiple lending

Customers portfolio quality shows positive correlation with multiple lending. Customers that with higher count of loan accounts (≥ 4) and distinct lenders (≥ 4) have much higher delinquency in volume terms.

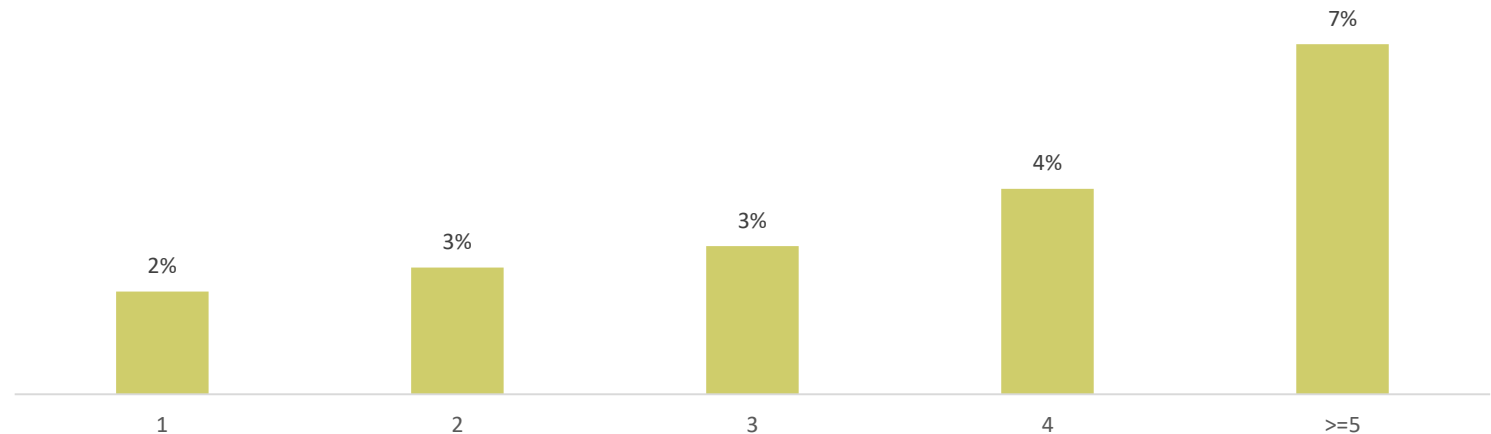
As an example, amongst the customers who have 1 active loan account, only 2% customer are delinquent. However, amongst the customer who have 5 or more active loan accounts, 5% customer are delinquent.

It may be noted that 180+ customers are removed in this analysis to knock-off the effect of demonetisation on delinquency and to show relationship between multiple lending and delinquency in a steady state.

loan accounts per customer and delinquency (> dpd > 30 days, excluding 180+ customers)



