

Islamic Banking System in Iran: Its Experience in Lending Operations

By:

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Abstract

Since 1984 Iranian banks has been operating under Islamic principles. This paper investigates dynamics of loans and the difficulties that Iranian banking system was facing. During the period of Islamic banking in Iran, banks experienced a significant increase in the supply of loans. Many factors have affected the behavior of banks in lending operations, the most important of which include rate of return, inflation, and government intervention. In this paper, a descriptive analysis and an error-correction model are carried out to investigate the behavior of lending activities in Iranian banks. The results indicate that government intervention, which aims managing of funds, has played the more important role than that of economic factors.

Keywords: Islamic banking, lending operations, rate of return, total deposits, inflation, government intervention, causality, exogeneity, endogeneity.

Introduction

This paper is concerned with the dynamics of loans in the Iranian Banking system, which operates under Islamic principles. It involves a case study of the operation of whole banks that explains and analyzes loan supply in Iranian banks. The investigation covers the period from 1984-2000 at a national level⁽¹⁾.

The paper evaluates the behavior of rate of return on loans after the basis of bank operations had been transformed by the introduction of Islamic principles. The method which is employed to analyze the data is a descriptive and an error-correction model. To this end, a model connects the supply of loans with the rate of return to banks, total deposits and the rate of inflation. In this paper the problems that have restrained or could restrain the efficiency of the system will be explained.

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1- The source of the data is from the Central Bank of Iran.

Background

The central feature in an Islamic banking system is the prohibition of *riba*. The Islamic financial system relies on equitable profit/risk-sharing between the provider of capital and the entrepreneur. Islamic law, while rejecting the concept of interest, permits an undetermined rate of return based on profit.

Islamic banking systems have been established in Muslim countries in recent years.

In the case of Iran, after the success of the Revolution in 1979, the process of Islamisation from an interest-based to a non-interest based banking system went through three distinct stages. The first stage was the nationalization⁽¹⁾ of the banking system. The Revolutionary Council carried it out during the summer of 1979. At this Stage commercial and specialized banks merged with each other and allowed continuing their operation under government supervision⁽²⁾. Foreign banks' representative offices were also closed in 1980. However, some of these banks were later re-opened with limited operations. They were then allowed to establish representative offices for advisory services- mainly to benefit importers and other Iranian banks.

Following the nationalization, the Iranian authorities took steps to bring the operations of the banking system into accord with the requirements of Islamic law. In February 1981, certain steps were taken by the Central Bank to eliminate interest from banking operations. Consequently, interest on all asset-side operations, or loans, was replaced by a 4 percent maximum service charge and by a 4-8 percent minimum expected profit rate depending on the kind of activity, for example, 4 percent was charged for housing, farming and manufacturing and 8 percent for services. Interest on the liability side was also replaced by a minimum profit return for savings and time deposits at 7.5-8 percent⁽³⁾. Meanwhile, the authorities, academic scholars and *fuqaha* prepared the first draft of a law to bring the entire operation of the banking system in harmony with the *Shari'ah*.

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- 1- R. K. Ramazani, "The Constitution of Islamic Republic of Iran", in *The Middle East Journal*, Washington, D.C., vol. 34, no. 2, September 1980. Article 44 of the constitutional law of the Islamic Republic of Iran divides the economy into three parts. They are the public, co-operative and private sectors. The public sector includes all large-scale and basic industries, foreign trade, major mineral resources, banking, insurance and the like. These will be publicly administered by the government.
 - 2- Commercial banks include the banks: Melli, Sepah, Saderat, Tejarat, Mellat, and Refah-e Kargaran. The specialised banks are: Banks; Keshavarzi (Agricultural Bank), Maskan (Housing Bank), San'at-va-Ma'dan (Industrial and Mining Bank) and Touse'ah-e Saderat (Export Development Bank).
 - 3- Economic Report and Balance Sheet of Iran, Tehran, The Central Bank of Iran, 1984, p. 452.

The second stage began in 1982 and continued until 1986. At this stage legislation was introduced in order to adopt and implement a clearly conceptualized model of Islamic banking. The law on interest-free banking was passed in August 1983 in Parliament and came into effect on 20th March 1984. It gave a deadline of one year to the banks for converting their deposits according to Islamic principles. It also asked the banks to convert the asset side of their operations, or loans, within three years from the date of approval of the law. The law also specified the types of contracts that must constitute the basis for the asset and liability sides of banking. Several modes of financing for the asset and the liability sides have been provided to facilitate the needs of banking activities⁽¹⁾.

