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Article

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# INPUTS, OUTPUTS, AND A THEORY OF PRODUCTION AND COST AT DEPOSITORY FINANCIAL INSTITUTIONS

C. W. SEALEY, JR. AND JAMES T. LINDLEY\*

## I. INTRODUCTION

THE TOOL OF ANALYSIS most often applied to the behavior of financial institutions has been portfolio theory. The inadequacy of this approach stems from the total omission of production and cost constraints under which financial firms operate, and thus the role of these constraints in determining the equilibrium output mix and the scale size of the financial firm. Although various studies have proposed to describe the operations of the financial firm (mostly commercial banks) by utilizing the concepts of the theory of the firm, thus correcting the deficiencies of portfolio analysis, they have not been completely successful in developing an adequate model of the banking or other financial firm [3; 16; 17; 19; 27].<sup>1</sup>

The lack of success of previous studies in developing a positive theory of the financial firm can be attributed to the incomplete application of the essential elements of the theory of the firm to financial institutions. Specifically, previous writers have failed to: (1) appropriately classify outputs and inputs of the financial firm by failing to consider the criteria on which the financial firm makes economic decisions, and (2) analyze the technical aspects of production and cost for the financial firm. The purpose of this paper is to develop a model within which the role of production and cost can be analyzed and the behavior of the financial firm understood within the context of a profit maximizing producer rather than, as viewed from the portfolio approach, as a rational investor. The analysis presented in this paper shows the following: (1) contrary to existing literature, in order to develop a positive theory of price and output decisions of the financial firm, explicit concepts of outputs and inputs of the financial firm must be developed and these concepts must be consistent with the criteria on which the firm's economic decisions are made; (2) by carefully analyzing the technical aspects of the financial firm's production process, a model of financial firm behavior can be developed which is consistent with the theory of the firm; (3) in contrast to the traditional firm, the technical production conditions facing the financial firm result in optimality conditions where the marginal revenue products do not, in general, equal the

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1 David A. Alhadeff. Barriers to Bank Entry. *Southern Economic Journal*, XL (April 1974), 589–603.

2 David A. Alhadeff and Charlotte P. Alhadeff. An Integrated Model for Commercial Banks. *Journal of Finance*, XII (March 1957), 24–43.

3 Frederick W. Bell and Neil B. Murphy. *Costs in Commercial Banking: A Quantitative Analysis of Bank Behavior And Its Relation to Bank Regulation*, Research Report No. 41. Boston: Federal Reserve Bank of Boston, 1968.

4 Frederick W. Bell. *Economies of Scale in Commercial Banking*. Boston: Federal Reserve Bank of Boston, 1967.

5 Frederick W. Bell. Economies of Scale and Division of Labor in Commercial Banking. *Southern Economic Journal*, XXXV (October 1968), 131–139.

6 George J. Benston. Economies of Scale of Financial Institutions. *Journal of Money Credit and Banking*, IV (May 1972), 312–341.

7 George J. Benston. Economies of Scale and Marginal Cost in Banking Operations. *National Banking Review*, II (September 1964), 507–549.

8 C. E. Ferguson. *The Neoclassical Theory of Production and Distribution*. Cambridge: Cambridge University Press, 1969.

9 Ragnar, Frisch. *Theory of Production*. Chicago: Rand McNally and Company, 1965.

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12 Josef, Hadar. *Mathematical Theory of Economic Behavior*. Reading, Mass.: Addison-Wesley Publishing Company, 1971.

---

13 Donald R. Hodgman. Alternative Measures of the Real Output and Productivity of Commercial Banks—Discussion. *Production and Productivity in the Service Industries*. edited by R. Fuchs Victor. New York: Columbia University Press, 1969, 189–195.

---

14 Paul M. Horvitz. Economies of Scale in Banking. *Private Financial Institutions Commission on Money and Credit*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1964, 1–54.

---

15 Nicholas, Kaldor. Limitational Factors and the Elasticity of Substitution. *Review of Economic Studies*, IV (1937), 163–65.

---

16 John H. Karaken. Commercial Banks and the Supply of Money, A Market Determined Demand Deposit Rate. *Federal Reserve Bulletin*, LIII (October 1967), 1699–1712.

---

17 Michael A. Klein. A Theory of the Banking Firm. *Journal of Money Credit and Banking*, III (May 1971), 205–218.

---

18 W. F. Mackara. What Do Banks Produce *Monthly Review*, Federal Reserve Bank of Atlanta, LX (May 1975), 70–74.

---

19 Boris P. Pesek. Bank's Supply Function and the Equilibrium Quantity of Money. *The Canadian Journal of Economics*, III (August 1970), 357–385.

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22 David H. Pyle. On the Theory of Financial Intermediation. *Journal of Finance*, XXVI (June 1971), 737-747.

23 Paul A. Samuelson. *Foundations of Economic Analysis*, New York: Atheneum, 1965.

24 Stuart A. Schweitzer. Economies of Scale and Holding Company Affiliation in Banking. *Southern Economic Journal*, XXXIX (October 1972), 258-266.

25 Paul, Smith. Cost of Providing Consumer Credit: A Study of Four Major Types of Financial Institutions. *Journal of Finance*, XVII (September 1962), 476-496.

26 Arthur, Smithies. The Boundaries of the Production Function and the Utility Function," in *Explorations in Economics*, New York: McGraw-Hill Book Co., 1936, 326-335.

27 Richard E. Towey. Money Creation and the Theory of the Banking Firm. *Journal of Finance*, XXIX (March 1974), 57-72.

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