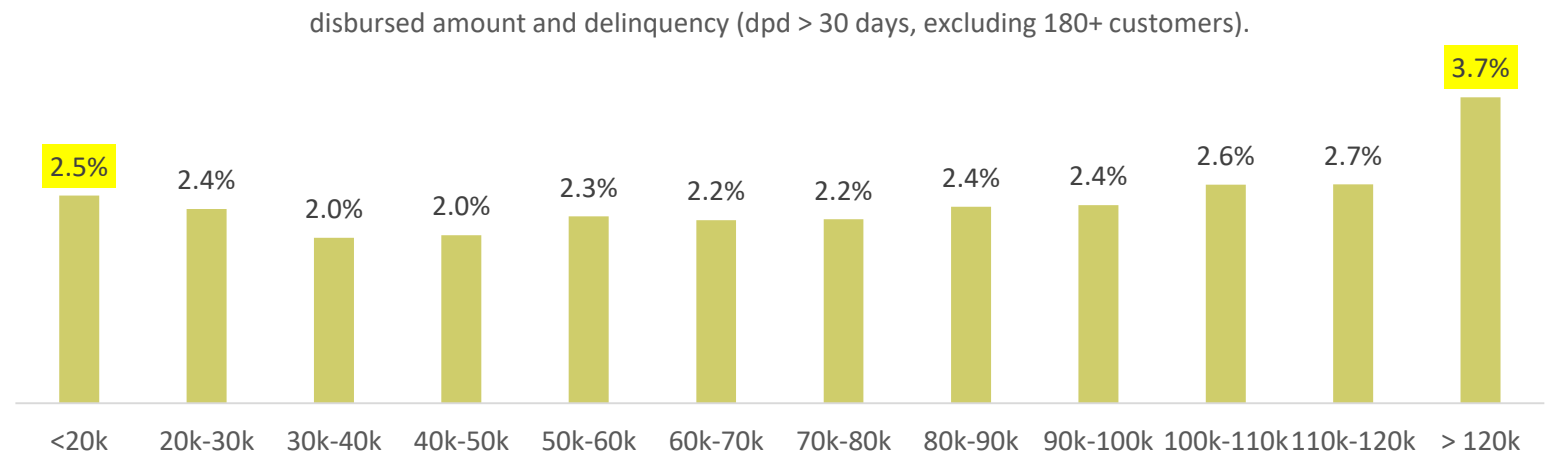
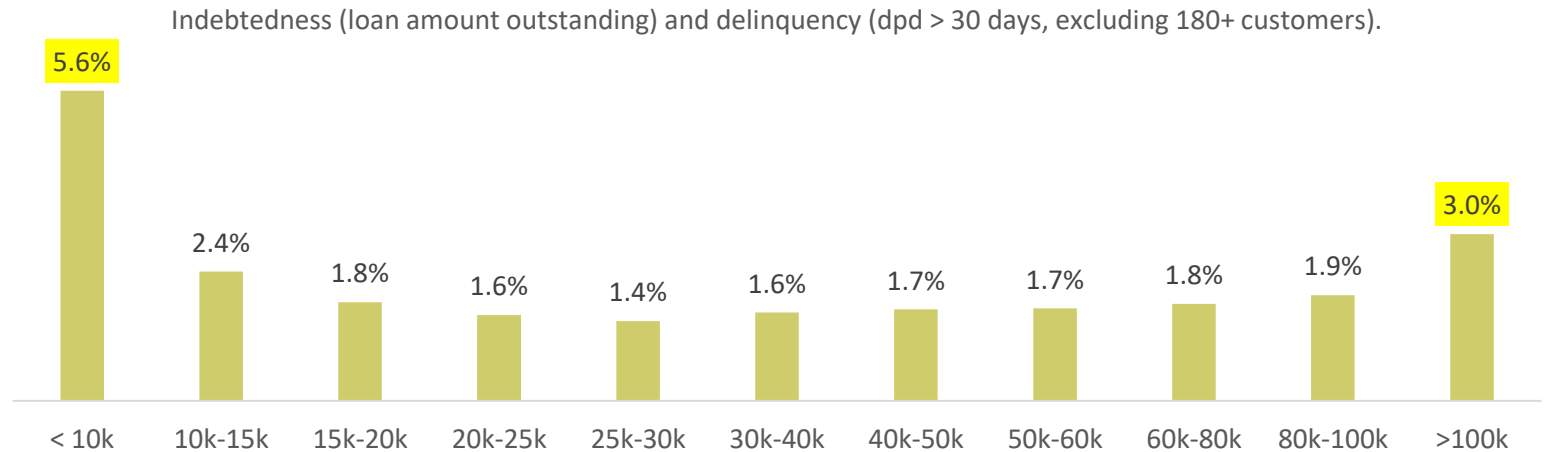
distinct lender per customer and delinquency (dpd > 30 days, excluding 180+ customers)



Delinquency: indebtedness and disbursed amount

Delinquency does not show completely linear relationship with indebtedness. Customers under lower indebtedness buckets (< Rs 15k) show worst portfolio quality. However, after loan amount crosses Rs 60k, delinquency increases with 5% of the customers with loan outstanding > Rs 100k being delinquent.

