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DEPOSIT INSURANCE, FINANCIAL LIBERALIZATION, AND THE PROBLEM OF MORAL HAZARD

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Introduction

Financial liberalization is an essential component of the economic adjustment programmes being implemented in Caribbean States. Given the positive association between financial development - widening and deepening of financial structures, innovative financial instruments and institutions, and increased efficiency in the financial intermediation process - and economic development, countries anticipate clear social advantages of financial liberalization. However the greater dynamism engendered by liberalization also brings greater risk of financial failure, depositor distress and general systemic threat. While more rigorous supervision and tighter regulations may offer a certain amount of protection to the system, these may be too costly, too inadequate or too rigid. In such a context, deposit insurance becomes an attractive option when the "lender of last resort" and "regulator" roles of the Central Bank fail to adequately protect depositors and the system.

This paper seeks to examine the possibilities offered by deposit insurance schemes to improve efficiency and confidence in the financial system and in particular to protect depositors in a context of widespread financial liberalization. Section I outlines the conceptual and policy framework with respect to deposit insurance; Section II highlights some of the experiences of countries with deposit insurance with particular reference to the Deposit Insurance Corporation in Trinidad and Tobago. Section III discusses the economic significance of deposit insurance in terms of morally hazardous behaviour, cost effective financial mechanisms and distortions of the market.

I. CONCEPTUAL AND POLICY FRAMEWORK

Deposit insurance is most appealing when systemic risk is greatest i.e. in times of economic recession or widespread financial liberalization. In both periods, business failures tend to be quite high and weak or poorly managed financial institutions are the first to collapse with consequent losses to depositors, creditors and shareholders. In the case of financial liberalization, the overall goal is to make financial markets more contestable by removing distortions and restrictions (deregulation) thus creating a more competitive environment, nationally and internationally. Some of the key elements in the liberalization package are:-

1. removal of administered interest rate restrictions;
2. facilitation of mergers, divestiture, expansion and new institution;
3. removal of excessive market segmentation regulations eg. highly differentiated reserve and liquid asset ratios;
4. abolition of selective credit policies which usually establish interest rates below the market rate and which offer preferential refinancing facilities;
5. limitation of privileged access to the banking system by State enterprises and the State;
6. removal of limitation on the range of instruments and participants in the money market;
7. abolition of exchange controls and restrictions on foreign currency accounts, etc.;
8. limitation on the State's involvement in the operations of Central Bank;
9. greater utilization of market based auctions for Government and other financial paper;
10. development of more prudential regulations.

The pace and scope of financial liberalization hasten the demise of marginal and uncompetitive financial institutions. As lender of last resort and protector of the integrity of the system, the Central Bank has three (3) main options to deal with threatened institutions:

(a) rescue and save through loans and tightened regulations;

(b) restructure and sell (transfer) to another institution;

(c) let them collapse

Each option has costs (monetary and opportunity) and benefits which must be analysed to establish cost effectiveness and subsequent action. In the case of collapse, depositors and the system as a whole could face heavy losses. Deposit, insurance can play an economically significant role, both before and after the collapse of an insolvent institution.

Deposit insurance guarantees the nominal value and liquidity of deposits (up to a certain size) so that depositors are protected from total loss. This should encourage savings, promote growth of financial institutions, contribute to financial stability and provide a formal and consistent mechanism to resolve institutional failures. Compared to implicit deposit protection schemes eg. cash payments to depositors or financial aid to ailing banks/financial institutions etc., deposit insurance offers the following advantages:

- it produces faster, smoother, more predictable resolutions since the rules of the game are predetermined. Implicit systems are more ad hoc and discretionary.
- small savers are better protected with coverage limits up to a certain figure.
- some costs of protection are shifted to banks through the contributory and premium arrangements.

On the other hand, deposit insurance can be as much as problem as a solution. There are two (2) aspects to consider in this:

(1) it encourages moral hazard or post contractual opportunism where insurance cover becomes a perverse incentive for more risky behaviour - more risky investments by the financial institution and more risky deposit behaviour by savers without scrutiny of the institution's operations - so that the full economic consequences of one's actions are not internalised.

(2) it can be more costly since the insurer is legally obliged to pay up all depositors up to the coverage limit. There is little discretion allowed on the timing and form of the payments even if financial stability may be at stake.

The overall efficiency of the deposit insurance scheme depends on its design and management.

