Role of Technology in reduction of Non-Performing Assets (NPAs) in Indian Banking Sector (with special focus on Global trends)

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I. ABSTRACT

Indian banking sector has not yet recovered from the problem of rising Non-Performing Assets (NPAs), especially the PSBs (Public Sector Banks). NPAs beyond a certain level are a cause for concern for everyone involved because credit is essential for economic growth and NPAs affect the smooth flow of credit. On the other hand, technologies in Data Analytics and Machine Learning have matured now and are ready to be implemented. They offer an exciting opportunity to establish new operational models and can provide scope to identify gaps in current financial sector functioning; uncovering opportunities and advantages that can be seamlessly helpful to address the problem of rising NPAs.

The key challenge going forward for banks globally is to expand credit portfolio and effectively manage NPAs while maintaining profitability. Asset quality continues to be the basic function and also the biggest challenge for banks in the present dynamic environment. In order to overcome the perceived risks, there is an urgent need for banks to have well-structured and effective credit appraisal and monitoring system in place coupled with appropriate business models which can be powered by Artificial Intelligence technologies to effectively manage all the current issues revolving around recovery in stressed assets and thereby help in reduction of NPAs across all banks. The objectives of the Research include study of institutional/bank specific factors (at each stage of loan delivery mechanism) resulting in rise of NPAs in Indian Banking Sector and applicability of remedial mechanisms /strategies of using Big Data Analytics as a remedial tool in faster resolution of Non-Performing Assets in Global Financial Sector.

II. IMAGE

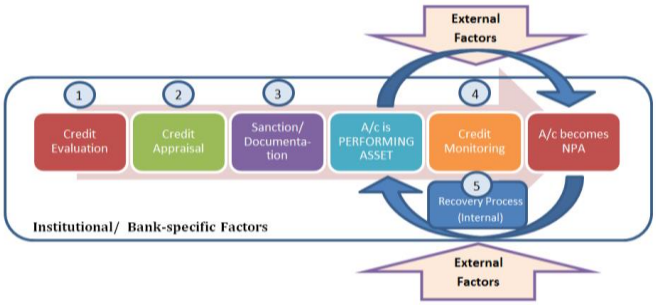
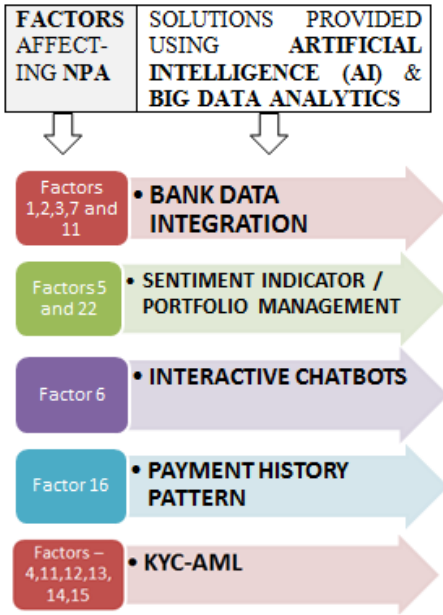


Fig.1: Stages of Loan Delivery Mechanism
Source: initiated by the researcher



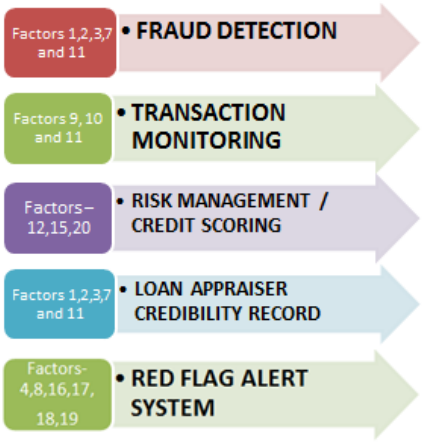


Fig. 2: NPA management using AI and Big Data Analytics
Source: initiated by the researcher

III. REFERENCE

[1] Ahmad, N.H. & Ariff, M. (2007), "Multi-country Study of Bank Credit Risk Determinants", The International Journal of Banking and Finance, Vol. 5(Number 1): 135–152

[2] Ahmad, Z. & Jegadeeshwaran, M. (2013), "Comparative Study of NPA Management of Nationalized Banks", International Journal of Marketing, Financial Services & Management Research, ISSN 2277- 3622, Vol.2, No. 8

[3] Banerjee, A.V., Cole, S. & Duflo, E. (2004), "Banking Reform in India", Indian Policy Forum", Vol. 1(1), pp. 277-332

[4] Baruah, A. (2018),"AI Applications in the Top 4 Indian Banks", Tech Emergence; Retrieved from https://www.techemergence.com/ai-applications-in-the-top-4-indian-banks/

[5] Chaudhary, S. & Singh, S. (2012), "Impact of Reforms on the Asset Quality in Indian Banking", International Journal of Multidisciplinary Research, Vol.2 (1)

[6] D'Monte, L. (2018), "NSE bets big on AI, blockchain to mitigate algo-trading risks",(LiveMint, Retrieved from https://www.livemint.com/Money/yVXE5LBuDzLbHhoxOntvZI/NSE-bets-bigon-AI-blockchain-to-mitigate-algotrading-risk.html)

[7] Messai, A. S. & Jouini, F. (2013), "Micro and Macro Determinants of Non-Performing Loans", International Journal of Economics and Financial Issues, Vol. 3, No. 4, pp. 852 – 860.

[8] Pandey, R., Patnaik, I. and Shah, A. (2016), "Dating business cycles in India", NIPFP Working Paper No. 175

[9] Ranjan, R. & Dhal, S.C. (2003), "Non-Performing loans and Terms of credit of Public sector banks in India: An Empirical Assessment", Reserve Bank of India Occasional Papers, Vol. 24, No.3

[10] Sabharwal, M. (2014), "The use of Artificial Intelligence (AI) based technological applications by Indian Banks", International Journal of Artificial Intelligence and Agent Technology, Vol 2,issue 1

[11] Sengupta, R. & Harshvardhan. (2017), "Non-performing assets in Indian Banks: This time it is different", Indira Gandhi Institute of Development Research, Mumbai, WP-2017-019

[12] Thiagarajan, S., Ayyappan, S. & Ramachandran, A. (2011), "Credit Risk Determinants of Public and Private Sector Banks in India", European Journal of Economics, Finance and Administrative Sciences, Issue-34.

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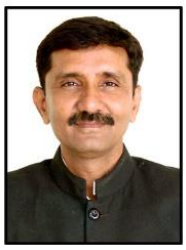
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