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CENTRAL BANK POLICIES AND THE BEHAVIOR OF THE MONEY MARKET

CENTRAL BANK POLICIES AND THE BEHAVIOR OF THE MONEY MARKET

The Case of the Philippines

by

Josef T. Yap
Mario B. Lamberte
Teodoro S. Untalan
Ma. Socorro V. Zingapan*

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*Respectively, Research Fellow, Vice-President, and Research Associates, Philippine Institute for Development Studies (PIDS).

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EXECUTIVE SUMMARY

An overview of the present structure of the Philippine financial system is given in Figure 2.1. The development of the Philippine financial system can be divided into three phases. During the first phase, which covered the period 1956-73, ceilings on deposit and lending rates were imposed while rediscounted loans were provided at concessional rates. This state of affairs did not encourage savings mobilization and this paved the way for the emergence of new financial assets and also new financial institutions outside the purview of the Central Bank regulations. This signalled the beginning of the money market. Because of the attractive yields these new instruments offered, resources were drawn away from traditional deposits while at the same time increasing the level of savings. Moreover, the existence of the money market instruments mitigated the control of the Central Bank over the flow of funds into the real sector.

Instead of liberalizing interest rates of the traditional assets, the authorities responded to the rise in money market assets and intermediaries by a) placing the non-bank financial institutions engaged in short-term lending under its authority; b) enforcing specialization among various types of financial entities; and c) imposing interest rate ceilings and taxes on money market transactions. This set of regulations ushered in the next phase in the development of the Philippine financial system which covered the period 1974-1981.

The regulations that were imposed during the second phase were an attempt to reverse the flow of funds from short term instruments to long-term financial assets. This effort, however, was undermined by two factors: first, the financial system was still segmented and this was underscored by the enforced specialization among the financial institutions; second, there existed a general state of repression which resulted in a mismatch between assets and liabilities in terms of maturity.

In 1981 a financial liberalization program was initiated which featured the removal of interest rate ceilings and the introduction of Universal Banking (actually a year earlier). The progress of this liberalization scheme was affected by two crises: one in 1981 when a businessman fled the country leaving billions of pesos in debt; and during 1983-85 when the country was plunged into a Balance-of-Payments crisis. The 1981 crisis served to highlight the reactive nature of the Central Bank's supervisory function. During the more recent period the Philippine financial

system has experienced more stability although it is widely perceived that it functions in an oligopolistic manner. This is due primarily to the restrictive policies the Central Bank imposed on bank branching and entry.

With specific regard to the money market, we have come up with the following findings:

1. Deposit substitutes were the most popular instrument up till about 1984. These instruments served to increase commercial banks resources as traditional deposits were subject to interest rate ceilings. The popularity of deposit substitutes declined later on as time deposits offered close to market rates and also because government securities carried more attractive rates. In addition, the desire of the commercial banks to avoid the high reserve requirement ratios prompted them to make long-term time deposits, which carried a much lower reserve requirement ratio (5 percent vs. 20 percent), more attractive. This came in the form of informal agreements wherein the client could pre-terminate his time deposit without incurring penalties.

As a percentage of total domestic liquidity, deposit substitutes reached a high of 33 percent in 1975; as of 1988 this figure was a mere 1.3 percent.

2. Interbank call loans have risen significantly during three periods, in 1979, shortly after the 1981 liberalization program, and shortly after the BOP crisis began in 1983. In the first case there was a liquidity crunch caused by the failure of a major bank. The second jump is due to a similar liquidity squeeze caused by the Dewey Dee crisis wherein the loss of confidence caused depositors to preterminate their deposits and transfer them to safer banks. The growth of the volume of interbank call loans also experienced an upward movement shortly after the BOP crisis as a result of the increase in the reserve requirement ratio. During the past several years the interbank call loan market has also become a semi-permanent source of investible funds for banks.

3. The volume of government securities has risen rapidly after the advent of the BOP crisis. This is directly related to the general thrust of the government's macroeconomic policy which has been described as elitist in the paper. For example, the tax policy and exchange rate policy have been conducted in such a way as to benefit the upper income segment of society.