The third and present stage began in 1986. At this stage the banking system was considered as an integral part of the Islamic government. During the past two decades, the reduction in oil revenues plus the political intention behind ceasing to rely on external financial sources meant that the banking system would have to play a role broader than the purely intermediary. Therefore, the banking system was used as an instrument of the government for restructuring the economy.

Characteristics of Bank Liabilities

According to the law on interest-free banking in Iran, liabilities incurred by the banks are basically of two kinds, as follows:

Qard-al-hasanah deposits constitute current and savings deposits. These are similar to those of conventional banks except that they cannot earn any return. Current *qard-al-hasanah* deposits are like demand deposits or current account in conventional banks. Customers are offered chequebooks. They can withdraw their money at any time without notice. This account, from the point of view of customers, is simply a means of making transactions and payments. The other type is the *qard-al-hasanah* savings account. In this account, depositors are offered non-fixed prizes and bonuses in cash or kind. Other incentives for this kind of account are that the banks exempt depositors from the payment of fees or commissions, and give priority in the use of banking facilities. *Qard-al-hasanah* savings deposits are the main sources of *qard-al-hasanah* loans.

1- They are: *Qard-al-hasanah* deposits (both saving deposits and demand deposits) for the liability side. The financing modes; *Mudarabah*, *Musharakah*, *Mark-up*, *Leasing*, *Salaf*, *Ju'alah*, *Muzara'ah*, *Musaqat* and *Qard-al-hasanah* loan are used for the asset side.

Investment deposits, which banks are authorized to acquire are of two kinds: short-term and long-term investment deposits. These deposits differ with respect to time. The minimum time limit for short-term deposits is three months and for long-term deposits, 1, 2, 3, 4 and 5 years. No fixed amount, or rate of return, can be guaranteed to the depositors in advance. In practice, banks pay the profits of depositors provisionally on a quarterly basis with a condition for final adjustment at the end of the financial year. Depositors can withdraw their money from long-term investment deposits before the termination of agreement, if they give notice in advance. In this case, the basis for the calculation of the profit will be the next lowest category of deposits, according to the time when the money has been deposited. Withdrawal from short-term deposits is possible at any time without notice.

Characteristics of Bank Assets

The law forbidding interest in Iran provides various modes of operations for financing the contracts between banks and customers. A brief description of the modes is as follows:

Mudarabah (profit-sharing): banks provide initial capital to the commercial sector, both individuals and traders, who engage in trade and business. By previous agreement the profit from undertakings are divided at the end of the contract.

Musharakah (partnership): the law recognizes two different forms of partnership, namely civil and legal partnership. The first, i.e. civil partnership, is a project-specific partnership for short and medium periods. It is defined as the mixing of capital from a bank with the capital from a partner or partners (in cash or kind) on a joint-ownership basis for the performance of a specific job.

The second form, i.e. legal partnership, is a joint venture for long duration. In this case the bank provides a portion of the total equity of a newly established firm, or purchases part of the shares of existing companies.

Direct investment: banks can undertake to invest directly in any economic activity for a long period. The possibilities for direct investment by banks only exist in the public sector through the creation of companies where legal partnership is not possible. Direct investment cannot be made in projects that lead to the production of luxury commodities. It must consider the priorities of the country's economic development.

Mark-up or deferred payment sale (*murabahah*): banks are authorized to purchase raw materials, machinery, equipment, spare parts, and other needs of enterprises in industry, farming, mining and services and resell them by short-term installments. Prices in these transactions cover cost, plus profit under

specific regulations. Banks have been forbidden to purchase items without the existence of a specific customer.

Purchase with deferred delivery (*salaf* or *salam* purchase): banks can purchase goods from productive enterprises in order to provide them with working capital. Thus, instead of lending money, the bank buys part of the future products at an agreed price which must not exceed the market price of the product at the time of the contract.

Lease-purchase (*ijarah be shart-e tamlik*): in this mode of financing banks buy real property or other assets needed by enterprises or individuals and lease the assets to them. The price of the asset is determined on a cost-plus basis. The ownership of the property is transferred to the lessee at the end of the contract. The period of repayment of the assets cannot exceed their useful life.