(i) should the system be public, private or mixed - private systems eg. Germany use market-based assessment rates to arrive at an actuarially fair premium for each institution. This avoids the problem of adverse selection where institutions with higher risk portfolios drive up the premium so that it becomes unattractive for potential participant institutions with low risk. Public systems eg. U.S., Canada, Trinidad and Tobago normally have flat premium rates without discrimination and are publicly managed/controlled. Table 1 shows how institutions can use the public deposit insurance scheme to their advantage. The table assumes depositors get back their initial outlay (or some fixed interest payment could be built in). Owners reap the benefits since each dollar of expected loss imposed on the Insurance Corporations shows up as another dollar of expected profit to owners.

(ii) Voluntary or compulsory membership - voluntary membership eg. Germany, Italy, Belgium is unstable, may not attract enough institutions for the insurance scheme to be viable and could lead to opportunism i.e. periodic large scale transfers of deposits from members to non-members in good

times and the reverse in bad times. On the other hand compulsory membership may be viewed as interfering and undermining the allocative decisions of firms based on market criteria and optimal utility behaviour.

(iii) How much protection (coverage) to offer - Schemes offering 100% coverage of deposits increase the risk of moral hazard and imprudent behaviour eg. Norway, Yugoslavia, Mexico. With limited coverage, eg. United States, United Kingdom, Trinidad and Tobago, there is greater protection to small depositors; there is less likelihood of bank runs/panic and large depositors are forced to be more circumspect. However, if the objective is to prevent bank runs, large depositors with limited coverage are usually more knowledgeable of the affairs of the bank and may transfer their depositors early so precipitate a bank run. This is dangerous especially if the run results in capital flight rather than in-country transfers. The United Kingdom system also has a coinsurance component so that a depositor is only insured up to 75% of the maximum cover.

Another critical concern, especially in view of the removal of exchange controls and the establishment of foreign accounts facilities, relates to the coverage of foreign (exchange) accounts. These are not covered in several countries eg. United Kingdom, Trinidad and Tobago, Canada. However with greater financial liberalization and attempts to make financial institutions internationally competitive, there may well be an increased demand for more extensive coverage to include foreign accounts.

(iv) Funding - the amount of funds in the Scheme determines its ability to protect savers and the system. Most schemes rely on initial and special contributions from members as well as annual premium payments. Sometimes, like in Trinidad and Tobago contributions are matched by allocations from the Central Bank. Most schemes are 'managed' funds i.e. they can borrow within certain limits to meet obligations, they invest locally and abroad and they can explore other mechanisms to assist ailing institutions without having to rely on the closing down option in every instance.

In the final analysis, careful design and prudent management of the deposit insurance operations can be both part of the solution and the problem in times of financial distress. It removes

market discipline as the main determinant of the behaviour of savers and financial institutions. On the other hand, it contributes to financial stability when wayward market tendencies, asymmetric information and uncertainty produce negative outcomes whose effects, through externalities, are contagious.

II. DEPOSIT INSURANCE IN PRACTICE: THE DEPOSIT INSURANCE CORPORATION IN TRINIDAD AND TOBAGO

Table 2 provides some comparative data on deposit insurance in six (6) countries - Trinidad and Tobago, Mexico, Nigeria, United States, United Kingdom and Canada. Most schemes were established during times of intense difficulties eg. 1933 in the U.S. 1986 in Trinidad and Tobago, 1979 in the United Kingdom. In the 1980's, the savings and loans debacle as well as the collapse of more than 250 banks in the United States have served to highlight the economic significance of deposit insurance as part of the regulatory, supervisory and protective framework in the financial systems. It also highlights the perverse incentives generated by the deposit insurance scheme, the weakness of the supervisory mechanisms to detect the large amount of fraud and mismanagement, bureaucratic gridlock and perhaps some regulator capture and political timidity. The extensive efforts to bail out the S & L's (more than US$300 billion of taxpayers funds will have to be found) through the Financial Institutions Reform, Recovery and Enforcement Act 1989, and the establishment of two new corporations; the Resolution Funding Corporation and the Resolution Trust Corporation to raise the required money and to manage the liquidations respectively provide important lessons of macro- and micro-management in respect of financial distress.

The D.I.C. was established in 1986 (the Central Bank and Financial Institutions (Non-banking) (Amendment) Act of 1986) in response to the failure of several financial institutions. Economic decline since 1982 led to the collapse of several businesses as well as several financial institutions whose loan portfolios were concentrated in these businesses and sensitive sectors. In its mission statement, the D.I.C. aims to:

> "promote and maintain stability, safety, integrity and public confidence in the financial system of Trinidad and Tobago by providing protection for depositors in the nation's deposit taking institutions, by the prudent and profitable management of the Deposit Insurance Fund, by the efficient liquidation of the assets of failed institutions and by ensuring safe banking and financial practices and the continued viability of the member institutions".