4. The financial system has displayed a great deal of innovativeness which can be traced to the "regulation-avoiding" attitude of bankers. It is suspected, however, that the costs of avoiding Central Bank regulations have

outweighed the benefits. Recently, this behavior has somewhat diminished as a result of 1981 crisis and also due to the prevailing high interest rates.

5. Based on statistical tests and also some existing practices, we chose the 91-day Treasury bill rate as a reference rate. Using this result in our data analysis, we found that there has been a trade-off between efficiency and stability.

As for the oligopolistic structure of the financial system, a holistic analysis of the problem would reveal that it is but a reflection of the general state of Philippine society which is characterized by a highly skewed income distribution. Since the development of the real sector has been beset by "special privileges" it is no surprise that a similar condition should filter into the financial system. Any solution to the problem should be made part and parcel of a more comprehensive liberalization program.

Table of Contents

Title	Page
1.0 INTRODUCTION AND OVERVIEW	1
2.0 THE PHILIPPINE FINANCIAL SYSTEM	5
2.1 History and Current Developments	5
2.2 Policy Framework, 1956-Present	15
2.2.1 Introduction	15
2.2.2 Period of Rigid Financial Repression: 1956-1973	21
2.2.3 Period of Repression in the Money Markets: 1974-1980	27
2.2.4 Period of Liberalization: 1981-Present	28
3.0 MONEY MARKET IN THE PHILIPPINES	32
3.1 The Philippine Money Market: Its Development	32
3.2 A Survey of the Philippine Money Market	37
3.2.1 Interbank Call Loans	37
3.2.2 Deposit Substitutes	43
3.2.3 Commercial Paper	51
3.2.4 Government Securities	64
3.3 The Foreign Exchange Market	72
3.3 Key Events	77
4.0 EFFECT OF POLICY ON PERFORMANCE OF THE MONEY MARKET	79
4.1 Performance Measures	79
4.2 Data Analysis	82
4.2.1 The Effect of Policy	82
4.2.2 Analysis of Key Events	101
4.3 Some Broad Conclusions	108
5.0 REFERENCES	109
APPENDIX 1	111
APPENDIX 2	113
APPENDIX 3	114

1.0 Introduction and Overview

In this study we attempt to relate policies of the Central Bank to the behavior of the money market. The money market is defined to be the short-term financial market covering instruments that are close substitutes for money. By convention only instruments with a maturity of less than sixty days are analyzed although we present data for instruments with longer maturities.

There are four major instruments in the money market which are analyzed in this study, namely: interbank call loans (IBCL), deposit substitutes, commercial papers and government securities. Deposit substitutes include promissory notes, repurchase agreements (government and private), and certificates of assignment. The relative importance of these instruments in the money market have changed during the period under study: 1975 to 1988. The IBCLs have become increasingly important as their use by financial institutions has evolved from reserve adjustment to general liability management similar to that being performed by deposit substitutes. Treasury bills and other government instruments have also been growing in importance since 1983 as government has been putting increasing reliance on domestic borrowings to finance its deficit and to stave off private accumulation of substitute foreign assets. Corollarily, private securities, which generally carried lower interest rates than T-bills in the mid-1980s

despite being more risky, have been declining in relative importance.

The government is involved in the money market as a regulatory authority and since 1983, as a major borrower. Government through the Central Bank started to heavily regulate the market in 1974. Regulation was in the form of putting a cap on the interest rates of IBCLs and deposit substitutes, imposition of a transactions tax, prescription of minimum placement, and placing under its regulatory purview the non-bank investment institutions. The objectives of government were to instill discipline in the market which was left unregulated since its inception in the mid-60s, and to mitigate the flow of surplus funds in short-term assets which was considered as detrimental to the performance of the real sector. The period of heavy regulation lasted up to 1981, at which time liberalization policies were introduced. The liberalization period which still continues up to the present features a mix of free market and administered market policies. The former is being implemented by the lifting of all interest rate ceilings, the reduction in minimum placements and the promotion of universal banking. Administered policies are demonstrated via the imposition of higher reserve requirements and other forms of taxation. Meanwhile, government's involvement as a major borrower in the market also started after 1981 due to the growing instability of its balance-of-payments position. Detailed discussions of

these policies affecting the money market, as well as the market's development are tackled in Section 3.