Ju'alah (transaction based on commission): this is a project undertaking by the bank (or the customer) to pay a specific sum in return for a service as specified in the contract. *Ju'alah* is one of the short-term facilities which may be granted for the expansion of production, commercial and service activities. The service to be performed and the fee to be charged must be determined at the time of the contract.

Qard-al-hasanah (benevolent loan): this is a non-commercial facility without any expectation of profit. *Qard-al-hasanah* loans are usually made to small producers, farmers, small-scale businesses and the people who are unable to find financial sources for their personal needs. The ability of banks to grant *qard-al-hasanah* loans depends on the *qard-al-hasanah* savings deposits. For instance The amount of *qard-al-hasanah* loans for personal needs is 2000,000RIs⁽¹⁾. The period of repayment for such loans is 2-3 years. The administrative expenses of such loans are borne by borrowers as service charges.

The other financing methods in agricultural activities such as muzara'ah and Masqat are recommended when the above modes cannot be implemented. Debt-purchasing was also a mode of financing in the law for interest-free banking. However, this mode was ordered to have a zero balance in the operations of banks since 1991. This is because the Council of Guardians of the constitutional law declared that this mode of financing as it was in practice can be considered as *ribah*⁽²⁾. A summary of the modes implementing in the asset side of banks regarding the types of economic activities is shown in table 1.

As in conventional banking, the most important activities in the Islamic banking system of Iran, are services. They include clearing cheques, transfers of

1- RI is the abbreviation for the Iranian currency, Rial.

2- 'Ribah' derives from *rayb* which literally means doubt or suspicion. It refers to the income which is similar to *riba* or which raises doubt in the mind about its rectitude.

money, payments, receipts, etc. which banks fulfill free or with a fee, or on commission, depending on the kind of service.

Descriptive Analysis of the Behavior of Lending operations in Iranian Banks

Of the implementation of interest-free banking in Iran, the Bank Markazi (CBI) established the minimum and maximum expected rate of return in various economic sectors, and also each mode of financing for lending activities of banks. These rates were from 4% to 25% depending on the year and the type of contract between banks and clients. Table 2 illustrates the ranges of the expected rates of return from various economic sectors.

Table 2: Sectoral expected rates of return to banks (in percent)

Year/Sector	1984-1989	1990	1991	1992	1993-1994	1995- 2000
Agricultural	4-8	6-9	6-9	9 (minimum)	12-16	13-16
Industry	6-12	11-13	11-13	13 (minimum)	16-18	17-19
Housing	8-12	12-14	12-16	12-16	12-16	15-16
Trade	8-12	17-19	17-19	17-24	18-24	22-25
Services	10-12	17-19	17-19	17-24	18-24	22-25
Export	8(minimum)	-	-	-	18(minimum)	18

Source: the Bank Markazi

Table 2 shows that the lowest expected rate of return was associated with the agricultural sector and the highest rate was related to the trade and service sectors. The low expected rates of return in the agricultural sector were set at 4-8% and the high-expected rates of return were charged in the service sector at 10-12% annually for 1984-1989. Beginning in 1990, these rates were raised to 6-9% in the agricultural sector and 17-19% for the service sector. From 1993 the rates for the trade and service sectors were allowed to be relatively market-determined, reaching a maximum of 25%. The average expected rate of return to banks on their loans was about 14.7% during the period of investigation. These expected rates of return on bank loans were generally less than the inflation rates.

In order to compare the average expected rate of return to banks supplying loans to clients with the average rate of inflation, Table 3 shows the rates of inflation.

Table 3: Rates of inflation in Iran based on the year 1990 (in percent)

