Loan - Loss Provisions in Indian Banks : An Appraisal of Institutional Attributes

** K. R. Pillai*
*** Linsy Mathew*

Abstract

The financial systems of a nation, being the lifeline of its economy, are expected to have ample preparation to confront and mitigate any shock inherent in a market - driven business. Loan - loss provisioning is a systematic way of handling risks rationally, signaling managerial prudence. Banks across the globe follow a dynamic provision policy. Sometimes, a well - designed policy is not enough to safeguard the interests of all the stakeholders. One such prominent and time - honored modus operandi to face contingencies is the rate of provisioning to be set aside annually to meet any contingencies. The proposed study attempted to report the chronological trend in provision in Indian banks in the latest decade. Data for the study were collected from CMIE online database. Bank size and nature of ownership were considered to be the predictors of provision. The findings of our study revealed that the size of the banks influenced the rate of provisions set aside. The study also revealed a clear distinction among the banks ranked high on the basis of size than medium and low ranked banks. We also recognized the global economic downturn as an incontestable constituent to increase the percentage of provisions across all the sectors of the financial industry.

Key words : **Indian banks, banking provision, loan-loss provision, loan-loss reserve, financial performance, NPA, distressed loans, banking failure**

JEL Classification : G01, G11, G21, G28

Paper Submission Date : January 8, 2017 ; Paper sent back for Revision : August 2, 2017 ; Paper Acceptance Date : August 18, 2017

The banking system of a country is expected to be robust and resilient in terms of liquidity norms and be sustainable with regard to profitability. Striking a balance between the twin conflicting objectives of liquidity and profitability, addressing their trade-off, is an obvious manifestation of sound portfolio management. But liquidity may be impaired, due to unexpected credit default, which is inherent in asset portfolio expansion. Banks are constantly engaged in credit expansion as lending is the strongest pillar and the most reliable source of their income (Brinkmeyer, 2015). Since lending is primacy, its inherent risks should be estimated well in time, and suitable risk mitigation mechanisms need to be devised. This calls for maximum prudence, transparency, and governance in the banking business. The absence of these attributes was instrumental to the collapse of more than one century old banking legacy and business edifice during the last decade. Bankruptcy of Lehman Brothers shook the global financial market, by being an epicentre of economic turmoil, with far-reaching ramifications. The panic button triggered by an individual bank created a domino effect to create catastrophic spillovers across the world. In the age of interconnectedness and banking networks, failure of a bank is fair enough to shatter even

* *Professor,* School of Management, Manipal University, Manipal - 576 104, Karnataka.
E-mail : kr.pillai@manipal.edu, krpillai123@gmail.com
** *Assistant Professor,* Department of Commerce, Manipal University, Manipal - 576 104, Karnataka.
E-mail : linsy.mathew@manipal.edu

the robust banking system, subject to its magnitude and coverage. This calls for a proper banking governance backed by prudential operation mechanism.

One of the time - tested methods to manage such conditions is to earmark a given amount annually to manage any anticipated default of loan or other means of loss, which is called provisions in banks (Ahmed, Takeda, & Thomas, 1999 ; Balla & McKenna, 2009 ; Laeven, Majnoni, Caprio, Honohan, Mishkin, & Promisel, 2003 ; Wernz, 2014). It is also a systematic way of handling risks rationally. Ruozi and Ferrari (2013) argued that management of a bank is subject to an indispensable liquidity constraint. Hence, financial system of a nation, including banking institutions, is expected to have ample preparations to confront and mitigate the operational shocks latent in a market - driven business. Wernz (2014) argued that the reserve money should be sufficient enough to shield a bank from any potential insolvency in a crisis - ridden situation. Experience of the domino effects of the recent financial crisis has made banking regulators to be stringent on provisioning norms and its reporting to ensure transparency and prudential governance mechanisms.

Though liquidity risk is intrinsic to the banking business (Ruozi & Ferrari, 2013), banks may, quite often, have hindsight to the problem in a profit-centric business paradigm. Volatility of earning is often sacrificed at the altar of profitability, when managers are tempted to lucrative offers (Wernz, 2014). There should be some insurance against such predictable investment failures, by means of loan-loss provisioning. It is not viewed as a sign of debility, rather a sound indicator of risk calculation and, thereby, cushioning against any potential jeopardy. The amount of annual provision earmarked builds upon the loan-loss reserves as a supplementary capital (Greenawalt & Sinkey, 1988). Ahmed et al. (1999) argued that the purpose of loan-loss provision is to revamp banks' loan - loss reserves to signal expected future losses in their loan portfolio. Studies affirmed that creating a buffer as loan-loss reserve is a forward-looking policy of income smoothing to adequately compensate the expected defaults in loan portfolios (Balla & McKenna, 2009 ; Bushman & Williams, 2015 ; Kanagaretnam, Lobo, & Mathieu, 2003 ; Laeven et al., 2003; Skala, 2009).