The effect of the above-mentioned policy changes on the performance of the money market are analyzed in Section 4, with focus on the efficiency and stability of the market. Originally, regression analysis of money market variables against the suggested typology of Central Bank policies was performed.[1] This, however, yielded unsatisfactory results. Instead, this paper resorted to the qualitative analysis of three measures of operating efficiency, namely: (a) the spread between the price of the funds in the market under study and the reference rate; (b) the liquidity of the market or the range of prices in the market; and (c) concentration of financial institutions in the market. The last two are indirect measures of efficiency, while (b) was also used as an indicator of stability. The reference rate used for (a), the 91-day Treasury-bill rate, was identified through the unit root test.[2] This test, which was also applied to other alternative rates, was used to determine whether the behavior of a particular market follows a random walk.

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[1]Harvard Program on International Financial Systems, "Methodology Paper for Regional Research Project: Guidelines for Study of Money Markets in Asia." Harvard Institute for International Development (May 1988).

[2]The unit root test followed Dickey and Fuller (1981).

Based on the observation of the above-mentioned performance measures, it can be generally concluded that regulations prior to 1981 produced a less efficient but more stable market. During the liberalization period, the behavior of the money markets was significantly affected by the Dewey Dee crisis in 1981, and the balance-of-payments crisis in 1983 which led to the 1984-1985 recession. Since data for the money market for 1981 was not provided by the Central Bank, the assessment of key events focuses only the effect of the latter crisis. The Central Bank's main policy instruments during the crisis were the introduction of the controversial "Jobo" bills which carried artificially high interest rates to arrest capital outflows. Stability in the monetary system was achieved but at the expense of operating efficiency. Transactions in the money market instruments, excluding Treasury bills and interbank call loans, declined rapidly during the period 1983-85 and have since not recovered. The paper, thus, clearly points out the trade-off between operating efficiency, on one hand, and stability on the other.