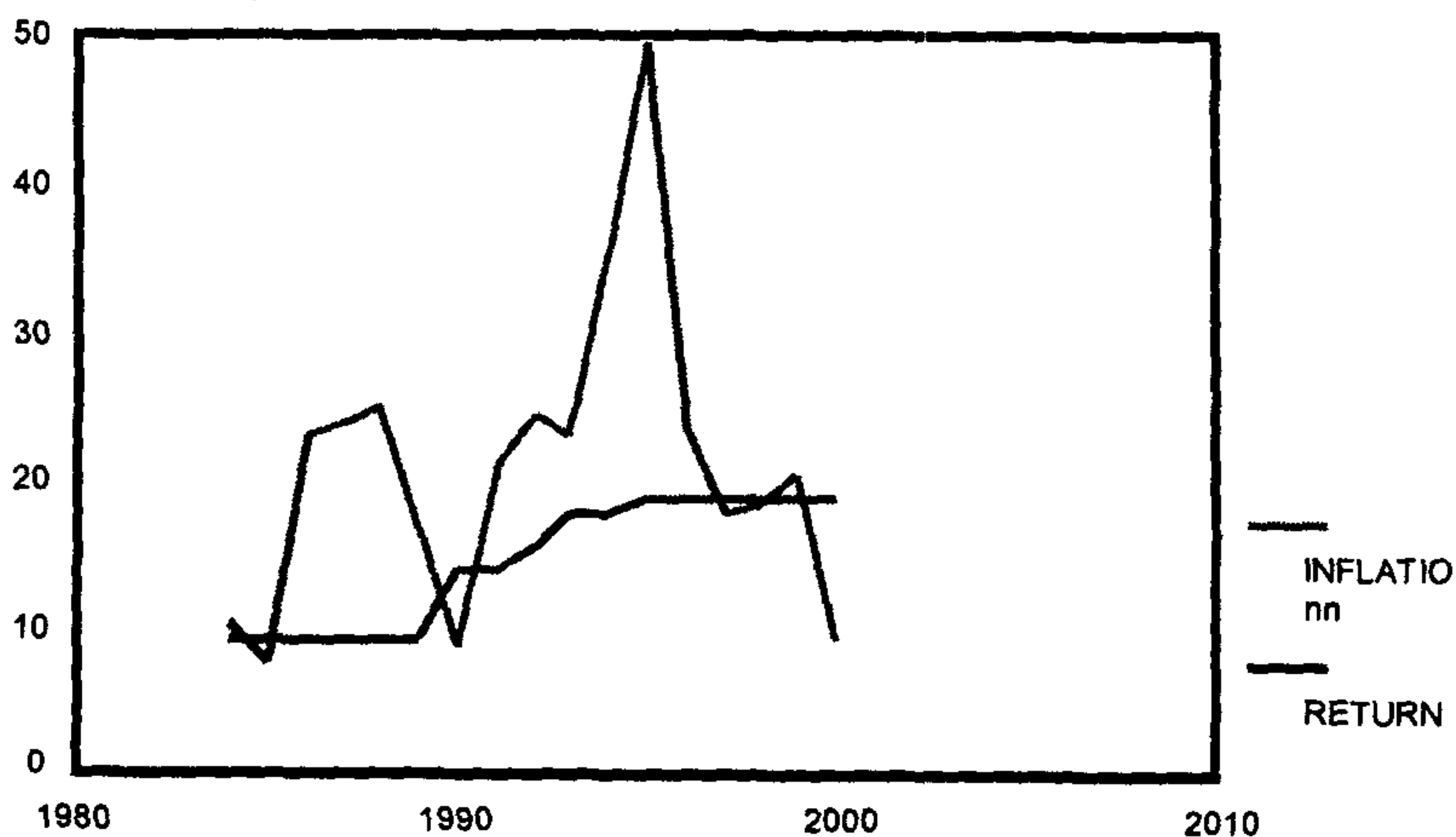
Year	1984	1985	1986	1987	1988	1989	1990	1991	1992
Inf.	10	7.6	23.1	24.2	25.1	16.6	8.6	20.7	24.4

Year	1993	1994	1995	1996	1997	1998	1999	2000
Inf.	22.8	35.2	49.4	23.2	17.3	18.1	20.1	9.3

Source: the Bank Markazi

Table 3 indicates that the average rate of inflation during 1984-2000 was around 20.9% per year. This indicates that borrowers, on average, benefited by approximately 6.2% from bank loans. This means that the market rates of return were not considered in lending operations.

Figure 1: Compare between return & inflation



The expected rates of return on loans have since 1984 been heavily influenced by managing of the government and regulation rather than market information, though the latter could lead to a more appropriate allocation of financial resources. This influence depended on the economic situation of the government resulted from external shocks such as a war with Iraq, sanction and reduction in oil revenues. The government intervention provided a situation whereby borrowers have benefited by obtaining loans from banks, which their rates were lower than the rate of inflation.