As a risk-adjusted asset (Greenawalt & Sinkey, 1988), loan-loss provisioning is a rational step in this regard, earmarking a general allowance to account for potential losses in the future. Henderson (1999) argued that provision for loan - loss signals how a bank perceives the quality of its loan portfolio and also is a tenable evidence of its success or failure in credit evaluation. Loan portfolio quality is an irrefutably important aspect of credit risk management (Makri, 2016). Literature (Ahmed et al., 1999 ; Bushman & Williams, 2012 ; Laeven et al., 2003 ; Leventis, Dimitropoulos, & Anandarajan, 2012 ; Skala, 2009 ; Walter, 1991) well-documented the forward-looking attribute of this policy to recognize and account for a future expected loan-loss well in advance. Taktak, Zouari, and Boudriga (2010) commented that even Islamic banks are more inclined to set up an allowance for loan provision to absorb any future losses, as the Islamic accounting regulators encourage the use of dynamic provisioning as a well-calibrated shock proof.

Any organized banking system is endowed with a statutory body to ensure operational orderliness in the system and to offer adequate and prompt accommodation as and when it is so warranted. Such regulatory system in the country insists the banks to build up provisioning and capital buffers in good times from a macro - prudential perspective as cushions to the losses in a down turn (Reserve Bank of India, 2015). Dhar and Bakshi (2015) alluded that regulation-based monitoring of loans and loan-loss provisioning is the hallmark of the monetary system in India. This can enhance robustness of individual banks and stability of the entire financial system. The capability of the Indian monetary system to insulate its banking sector from the shock waves of the recent global meltdown, triggered by the U.S. banking crisis, is evident.

Context of the Study

Transparent financial reporting offers reliable and relevant firm-specific information on financial performance

and condition of a business. How markets interpret the components of income is conditioned on related disclosures of balance sheet and financial statements (Wahlen, 1994). This information must have sufficient implications for investors and regulators. In this regard, loan-loss provisioning mechanism is a part of overall capital regulatory framework to foresee dangers and avoid it (Laeven et al., 2003).

The Indian banking system has proven its internal robustness during the recent financial crisis. However, NPA still remains a glaring defect (Pillai, 2016), raising the question of operational efficiency of the system. The higher the level of NPAs, the more will be the provisioning arrangements, which will be disastrous in the long-term. Continuous rise in NPAs across the banking institutions in a country is a disturbing macroeconomic indicator, signifying the operational inefficiency of the banking industry and poor regulatory mechanism or/and its lack of compliances. The Indian banking system is caught in a seemingly intractable dichotomy of profitability and social dimension of banking. Profitability is an essential pre-requisite to strive ahead and sustainably overcoming the inherent market turbulence (Nagaraju, 2014). The social dimension of banking is a mandatory regulatory compliance to undertake risk-inherent investment to scale up the proclaimed financial inclusiveness in the country. Anticipating the inherent risk in business, provisioning is mandatory in banking and financial businesses. Packer and Zhu (2012) commended on the conservative nature of loan classification practices in India, which have moved closer to international norms since the Asian financial crisis. Also, the Reserve Bank of India (2015) has become more vigilant in this regard recently.

In compliance with Basel Committee on Banking Supervision, the Reserve Bank of India (2014) has created accelerated provisioning regime as a macro-prudential tool to create counter-cyclical provisioning and capital buffers to ward-off systematic risk. Provisioning is made on the basis of classification of assets based on the previous period, for which the assets have remained non-performing and the availability of security and the realizable value there of (RBI, 2015). Mounting provisioning is a matter of concern not only to a particular bank, but the whole banking system and the economy in its culmination. The regulatory guidelines have introduced accelerated provisioning norms to those banks which try to conceal the status of NPAs or try to evergreen the accounts (RBI, 2015), as shown in the Table 1. Blocking huge amount as provision may aggravate liquidity shortages and capital inadequacy in any individual bank and fund shortages in the overall banking system. Against this backdrop, this study was conducted to understand the longitudinal trends of provisioning in Indian banks taking into consider the ownership nature and ranking by bank size as institutional elements.