Similar to indebtedness, delinquency is slightly higher for lower disbursement amounts and then again rises for higher disbursement amounts.

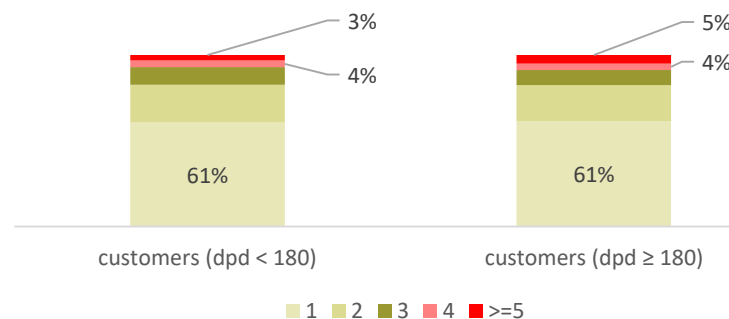


Delinquency: NPA customers

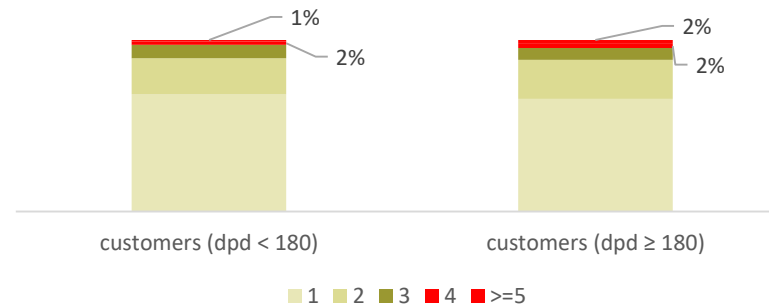
Post demonetization, about 9% customers became delinquent and eventually did not pay. For these customers with delinquency > 180 days, we tried to analyse if factor other than geography differentiates these customers such as higher multiple lending or indebtedness?

Data shows that hard-delinquency bucket customers (dpd > 180 days) are not very different from normal-bucket customers (dpd < 180 days). Amongst hard-delinquency bucket customers, share of customer with high-multiple lending (≥ 4 loan accounts/lenders per customer) is only marginally higher (1%-2%) compared with customers in normal-delinquency buckets (dpd < 180). In fact share of customers with higher indebtedness (loan amount or disbursement amount > Rs 100k) is rather low. This comparison shows that external factors (demonetization and subsequent political interference) drove these customers to defaults and not any underlying customer-level stress.

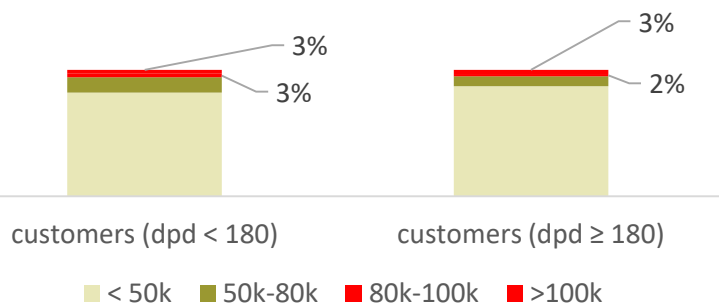
bucketing of customers (non-NPA and NPA) based on count of loan accounts