The descriptive analysis of rates of return on loans indicates that lending operations of banks were mostly influenced by the government to facilitate the

needs of the economy and not related to the actual price of loans. The authorities were aware of the mentioned problem, but the justification of them were that the long-term social benefits of such loans to support the financial needs of various sectors of the economy.

The Error-correction Model for Analyzing Lending Operations

To analyze the behavior of banks in lending activities, an error-correction model is examined. The model regresses the supply of loans in Iranian banks against the average rate of return, total deposits and the rate of inflation during the period of first decade (1984-1994) of Islamic banking experience in Iran. The reason for consideration of this period is that, according, to Table 2, in 1993 authorities understand that the irrational pressure on banks to offer low cost loans can not be more existed; thus, permitted the banking system to have a relatively market determination of expected rate of return on loans.

In the model which is examined, it is expected that the supply of loans has a positive relationship with rates of return and the size of total deposits in banks, and a negative relationship with the rate of inflation⁽¹⁾. This means that with an increase in the rates of return on loans and the size of deposits, the supply of loans will increase. On the other hand, with an increase in the rate of inflation, loan supply will decrease. In equation (1), these behavioral assumptions require that coefficients β_1 & $\beta_2 > 0$ and $\beta_3 < 0$. The equation for the model used in this study is:

$$SL_t = \beta_0 + \beta_1 R_t + \beta_2 TD_t + \beta_3 I_t + \varepsilon \quad (1)$$

Where dependent variables is:

SL_t = Supply of loans in period t,

Independent variables are:

R_t = Average rate of return on loans in period t,

TD_t = Total deposits in banks in period t,

I_t = Rate of inflation in period t,

β_j = Parameter to be estimated

ε_t = Stationary disturbance term

1 - Carter, H. and Partington, I., Applied Economics in Banking and Finance, Oxford, Oxford University Press, 1979.

The results of the Unit Root test show that all the series, i.e. the supply of loans, average rate of return on loans¹, total deposits and the rate of inflation are integrated of order one, or I(1). Then, the co-integration test using Johnson methodology leads us to the long-run relationship of the chosen vector, which is:

$$SL_t = -5950 + 294.1 R_t + 1.278 TD_t - 88.41 I_t \quad (2)$$

Having found an appropriate co-integrating vector, the short-run dynamics model (ECM) is performed which is compatible with the theory and the certain criteria. This short-run dynamics model can be generated by the following:

$$\Delta SL_t = \beta_0 + \beta_1 \Delta R_t + \beta_2 \Delta TD_t + \beta_3 \Delta I_t + \sum_{i=1}^n \alpha_i \Delta SL_{t-i} + \sum_{i=1}^m \lambda_i \Delta R_{t-i} + \sum_{i=1}^j \gamma_i \Delta TD_{t-i} + \sum_{i=1}^k \eta_i \Delta I_{t-i} + \beta_4 EC(-1) + \varepsilon_t \quad (3)$$

The ECM for the loan supply is estimated, which produces the result in Table 4.

Table 4: Estimation of the supply of loans

Dependent Variable is D(SL _t)			
Variable	Coefficient	t.statistic	Prob.
D(R)	17.32096	0.481935	0.6331
D(TD)	0.228957	4.185879	0.0002
D(I)	33.43566	2.073116	0.0463
D(SL(-1))	0.297459	3.610730	0.0010
D(SL(-4))	0.532199	4.250384	0.0002
D(R(-4))	-70.16207	-2.114172	0.0424
EC(-1)	-0.309308	-3.602068	0.0011
R-squared	0.948358		
Adjusted R-squared	0.938675		
Durbin-Watson stat.	1.911871		
F-statistic	97.94190		
Prob (F-statistic)	0.000000		

D(SL), D(TD), D(R) & D(I) are changes in supply of loans, total deposits, rate of return and of rate of inflation. Table shows that D(R) is not significant

1- In determining the expected rates of return on different financing modes, an average rate between the maximum and minimum expected rates of return is calculated. The outcome is then weighted by the share of various modes of financing in total loans.

The result shows that the sign and probability of the coefficient of the error term are as expected. In other words, the coefficient of the error term EC(-1) is negative and significantly different from zero. The speed of adjustment (the coefficient of the error term) is 0.30. This indicates a relatively rapid adjustment towards long-run equilibrium.