Table 1. Accelerated Provisioning Norms of RBI

Asset Classification	Period as NPA	Current Provisioning (%)	Revised Accelerated Provisioning (%)
Sub-standard assets:			
1. Secured	Up to six months	15	No Change
	Six months to one year	15	25
2. Unsecured	Up to six months	20 for Infrastructure loan & 25 for others	25
	Six months to one year	20 for Infrastructure loan & 25 for others	40
Doubtful assets:			
1.	Second year	25 (secured portion) 100 (unsecured portion)	40 (secured portion) 100 (unsecured portion)
2.	Third & fourth years	40 (secured portion) 100 (unsecured portion)	100 (for both)
3.	Fifth year onwards	100	100

Source: RBI (2015), p. 82

Review of Relevant Literature

An empirical study by Greenawalt and Sinkey (1988) examined bankers' attitude towards loan portfolio risk taking. The study identified loan volume, loan policy, loan mix, and historical loan-loss experience as key determinants of provisions for loan-loss. Wahlen (1994) commented that managers have private information regarding default risks inherent in the loan portfolio. The study argued that managerial information prerogative gives them ample latitude to use discretion in decision making. In a study on the loan-loss provisions on the American owned banks, Henderson (1999) identified social cost of operating banks in a distress-prone situation, especially the banks' presence was mandated by external factors. The author claimed that a well-designed framework can be useful to better assess the credit risk exposure associated in lending by taking full cognizance of the social cost of operating a minority bank.

Kanagaretnam, Lobo, and Yang (2004) investigated implications of bank managers' discretion over their loan-loss provisioning as a signal to future performance of banks. The study found empirical evidence in managers' discretion to use provisioning for either income smoothing or signaling or both, with underlying incentives. By examining, empirically, the cross-country variation in loan-loss provisioning practices, Skala (2009) presented strong empirical evidences on the use of loan-loss provisions to smoothen banks' income streams. The study used data form 179 commercial banks in 11 central European countries over the period from 2004 - 2012. The results noted that over optimism of bank managers during prosperity resulted in aggressive loan growth, resulting in mounting non-performing assets. Khurana and Singh (2010) reported the comparative advantage of private sector banks, especially of new generation banks, over public sector banks. The study empirically validated the capitalization effectiveness of private banks to encounter any credit related stress.

Bushman and Williams (2012) provided new evidence on the impact of discretion on information properties of loan provisions and discipline in banks' risk- taking activities. The study found that managers' discretion on loan-loss provisioning degraded the transparency of banks. This makes it difficult for regulators and investors to monitor banks' discipline in risk taking. On examining a sample of 240 banks in 12 countries, spanning across more than one decade, Leventis et al. (2012) examined the propensity of managers to engage in signaling by using provisioning, using data from 18 countries in the European Union. The results found sufficient empirical evidence to conjecture that healthy banks engaged in signaling behaviour to convey indications of managerial prudence to future profitability of investors. Packer and Zhu (2012) contended that many Asian countries have adopted stricter provisioning requirements as a counter cyclical policy in the wake of the Asian financial crisis, most strikingly of India. The study proposed a countercyclical provisioning policy to contain volatility of banks' profits and to deter the possibility that the banks may have to deplete their capital when actual losses exceed expected losses. Curcio, Dyer, Gallo, and Gianfrancesco (2014) examined the functioning of bank provisioning regime in the Chinese economy. The study found that the provisioning mechanism could address the issues associated with pro-cyclicality of banks' capital requirements.

Contributing new evidence on managers' discretion with respect to financial reporting, Bushman and Williams (2015) argued that loan-loss provisioning is a key accounting policy choice that directly affects the volatility and cyclicality of earnings of banks and indicates the nature of loan portfolio risks. The paper further noted that when a bank delays recognition of expected losses, it creates an overhang of unidentified expected losses that carry forward to the future. Dhar and Bakshi (2015) examined the evidence concerning the importance of bank-specific factors as determinants of loan-losses in the context of public sector banks in India. The study noted that provisioning against loan-losses is a major concern for stability of a banking system in a country. Using a panel data set from 22 countries from 2008 through 2012, Bougatef (2016) found evidence to the influence of corruption to impair portfolio quality in emerging markets, hampering banks to optimally allocate their resources. On examining the financial soundness of the Indian banking system between 1999 and 2013, Maji and Hazarika

(2016) argued for a proper assessment mechanism from the loan origination phase to the servicing of accounts phase, to minimize exposure to credit risk. On reviewing the Insolvency - Bankruptcy Code of India 2016, ASSOCHAM - CRISIL (2017) urged the banks to be more professional and proactive, especially to set an early warning mechanism and for astute credit monitoring in the event of limited progress under existing recovery regimes.

Objectives of the Study

The study has the following objectives to accomplish :

(1) To explore the chronological trend in loan-loss provisioning in India,

(2) To understand the influence of organizational status upon provisioning,

(3) To decipher the influence of bank size on determining provisioning.