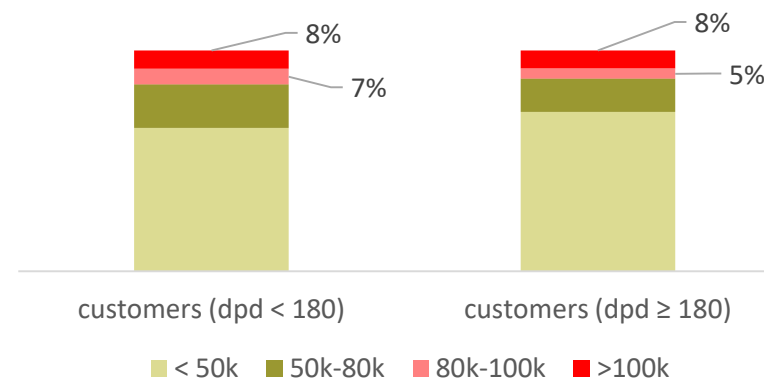
bucketing of customers (non-NPA and NPA) based on count of distinct lenders



bucketing of customers (non-NPA and NPA) based on loan amount outstanding

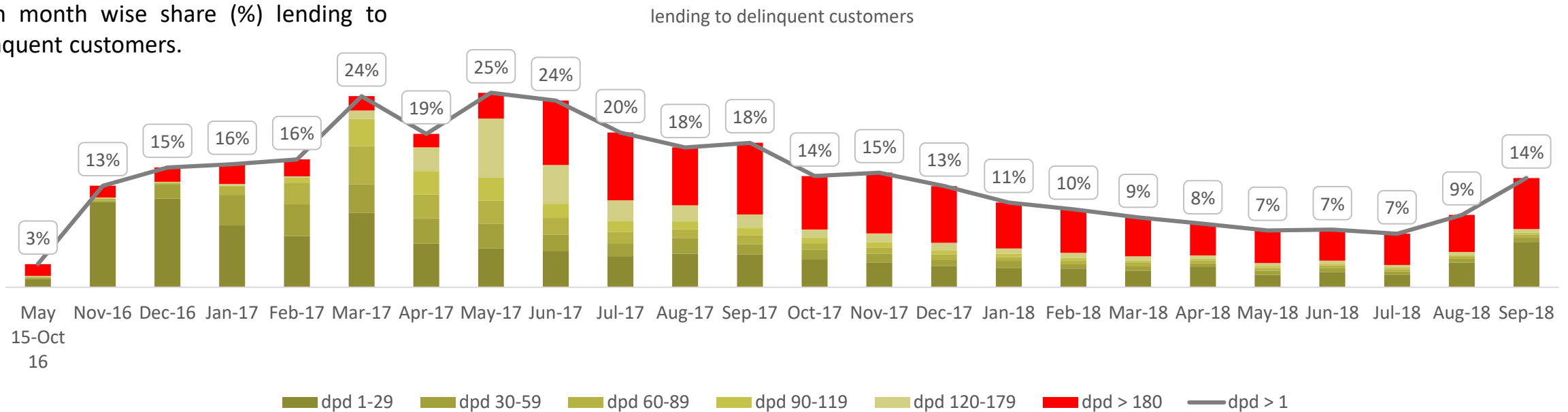
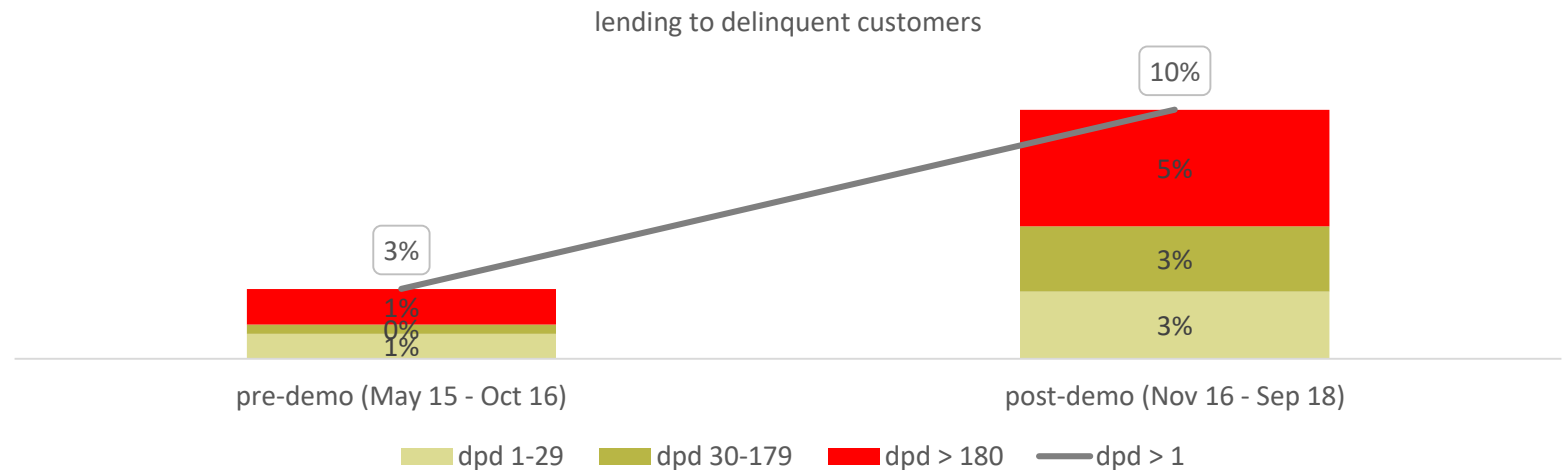