Insurance protection is offered up to a maximum of TT$50,000 per depositor. Member institutions pay an initial contribution of 0.4% of their average deposit liabilities and annual premium of 0.2% of these liabilities. Special contributions may also be required from time to time. Contributions are matched by funds from the Central Bank. To be eligible a depositor must submit a claim within one (1) year from the date of closure of the institution. Deposits over $50,000 may receive additional cover on a pro-rata basis depending on the success of the liquidation efforts of the D.I.C.

Table 3 provides data on the operations of the D.I.C. since its inception in 1986. In its first year the D.I.C. was faced with the closure of 4 institutions with total deposit liabilities of TT$350m. and 13,800 depositors. To settle the payments (up to 60% of the deposit liabilities required insurance payments), a loan of TT$91.8m was secured from the Central Bank. This is still being repaid. Over the entire period 1986-92, seven (7) institutions have been closed necessitating payments of over TT$213m to more than 14,000 depositors. The D.I.C. has made commendable strides in reducing the deficiency in its insurance operations (Re: repayment of the Central Bank loan) so that in 1991 its debt was TT$9.9m.

As liquidator, the D.I.C. also seeks to recover and settle claims relating to the company. As such, while its primary role is to provide protection to small depositors (up to $50,000) it also

has responsibilities to creditors, shareholders as well as other claimants. It is also a self-financing institution so that administrative costs in its various activities must be covered. As manager of the Insurance Fund, the D.I.C. must consider several options before providing insurance payments in dealing with ailing financial institutions. This function relies heavily on its close link and symbiotic relation with the Central Bank.

Since 1986, the financial system seems more stable - depositors are more conscious of the presence of the D.I.C., and finance institutions are more circumspect in their loan portfolio management. It is debatable whether this stability is due to heightened vigilance and pre-emptive supervision, tougher legislation on prudential criteria and liability of managers or the restoration of public confidence engendered by the successful operation of the D.I.C.

III. OBSERVATIONS AND DISCUSSION

There are several aspects of asymmetric information, competitive financial markets and regulatory efficiency which are highlighted by the implementation of a deposit insurance scheme.

(i) deposit insurance is not a first option when considering how to deal with a distressed financial institution. If chronic illiquidity is present, this is not the same as insolvency. Other options must be examined which stress more forbearance and rescue e.g. restructuring along with injections of new funds from the Central Bank; purchase, assumption, and sale of the ailing institution and arranging mergers. Each option must be carefully analysed for internal cost effectiveness and for the externality effects on the rest of the system. For example, the rescue operation of the Workers Bank and Trust Company Trinidad and Tobago in 1989 provided an ideal opportunity to assess the cost of closing it down (deposit insurance payments and costs to the society) versus saving it.

(ii) timely closure of ailing institutions can reduce the cost to the insurer, discourage excessive risk taking and retain confidence in the "rules of the game". However, there is usually a costly lag between analysis and action. In addition optimal closure in an economic sense should take place when the expected return on assets are less than that on alternative uses. Legally, insolvency occurs when the historical book value of assets is less than that of liabilities. Economic insolvency however requires the market values of assets to fall below that of liabilities. As such, compatibility between the economic and accounting/legal definitions can influence the timeliness of closure decisions with consequent effects on the deposit insurance resources.

(iii) the determination of a fair premium has to move away from the single, non-discriminatory rate to one which is actuarially fair and reflects the risk-behaviour of each institution. The US is moving towards a risk-based premium by 1994 using 3 capital ratio categories and 3 supervisory evaluation categories. This gives 9 risk assessment classifications. Using a clearly defined points system, ratings will range from 25 for healthy and well capitalised to 31 for unhealthy.

While there are some merits in using a pooled flat rate, adverse selection may mean that institutions are paying higher or lower rates than warranted by their risk behaviour.

(iv) membership in the scheme is largely restricted to deposit-taking institutions. The impact of insurance companies, credit unions and investment companies on the financial market is sufficient to warrant consideration of including them in the scheme. If the objective is to protect small depositors and the integrity of the financial system, then excluding them may well involve more legal and bureaucratic rather than economic considerations.

(v) coverage of foreign currency accounts is critical in a period where international competitiveness is the driving force behind enhanced development of the financial sector. This is a factor which is more relevant to Developing Countries which are seeking to attract acounts in foreign currency from nationals and non-nationals.