Study Design

Following the ontological paradigm of research, the study follows an interpretative philosophy. The approach of the study is a mixture of longitudinal and cross-sectional designs. Data for accomplishing the task of research were obtained from Economy Outlook, an online database hosted by Centre for Monitoring of Indian Economy (CMIE, n.d.). We collected the information on provisioning for the immediate past 10 years (2006-07 to 2015-16), which was presented as a percentage of income. The study could not cover all the banks (111 in numbers) due to unavailability of information for all relevant years in the database. Only 60 banks were considered for analysis, having relevant information available for the period covered under the study.

All the banks were classified based on two criteria: Nature of ownership and the size of banks. Based on ownership they were classified into nationalized banks, domestic private banks, and foreign banks. The basis of classification of banks such as big, medium, and small has adhered the ranking position of each bank presented in the database. The two-way classification was done prior to the elimination of banks, which did not have relevant information for the reference time.

Trend analysis was conducted by consolidating the annual data pertaining to bank ownership and size to capture the longitudinal and cross-sectional trends within the scope of the study. One-way ANOVA test was conducted to examine the impact of ownership type and size on loan-loss provisions and, thereby, empirically verify the proposed hypotheses. Theoretically, ANOVA is used to examine the difference in the mean values of the dependent variable associated with the effect of independent variables (Hair, Black, Babin, Anderson, & Tatham, 2011 ; Malhotra & Dash, 2011). This was conducted to observe the overall trend across institutions as well as annual trends. Post - hoc multiple comparisons test (Hair et al., 2011) was loaded on both the attributes of banking classification to comprehend the relative and overall differences in mean.

The research proposes two working hypotheses to be validated :

- **H01:** Loan loss provisioning is independent of bank ownership nature.
- **H1:** Type of bank ownership is a significant predictor of loan-loss provisioning.
- **H02 :** Loan loss provisioning is independent of bank size.
- **H2:** Size is a significant determinant of loan - loss provisioning.

Analysis and Results

Higher stake of provisioning on income is an indicator of impending asset erosion in the banking system. This paper has attempted to examine the trends in provisioning in Indian banks taking due regard to institutional attributes in terms of ownership and size. The grouping was done prior to the removal of banks, which did not have data availability for the relevant years, to be congruent with the ranking given in the database. The classified profile is presented in the Table 2. It is understood that public sector banks constitute significant number in size and maintain monopoly in nature of ownership.

The ownership dimension of provisioning implies that public sector banks exhibit a higher overall trend in provisioning (see Figure 1). It is evidenced that, with an initial fall, provisioning in public sector banks has constantly been rising. It also registers an exponential rise during the terminal year of reference (2015-16). Private sector banking system has displayed slight overall hike in provisioning subject to mild fluctuations. Foreign banks, though have not registered any perceptible change in the terminal years, their decadal trend was not free from fluctuations.

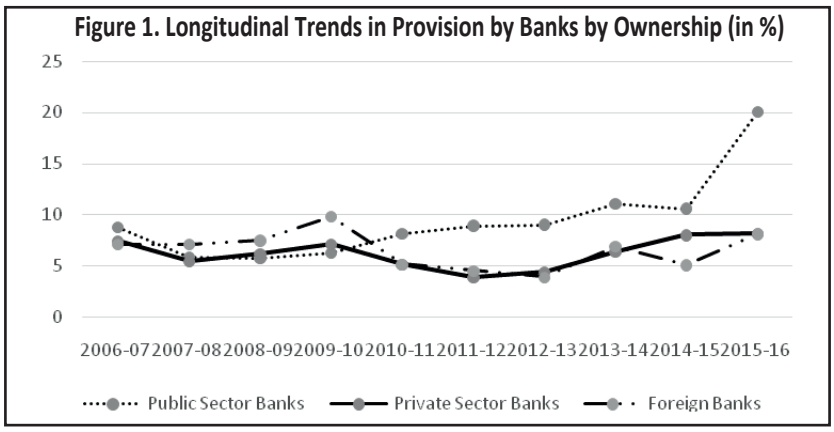
We attempted to examine the decadal trends in loan-loss provisions in the country, accounting for the asset size of banks. All banks were grouped into three categories such as big, medium, and small prior to the elimination of banks, which had missing data. The results are presented in the Figure 2.

Both the big and small sized banks display almost similar chronological trends. Provisioning in medium sized banks exhibits a curious trend by being unsteady with higher amplitudes. The trend shown during 2015 - 16 with respect to big sized banks is as same as that shown by public sector banks (refer Figure 1). It is to be noted that all public sector banks are big sized (refer Table 2).

