

Predicting Acquisitions in the Indian Financial Services Sector

VENKATESWARAN VINOD*
S.K.SUDARSANAM**

Abstract

Acquisitions are crucial for a firm's growth strategy with various motivations such as economies of scale, new product or technology acquisition, introduction in new markets, and increasing market share. These motivations are applicable in the financial services sector. In India, acquisitions have gained prominence over the last few decades for reasons such as liberalization, globalization, and access to capital markets. Research on predicting acquisitions over the previous four decades has been developed using traditional statistical modeling. In addition, accounting data has been used as independent variables to determine the probability of acquisition. Two models have been developed using Random Forest (a machine learning algorithm) and Logistic Regression for predicting takeovers in the Indian financial services industry. The performance of both models is evaluated using standardized metrics.

JEL Code : C45, E44, G17, G19, G34

Keywords : Financial Services; Industry; M&A; Modeling; Machine Learning; India

I. Introduction

THE FINANCIAL SERVICES sector in India is the backbone of the economy, managing all financial transactions. It is characterized by two distinct phases – pre-liberalization and post-liberalization. The country's financial services sector consists of banks and non-banks. Banks can be categorized into commercial, cooperative, payments, and small finance banks; non-banks include insurance companies, mutual funds, and Non-Banking Financial Companies (NBFC).

* Doctoral (Ph.D.) Research Scholar, Vellore Institute of Technology (Deemed-to-be-University), VIT Business School, Kelambakkam, Vandalur Road, Rajan Nagar Chennai, Tamil Nadu 600127, INDIA.

** Dean and Professor, Vellore Institute of Technology (Deemed-to-be-University), VIT Business School, Kelambakkam, Vandalur Road, Rajan Nagar Chennai, Tamil Nadu 600127, INDIA.

Submitted January 2022; Accepted December 2022

phenomenon has been gathering momentum over the last two or three decades; however, unlike in the west, the number of studies focused on predicting firms' acquisition likelihood in the financial services sector is limited. This paper contributes to the body of knowledge on predicting acquisition likelihood in the Indian financial industry.

The authors have examined firm and industry-level characteristics to determine the takeover likelihood. The research objectives were to understand the factors that predict acquisitions in the Indian Financial Services industry and to compare the performance of different models in the prediction. After the data cleaning and preparation process, five hypotheses and eight associated variables were shortlisted. The null hypothesis was rejected in all of them, and the alternate hypothesis was not rejected, indicating that inefficient management, growth-resource mismatch, smaller size, lower cash flow, and lending activity increased acquisition probability. The Logistic Regression statistical technique and Random Forest machine learning algorithm were used to compute the acquisition probability. The classification accuracy using the Random Forest machine learning algorithm is 86.1%, and the logistic regression had a classification accuracy of 63.1%. In addition, techniques such as textual analysis of management commentary and enhancing the data quality through multiple data sources can improve the probability of prediction.

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