Following the above ECM, another three ECM-causality equations are performed to find the exogeneity or endogeneity of the variables. These equations are implemented and the results are:

Table 5: Summaries of the ECMs for causality findings

DV	ΔSL	ΔR	ΔTD	ΔI	EC(-1)	Adj.R ²	LM
ΔR	1	0	0	0	2.93E-05 (0.43)	0.04	0.096 [0.75]
ΔTD	4	2	1,5,6	0	-1.482 (-4.34)	0.91	1.31 [0.25]
ΔI	0	0	0	1	0.0001 (1.14)	0.58	0.32 [0.57]

In Table 5, the figures in columns 2-5 represent the number of the lag length(s) of the variables at the head of the column which appeared in the ECMs for causality findings⁽¹⁾. The term EC(-1) is the lagged error-correction term. The t-statistics of the EC terms are given in parentheses below them. The sixth column of Table 5 shows the adjusted R-squared. The last column is related to the LM test (which is a χ^2 test with 1 degree of freedom). The figures in the square brackets are the probabilities of the LM tests.

The error-correction term can show the exogeneity or endogeneity of a variable and its long-run causality in terms of the indirect causal relationship between the variables; the causal variable in this framework is described in the literature as being weakly exogenous.² The ECM for the supply of loans shows that the error-correction term has a negative sign and is significantly different from zero. This means that the supply of loans is weakly-caused by the other variables. The subsequent equations which are summarized in the table for causality findings indicate that only the error-correction term for the variable of total deposits is negative and significant. This indicates that total deposits are also weakly-caused by the other variables, i.e. the supply of loans, the rate of

1- For example, for the variable of average rate of return on loans as the dependent variable, apart from the inclusion of the changes in all the other variables, only lag 1 of the variable of the supply of loans is incorporated in the equation.

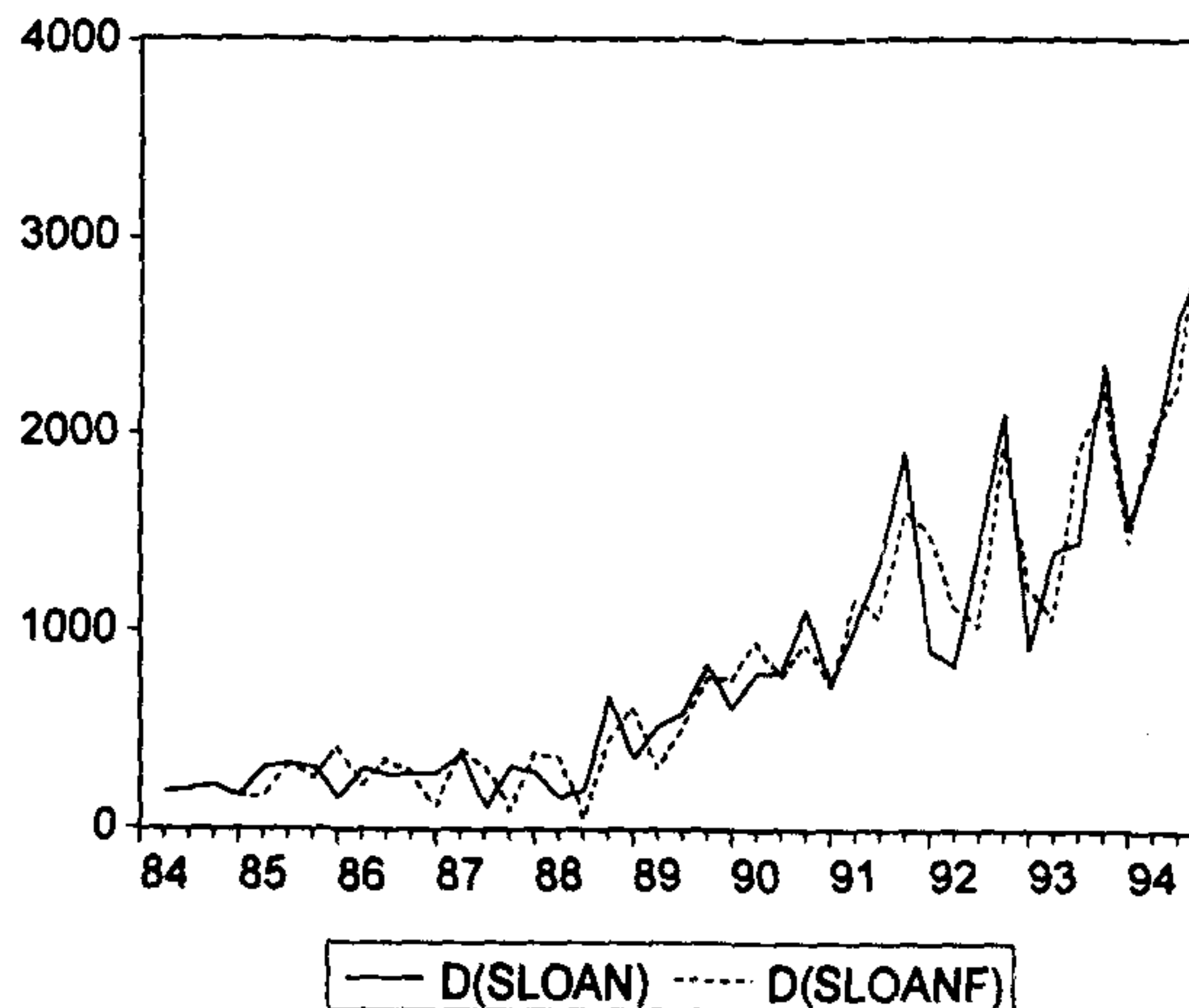
2- Enders, Walter (1995), Applied Econometric Time Series, pp. 315-316.