Table 2. Banks by Ownership * Banks by Size Cross Tabulation

(Number of banks)

		Banks by Size			Total
		Big	Medium	Small	
Banks by Ownership	Public sector bank	26	0	0	26
	Private sector bank	7	11	0	18
	Foreign bank	4	8	4	16
	Total	37	19	4	60



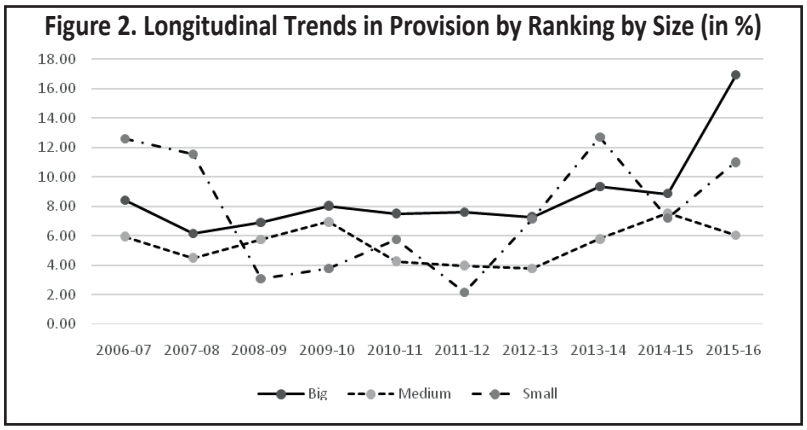


Table 3. ANOVA

	F	*Sig.*
Banks by Ownership	9.508	.000
Ranking by Size	7.868	.001

Table 4. Post Hoc Test on Ownership Attribute

Dependent Variable: Composite Average (Tukey HSD)

(I) Banks by Ownership	(J) Banksby Ownership	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Public sector bank	Private sector bank	3.37137*	.84386	.001	1.3407	5.4020
	Foreign bank	2.78317*	.87447	.007	.6788	4.8875
Private sector bank	Public sector bank	-3.37137*	.84386	.001	-5.4020	-1.3407
	Foreign bank	-.58819	.94560	.809	-2.8637	1.6873
Foreign bank	Public sector bank	-2.78317*	.87447	.007	-4.8875	-.6788
	Private sector bank	.58819	.94560	.809	-1.6873	2.8637

Note : *The mean difference is significant at the 0.05 level.

On examining the role of institutional profile as a predictor of loan-loss provisioning, it is understood that both the institutional attributes (nature of ownership and ranking by size) are significant predictors as evidenced in the Table 3. Chronological data, with respect to nature of ownership and size, were reduced into composite average before being loaded for ANOVA test. Composite average for the relevant period is used as a dependent variable. ANOVA table offers ample statistical evidence to infer that both ownership and size account for loan-loss provisioning, as the levels of significance in ANOVA table is less than the threshold limit of 0.05. Hence, the two working hypotheses were validated empirically.

Having observed the role of institutional attributes, being significant predictors, the post - hoc comparative test was conducted to examine which category differs significantly from others (Hair et al., 2011 ; Malhotra & Dash, 2011). With these results, we understand that there is ample empirical evidence to reject H01 and H02 at 5% level of significance. Hence, it is inferred that both nature of bank ownership and bank size influence loan loss provisioning. The method used for multiple comparison (post hoc) is Tukey HSD (Hair et al., 2011). The post hoc test results are shown in the Tables 4 and 5.

Table 5. Post Hoc Test on Ranking Attribute

Dependent Variable: Composite Average (Tukey HSD)

(I) Ranking by Size	(J) Ranking by Size	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Big	Medium	3.14964*	.79407	.001	1.2388	5.0605
	Small	.98649	1.48082	.784	-2.5770	4.5500
Medium	Big	-3.14964*	.79407	.001	-5.0605	-1.2388
	Small	-2.16316	1.54774	.349	-5.8877	1.5614
Small	Big	-.98649	1.48082	.784	-4.5500	2.5770
	Medium	2.16316	1.54774	.349	-1.5614	5.8877

* The mean difference is significant at the 0.05 level.

Table 6. ANOVA for Individual Years

Year	Banks by Ownership		Ranking by Size	
	F	*Sig.*	*F*	*Sig.*
2006-07	1.023	.366	5.819	.005*
2007-08	.928	.401	6.459	.003*
2008-09	.759	.473	1.329	.273
2009-10	2.216	.118	.945	.395
2010-11	4.098	.022*	4.285	.018*
2011-12	14.559	.000*	8.909	.000*
2012-13	14.535	.000*	5.073	.009*
2013-14	3.803	.028*	3.019	.057
2014-15	4.608	.014*	.403	.670
2015-16	15.607	.000*	8.392	.001*

Source: Estimated from CMIE database

* Statistically significant relations

As per the Table 4, it is evidenced that public sector banks overtly differ from the other two categories in producing the highest mean differences across group comparisons. The estimated mean differences (3.37137 and 2.78317) are statistically significant (.000 and .007, respectively) to endorse the group mean difference empirically. These results are consistent with the trends presented in the Figure 1.