(vi) for the ordinary depositor, the search and transaction costs of finding an appropriate financial institution which maximises the welfare of the depositor can be quite high. If the most critical factor in determining the stability of the system is rational choice of the depositor based on as full information as possible, there is a key role for the insurance scheme to make such information possible. As such, deposit guarantees based on pooled or average risk-rating i.e. flat rate premium as a percentage of deposit liabilities are not enough. The deposit insurance scheme has enough information for discriminatory rating of institutions and this information can assist in the decision making processes of individual depositors.

(vii) more rigourous scrutiny and regulations may lead to early identification of problem institutions and timely action. But there can also be a substantial cost attached. Restrictions on investment and competition may impose efficiency losses in terms of stifled innovations and aborted reallocation of resources in response to shifts in the profitability of financial services. The emphasis should be on prudential criteria rather than detailed regulations of the loan portfolio behaviour of financial institutions. Additionally, since a large percentage of failed institutions are due to fraud, insider dealings, and mismanagement, consideration should be given to limiting ownership to certain values and to greater legal accountability of managers.

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TABLE 1.
HYPOTHETICAL DATA ON SAFE AND RISKY INVESTMENT ($)
(RISKY INVESTMENT FIGURES IN PARENTHESES)

Indicator	Depositors	Owners	Deposit Insurance Company	Total
Initial Quality	97 (97)	3 (3)	0 (0)	100 (100)
High Return Gross	97 (97)	13 (28)	0 (0)	110 (125)
Low Return Gross	97 (97)	3 (0)	0 (-32)	100 (65)
Edpected Return Gross	97 (97)	8 (14)	0 (-16)	105 (95)
Expected Return Net	90 (90)	5 (11)	0 (-16)	5 (-5)

TABLE 2
COMPARATIVE DATA ON DEPOSIT INSURANCE IN SELECTED COUNTRIES

Indicator	Trinidad and Tobago	Mexico	Nigeria	U.S.	U.K.	Canada
1. Year Established	1986	1986	1988	1933	1979	1967
2. Public/Private	Public	Public	Public	Public	Joint	Public
3. Mandatory/ Voluntary	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory	Mandatory
4. Local Currency Only	Yes	No	Yes	No	Yes	Yes
5. Coverage per Depositor	TT$50,000	No Limits	N 50,000	US$100,000	£20,000*	CDS60,000
6. Managed Fund	Yes	Yes	Yes	Yes	Yes	Yes
7. Flat Rate or Risk-based Premium	Flat Rate	Flat Rate	Flat Rate	Risk Based	Contribu- tions	Flat Rate
8. % of all Deposits or % of Insured	% of all	% of In- sured	% of all	% of all	% of all	% of Ins.
9. Annual Premium Rate	0.2%	0.3%	0.91%	0.23-0.31%	£10,000- 30,000	0.13%
10. Target Fund Size	None	None	None	1.25% of Insured	£5-6m	None
11. Additional Contribution/ levy permitted	Yes	Yes	Yes	Yes	Yes	No

*25% co-insurance is fixed. So maximum payable to any one depositor is £15,000.

Source: Canada Deposit Insurance Corporation:- Deposit Insurance Survey Report, 1993.

TABLE 3

SELECTED DATA ON THE OPERATIONS OF THE D.I.C., 1986/87-92

Indicator	1986/-87	1988	1989	1990	1991	1992
A. Number of Member Institutions	27	26	26	27	25	25
- Commercial Banks	8	8	8	8	8	8
- Finance Houses	8	7	8	8	7	7
- Trust Companies	6	6	5	5	5	5
- Mortgage Companies	2	2	2	2	-	-
- Merchant Banks	3	3	3	4	5	5
B. Number of Closed Inst.	4	1	-	-	-	-
C. Balance Sheet (TT$mn)	7.0	20.3	40.0	59.8	69.3	n.a.
- Total Assets	61.0	31.6	43.0	67.5	79.5	104
- Current Liabilities	54.0	11.3	3.0	7.7	10.2	n.a.
D. Insurance Operations						
- Premium income/ contributions	94.6	19.4	19.3	19.2	20.4	21.8
- Net Claims Provision	179.3	8.8	0.0	0.0	4.0	n.a.
- Deficiency on Ins.Operations	84.9	71.5	52.3	26.1	9.9	n.a.
E. Administrative Operations (TT$mn)	(0.1)	(0.8)	(0.2)	6.4	0.9	n.a.
- Income	1.4	0.7	1.4	8.1	5.5	n.a.
- Expenses	1.5	1.5	1.6	1.7	4.6	n.a.
F. Cumulative number of Depositors receiving payments	11,822	14,000	14,000	14000	14,100	n.a.

Source: Annual Reports of D.I.C.