bucketing of customers (non-NPA and NPA) based on loan amount disbursed



Delinquency: customers' access to credit

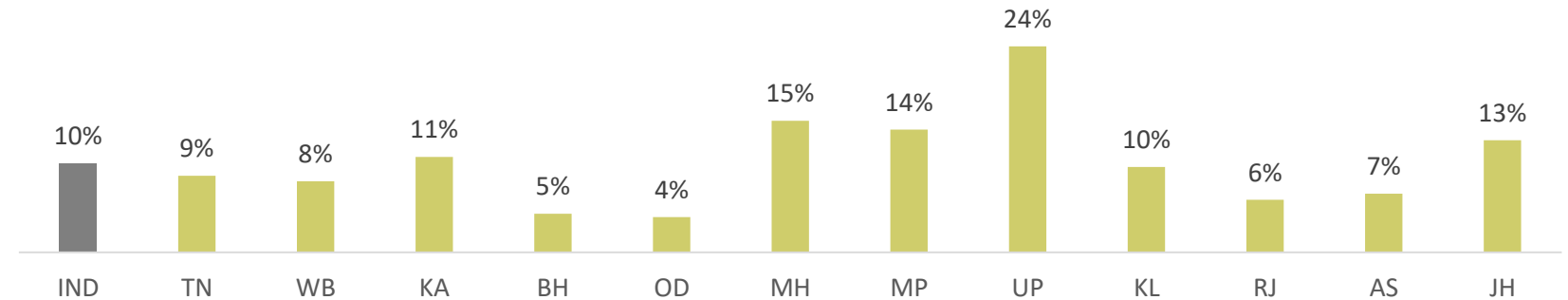
Based on a sample (1.62 Cr) of customers sourced during May 15 – Sep 18, there has been a increase in lending to delinquent customers after demonetization (Nov 16). While in pre-demo period only 3% loans were given to delinquent customers (either to customer with dpd < 30 days or to customers with dpd > 180 days), the period after demo saw sharp increase in such lending with average for period being 10%. Chart here given month wise share (%) lending to delinquent customers.