Though multiple comparison test was conducted for ranking category, we could not observe any empirically significant evidence (Table 5). A close look at Table 2 (cross tabulation) indicates that all public sector banks belong to the category of big banks. Lack of loadings under medium and low categories against that category (refer to Table 2) might have led to spurious effect on the results. However, it can be argued from the evidence of Table 5 that medium sized banks stand apart significantly in its mean difference (-3.14964 and -2.16316) from that of the other two categories. The evidence from Figure 2 gives credence to the results depicted in Table 5.

We examined the impact of ownership and size of banks on annual trends in provisioning as well. The results are presented in the Table 6. Ownership indicates empirically proven influence on provisioning during the last six years only. However, influence of size of banks is dissimilar on various years.

Discussion

We observe the role of institutional elements (both nature of ownership and bank size) in provisioning (refer Tables 3 and 6). The results of our study are consistent with Khurana and Singh's (2010) findings on higher asset quality in private sector banks being evidenced by their low provisioning (refer Figure 1), which, in turn, is the outcome of low NPA level. Our results also correspond to the findings of Nagaraju (2014) with respect to the inefficiency of public sector banks, which is manifested in terms higher levels of provisions, signaling asset erosion. It is observed that there was an overshoot in provisioning in Indian banks consistently in the latest year (refer Figures 1 and 2). This might be due to the stringent regulatory measures in 2015 (Reserve Bank of India, 2015). This is clearly reflected in the provisioning during 2015 - 16, signifying the impact of an accelerated provisioning regime.

RBI (2015) stipulated that provisioning should be on the basis of asset classification on the period a particular asset remained unyielding, its collateral and the realizable value thereof. The policy guidelines mandated that those banks, which try to conceal the status of NPAs or try to evergreen the accounts would be subjected to accelerated provisioning for those accounts and/or other supervisory actions as deemed appropriate by RBI (2015). The RBI has followed it as a prudential supervision norm to be commensurate with the level of risk in the loan portfolio, well in advance. This is a manifestation of RBI's emphasis on higher requirements for provisioning against continued high credit growth and higher default rates. The latest legislative framework on Insolvency and Bankruptcy Code (Government of India, Ministry of Law & Justice, 2016) can potentially plug willful defaults by envisaging a creditor control regime. The Code insists that stressed/distressed corporates must devise an effective turnaround plan and communicate to all stakeholders in advance, expounding the aspects of financial restructuring, operational improvement, and sale of assets.

In the light of the study, we correspond with the recommendations of Hrishikes (2014) for stricter provisioning norms to arrest degradation of assets due to riskier exposures. It has also been pointed out that strict adherence to provisions may sap the profitability of banks (Pillai, 2016). Dhar and Bakshi (2015) observed the country-specific regulatory frameworks and the roles of central banks for loan-losses in a banking system. The results of our study also support this observation, which was manifested by considerable rise in provisioning in the latest year due to stringent regulatory guidelines.

Provisioning for the advances in portfolio could give more consistency and transparency in the published accounts (RBI, 2015). The provisioning requirement mandated by the RBI (2015) was only indicative and warranted by the regulatory norms to indicate a minimum requirement against likely default of loans. A bank has the liberty to make higher provisions than prescribed by the regulator to insulate itself from the adversaries of any unsystematic risk. Moreover, such a pro-active step on provisioning norms is a potent indicator of sound operational principles, rational risk calculation, and greater governance. Researchers (Packer & Zhu, 2012) lauded the provisioning norms of India based on the riskiness of the sector and public policy objectives.

Conclusion

Banks cannot relax on the non-payment of loans, as they are dealing with public money on trust. Hence, every bank is expected to design and systematize a realistic repayment schedule, suitable to their debtors' cash-flow and remittance convenience to ensure prompt and uninterrupted recovery in advances in such a way as to smoothen its cash flows. A proper recognition of credit risk and credit losses well in advance will offer ample tools to mitigate shocks in down turns. The mandatory provisioning requirement itself is a forewarning and point of alert to the bankers to be vigilant to explore the debtor's eligibility and credibility before the issuance of a loan. Failure in this is an overt question of lack of governance and reckless portfolio management.