return and the rate of inflation. These causal relationships indicate that both the supply of loans and total deposits are caused by the variables of the rate of return and the rate of inflation. Thus, the variables of the rate of return and the rate of inflation are weakly exogenous for the supply of loans and also total deposits in the long-run. To put it another way, it is changes in these two variables that generate changes in the levels of the supply of loans and of total deposits. The ECM also passed the diagnostic tests for the residuals. The estimated ECM can be written as:

$$\Delta SL_t = 17.32 \times \Delta R_t + 0.22 \times \Delta TD_t + 33.43 \times \Delta I_t + 0.29 \times \Delta SL_{t-1} + 0.53 \times \Delta SL_{t-4} - 0.70 \times \Delta R_{t-4} - 0.30 \times EC(-1) \quad (4)$$

From the result of the ECM implemented for the supply of loans (Table 4), it can be seen that the changes in the average rate of return on loans $D(R)$ is not significant. This means that the supply of loans had no relationship to the rate of return in the period considered. The other explanatory variables, i.e. the changes in total deposits $D(TD)$, the changes in the rate of inflation $D(I)$, and the changes in the time lags of variables, are significant. The sign of the variable of changes in the inflation rate $D(I)$ is also positive which is opposed to theory of fund supply in an inflationary situation.

Figure 2: Actual and fitted values of the changes in the supply of loans



The general conclusion is; given the financial needs of the economy in that period, the constraints imposed by the government on banks to grant low-cost loans and the inflationary situation of the Iranian economy, it is not unexpected

that the rate of return on loans is insignificant, and that there is a positive relationship between the changes in the supply of loans and the changes in the rate of inflation in the result of the ECM.

Concluding Remarks

The study, both descriptive and modeling analyses, indicates that supply of loans was largely influenced by the financial managing and intervention of the government rather than the return to the banking system. The model which connects the supply of loans to the rates of return, total deposits and rate of inflation shows that the changes in the supply of loans are not related to the changes in the rate of return on loans. The evidence on indirect causality observed from the ECMs shows that weakly exogenous variables are those of the rate of return and the rate of inflation for both the supply of loans and of total deposits. This indicates that changes in the rate of return and the rate of inflation generate changes in the level of loans and of total deposits. Moreover, despite that banks were reluctant to offer loans in an inflationary situation; the positive sign of the variable of inflation in the ECM denotes that the supply of loans was affected by the financial needs of the economy.

It can be said that a rational independence of the banking system from the government in terms of market determination of rate of return can influence to the payment of a suitable return to depositors, and thus capital aggregation for developing the economy. A further step for the improvement of banks could be to allow the establishment of private financial institutions - although significant steps have taken for establishment of a few private banks in recent years. Development of the existing stock market can also provide a main source of capital, both internal and external, to industry and the government. These lead to the improvement of banking services and also helping market forces to be reflected in loans and deposits.

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