Delinquency: customers' access to credit

Data of lending to delinquent customers at state level shows that Uttar Pradesh, Maharashtra, Madhya Pradesh, Karnataka have higher % of lending to delinquent customers (of total lending). It may be noted that these states were much adversely affected during demonetization and in post-demo period, delinquent customers were given new loans to normalize the repayments. Customer in these states also account for majority of such lending.

lending to delinquent customers (dpd > 1) across states since Nov 16 – Sep 18



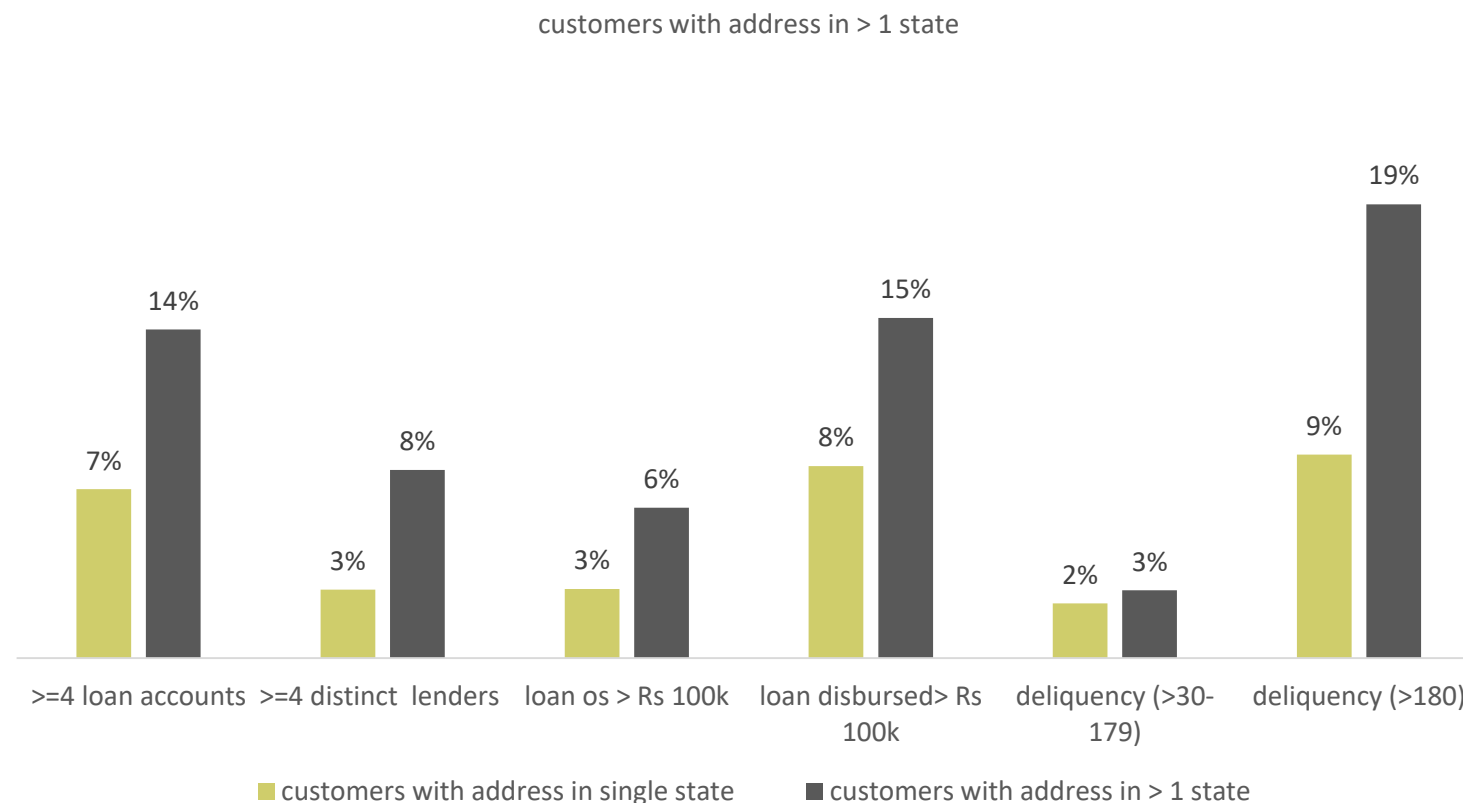
share of loans to delinquent customers across states (Nov 16 – Sep 18)



■ UP ■ MH ■ KA ■ TN ■ MP ■ WB ■ KL ■ BH ■ OD ■ Others

Data shows that there are about 4%, aggregating to more than 17 lakh customers who are mapped to > 1 states as they have address (across different loan accounts) mapped to multiple states.