Any pro-active step on provisioning norms as an unfailing buffer, over and above warranted by mere regulatory compliance, signifies sound operational principles, rational risk calculation, and greater governance. Advance detection and allowance for credit losses in loan portfolios enable banks to build up a buffer in good times intended to be used in crisis. A contingency plan is essential for any financial institution to restore its long-term financial soundness, in case of any future setbacks, expected or unexpected, due to bank-specific or market-wide stress. Earmarking provisioning and its review and modification periodically is an indicator of sound management practices attributing the advance preparation to address any depletion in future cash flows. However, considerable amount of provision may sap the asset structure and lead to capital erosion eventually. This calls for a strategy of conservative accounting practices blended with management prudence not only for signaling the competency of an individual bank, but to ensure the robustness of the larger banking system. We acknowledge the pro-active steps taken by the government to develop a creditor-friendly and structurally strong banking ecosystem through the historic Insolvency-Bankruptcy Code.

Implications, Limitations of the Study, and Scope for Future Research

The study has implications for policy makers as well as banks. The government should promulgate a structurally robust policy regime to arrest the capital erosion of banks by promoting an organic creditor-creditor relationship. Banks must restrain from overambitious credit exposure and design a mechanism to have regular surveillance on their asset portfolio depletion, and have an early intervention strategy accordingly.

Though we have observed perceptible increase in provisioning during 2015 – 2016 (post-accelerated provisioning regime), it is too early to make any logical inference. The time limitation of the study is 10 years. The study could not investigate the factors underlying the provisioning.

We do not overlook Henderson's (1999) observation regarding the likely deviation of banks from best practice measures due to the characteristics unique to its operating area rather than managerial competency. Future research can validate this in the Indian scenario. The wisdom drawn from the recent financial crisis is that bank provisions have significant role to determine its coverage of credit risk, which can be a potential topic for future enquiry. Our findings on the role of institutional elements (both nature of ownership and bank size) in provisioning needs validation through further enquiry. The perceptible increase in provisioning during 2015 - 2016 (post-accelerated provisioning regime) can be investigated in future. There is also a pressing need for an examination on bankers' attitude towards loan portfolio risk taking in India.

References

Ahmed, A. S., Takeda, C., & Thomas, S. (1999). Banks loan-loss provisions: A reexamination of capital management, earning management and signaling effect. *Journal of Accounting and Economics, 28* (1), 1 - 25.

ASSOCHAM-CRISIL. (2017). *The Insolvency and Bankruptcy Code: Protecting Stakeholders, improving 'ease of doing business'.* Joint Report by Associated Chamber Commerce and Industry and CRISIL Limited. New Delhi: ASSOCHAM.

Balla, E., & McKenna, A. (2009). Dynamic provisioning: A counter cyclical tool for loan-loss reserves. *Economic Quarterly, 95*(4), 383 - 418.

Bougatef, K. (2016). How corruption affects loan portfolio quality in emerging markets ? *Journal of Financial Crime, 23* (4), 796 - 785.

Brinkmeyer, H. (2015). *Drivers of bank lending: New evidence from the crisis*. Germany: Springer Gabler.

Bushman, R. M., & Williams, C. D. (2012). Accounting discretion, loan-loss provisioning, and discipline of banks' risk-taking. *Journal of Accounting and Economics, 54* (1), 1 -18.

Bushman, R. M., & Williams, C. D. (2015). Delayed expected loss recognition and the risk profile of banks. *Journal of Accounting Research, 53* (3), 511 - 553.

CMIE. (n.d.). *Economic outlook.* Retrieved from https://economicoutlook.cmie.com/kommon/bin/sr.php?kall=wreport&tabcode=001021010010020000&oporder=0

Curcio, D., Dyer, D., Gallo, A. G., & Gianfrancesco, I. (2014). Determinants of banks' provisioning policies during crisis: Evidence from Chinese banking system. *Managerial Finance, 40* (10), 987 - 1006.

Dhar, S., & Bakshi, A. (2015). Determinants of loan-losses of Indian Banks : A panel study. *Journal of Asia Business Studies, 9* (1), 17 - 32.

Government of India, Ministry of Law and Justice. (2016). *The insolvency and bankruptcy code, 2016.* Retrieved from http://www.indiacode.nic.in/acts-in-pdf/2016/201631.pdf

Greenawalt, M. B., & Sinkey, J. F. (1988). Bank loan-loss provisions and the income - smoothing hypothesis: An empirical analysis, 1976-1984. *Journal of Financial Services Research, 1*(4), 301 - 318.

Hair, J. F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2011). *Multivariate data analysis.* New Jersey : Prentice Hall.