Group of these customers show a higher risk profile compared to customers who have address in single state. Amongst the customers who have address in > 1 state, 14 % customers have ≥ 4 loan accounts, 8% ≥ 4 distinct lenders, 6% have loan outstanding > Rs 100k and 15% have loan disbursed > Rs 100k. While only 3% of these customers are delinquent (dpd > 30) in dpd 0-180, about 19% of these customers are in hard delinquency buckets (dpd > 180 days).



Positives first - Industry continues to add a large number of new customers to micro-credit, many of them must be accessing their first credit from the formal financial sector. At aggregate level there is a high-degree of adherence to norms on multiple lending and total indebtedness with 97% customer having ≤ 3 lenders and indebtedness $< \text{Rs } 100,000$.

However, it would be unwise to leave this matter here.

These 3% customers (having higher credit exposure) aggregate to about 15 lakh customers. If leverage is looked through a monthly-debt-service obligations, share of customer paying $> \text{Rs } 5,000$ is in excess of 5%. These customer are concentrated in few regions and pockets. It cannot be assumed either that all these customers have higher incomes and therefore capacity to absorb large loans (customers with ≥ 4 lenders and indebtedness $\geq \text{Rs } 100,000$ show worse portfolio quality). This should also be studied in the context of lack of information about customers' credit on consumer bureau, her households credit profile and of course customer's and her household's income levels.

Therefore, industry needs continued vigilance and some immediate steps can improve the overall position further:

1. In addition to number of accounts, lenders and indebtedness, data on monthly debt-servicing-obligation can be critical metrics for lending decision. Currently this data is non-standard and non-uniformly populated. MFIN is connecting with CICs and lenders to bring hygiene in reporting of this data and making it available in the Credit Information Report (CIR) for consumption by lenders
2. MFIN is bringing all RBI-regulated lenders (including Banks, NBFC-MFIs, NBFCs, SFBs) to agree on uniform norms on multiple lending/indebtedness/credit bureau submission and usage under the Mutually Agreed Code of Conduct (MACC). This should substantially bring down such instances
3. Lenders choosing to take higher risks should consider keeping close watch on the customers with higher exposure including more frequent assessment of their credit profile and any changes in repayment behaviour, demographic details etc

Report has important pointers for the regulatory framework and these would be taken to the policy makers.

Andaman and Nicobar Islands	AN	Meghalaya	ML
Andhra Pradesh	AP	Mizoram	MZ
Arunachal Pradesh	AR	Nagaland	NL
Assam	AS	Odisha	OR
Bihar	BR	Puducherry	PY
Chandigarh	CH	Punjab	PB
Chhattisgarh	CG	Rajasthan	RJ
Dadra and Nagar Haveli	DN	Sikkim	SK
Daman and Diu	DD	Tamil Nadu	TN
Delhi	DL	Tripura	TR
Goa	GA	Uttar Pradesh	UP
Gujarat	GJ	Uttara Khand	UK
Haryana	HR	West Bengal	WB
Himachal Pradesh	HP	Average	Avg
Jammu and Kashmir	JK	Portfolio at Risk	PAR
Jharkhand	JH	Gross Loan Portfolio	GLP
Karnataka	KA		
Kerala	KL		
Lakshadweep	LD		
Madhya Pradesh	MP		
Maharashtra	MH		
Manipur	MN		

For any suggestion/clarification/query, please contact

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