Henderson, C. C. (1999). The economic performance of African-American owned banks: The role of loan-loss provisions. *The American Economic Review, 89* (2), 372 - 736.

Hrishikes, B. (2014). *Banking strategy, credit appraisal and lending decisions: A risk-return framework* (2nd edn). New Delhi: Oxford University Press.

Kanagaretnam, K., Lobo, G. J., & Mathieu, R. (2003). Managerial Incentives for income smoothing through bank loan-loss provisions. *Review of Quantitative Finance and Accounting, 20* (1), 63 - 80.

Kanagaretnam, K., Lobo, G. J., & Yang, D. H. (2004). Joint tests of signaling and income smoothing through bank loan-loss provisions. *Contemporary Accounting Research, 21* (4), 843 - 884.

Khurana, A., & Singh, M. (2010). NPA management: A study of new private sector banks in India. *Indian Journal of Finance, 4*(9), 3 -13.

Laeven, L., Majnoni, G., Caprio, J., Honohan, P., Mishkin, R., & Promisel, L. (2003). Loan-loss provisioning and economic slowdown: Too much, too late? *Journal of Financial Intermediation, 12* (2), 178 - 197.

Leventis, S., Dimitropoulos, P. E., & Anandarajan, A. (2012). Signaling by banks using loan-loss provisions : The case of the European Union. *Journal of Economic Studies, 39* (5), 604 - 618.

Maji, S., & Hazarika, P. (2016). Does competition influence the financial soundness of banks? Evidence from the Indian banking sector. *Indian Journal of Finance, 10*(10), 27 - 41. doi:10.17010/ijf/2016/v10i10/102994

Makri, V. (2016). Towards an investigation of credit risk determinants in European countries. *Accounting and Management Information System, 15*(1), 27 - 57.

Malhotra, N.K., & Dash, S. (2011). *Marketing research: An applied orientation*. New Delhi : Pearson Education.

Nagaraju, T. (2014). An analysis of profitability and marketability efficiencies of Indian public and private banks. *Indian Journal of Finance, 8*(1), 15 - 28. doi:10.17010/ijf/2014/v8i1/71981

Packer, F., & Zhu, H. (2012). *Loan-loss provisioning practices in Asian banks* (BIS Working Papers No. 375). Bank for International Settlements. Retrieved from http://www.bis.org/publ/work375.pdf

Pillai, K. R. (2016). Temporal and institutional essence of non-performing assets in banks: An Indian scenario. *A Paper presented at the International Conference on Contemporary Issues in Commerce, Management and Social Sciences*, held in Malaysia on 22nd and 23rd July.

Reserve Bank of India. (2014). *Report of the internal working group on implementation of counter-cyclical capital buffer*. Reserve Bank of India. Retrieved from https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=797

Reserve Bank of India. (2015). *Master circular on prudential norms on income recognition, asset classification and provisioning pertaining to advances, 1st July 2015*. Reserve Bank of India. Retrieved from https://rbidocs.rbi.org.in/rdocs/notification/PDFs/101MC16B68A0EDCA9434CBC239741F5267329.PDF

Ruozi, R., & Ferrari, P. (2013). *Liquidity risk management in banks: Economics and regulatory issues*. New York: Springer.

Skala, D. (2009). Saving on a rainy day? Income smoothing and pro-cyclicality of loan-loss provisions in Central European banks. *International Finance, 18* (1), 25 - 46.

Taktak, N. B., Zouari, S. B. S., & Boudriga, A. K. (2010). Do Islamic banks use loan-loss provisions to smooth their results? *Journal of Islamic Accounting and Business Research, 1*(2), 114 -127.

Wahlen, J. M. (1994). The nature of information in commercial bank loan-loss disclosures. *The Accounting Review, 69* (3), 455 - 478.

Walter, J. R. (1991). Loan-loss reserves. *Economic Review,* 20 - 30. Retrieved from https://www.richmondfed.org/~/media/richmondfedorg/publications/research/economic_review/1991/pdf/er770402.pdf

Wernz, J. (2014). *Bank management and control: Strategy, capital and risk management*. New York : Springer.

About the Authors

Dr. K. R. Pillai, Professor at the School of Management, Manipal University, Manipal, Karnataka is a Ph. D. graduate in Economics from the University of Kerala. His professional career spans across 25 years. His research interests comprise of Developmental Economics, Sustainable Tourism, Environment-Economy Linkage, and Health Economics.

Ms. Linsy Mathew holds a Master's Degree in Finance from Manipal University and is an Assistant Professor in the Department of Commerce, Manipal University, Manipal, Karnataka. Prior to joining MU, she was serving in an MNC bank in the UAE. Her research interests focus on Banking Policy, Performance, and Marketing.