2. The Philippine Financial System

2.1 History and current developments

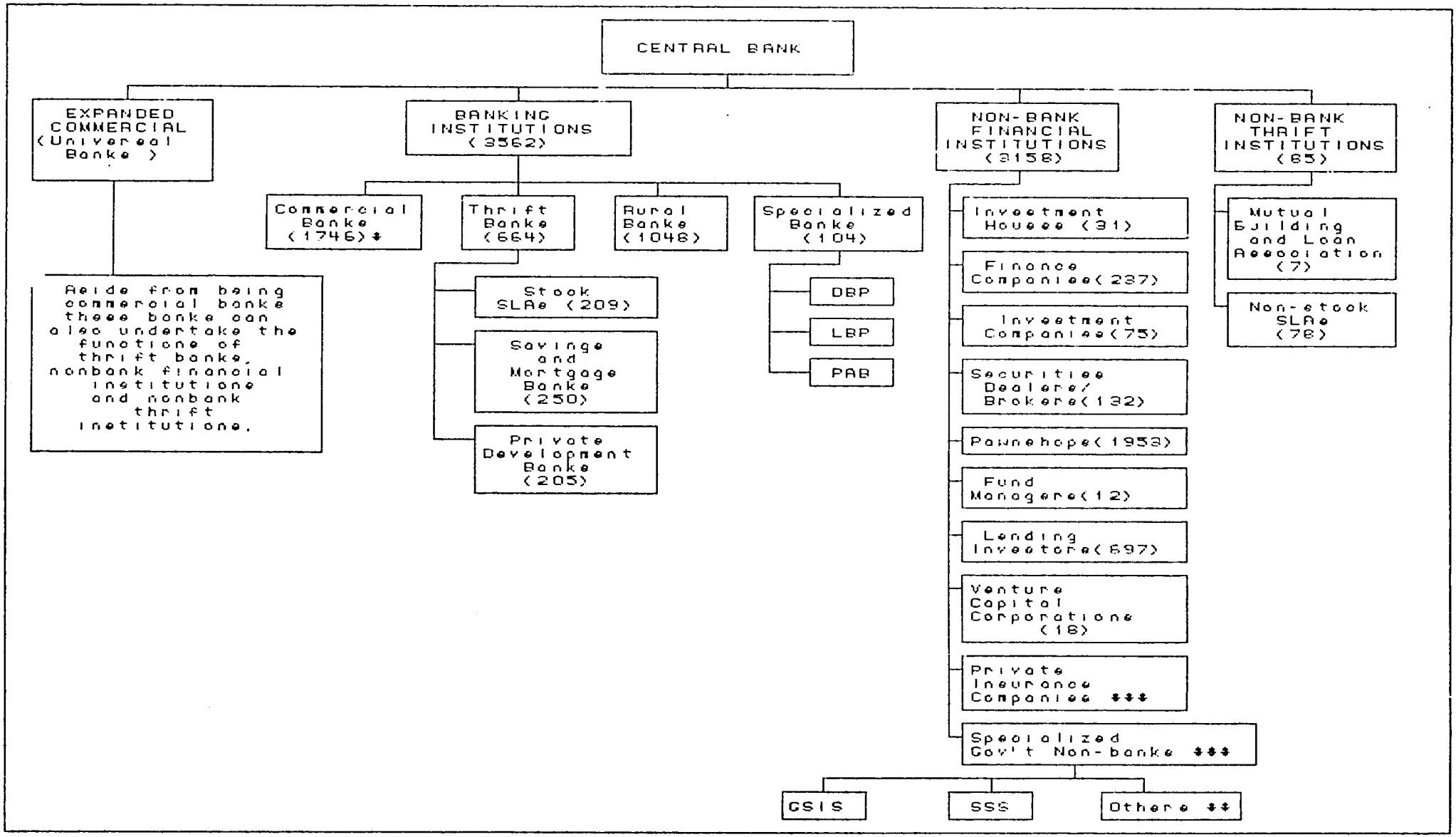
The Philippine financial system has grown rapidly in terms of size and variety, albeit at uneven rates, since the establishment of the Central Bank in 1949. Prior to this, the system consisted of only seven commercial banks, three savings banks, a government-owned agricultural bank, seven branches of foreign banks and a small stock exchange. The banking sector has since then evolved into a sophisticated system while various non-bank financial institutions (NBFIs) such as financing companies and investment houses have appeared. (Figure 2.1 presents the existing structure of the financial system and the number of financial agencies, as of 1988. Tables 2.1a and 2.1b show the total resources of the institutions and their relative importance from 1970 to 1988, respectively).

The banking sector had total assets of P360 billion as of year-end 1988, representing a 63 percent real growth over its resources in 1970. The sector consists of commercial banks (KBs), thrift banks, rural banks and specialized government banks. Most of the banking offices are concentrated in the National Capital Region (Metro Manila) as bank density ratio in this area (9.9) is much higher than the next region of importance (2.3).[3]

[3]Bank density ratio: ratio of banking offices to total cities and municipalities as of December 31, 1988.

Figure 2.1

THE PHILIPPINE FINANCIAL SYSTEM



* Include offices of the nine universal banks
** National Development Company, National Home Mortgage Finance, and Phivides.
Figures in parentheses represent the number of offices as of December 31, 1988
*** Insurance companies (gov't. and private) are supervised by the Insurance Commission; NDC, etc. are attached to other agencies.
Source of data: Philippine Financial Fact Book, 1988. Source of diagram: Sicat (1983).

Table 2.1a

Assets of the Financial System
As of December 31, 1970, 1975, 1980-1988
(billion pesos)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
Central Bank	6.0	26.0	65.4	71.6	91.7	130.4	206.0	251.6	313.9	325.2	349.9
Banking System	18.8	69.9	193.3	226.6	276.9	330.8	408.1	394.3	289.0	313.2	360.1
Commercial banks	14.1	53.2	144.1	168.9	205.3	248.2	303.5	285.7	236.5	259.8	299.3
Private	8.3	35.1	84.0	100.5	118.0	134.7	167.2	165.7	164.4	179.4	224.6
Government	4.6	18.1	41.4	47.6	60.7	73.1	89.5	76.1	35.0	31.3	38.8
Foreign	1.2	-	18.7	20.8	26.6	40.4	46.8	43.9	37.1	49.1	35.9
Thrift banks	0.9	2.1	10.6	9.7	12.6	16.1	15.0	15.1	17.6	19.5	24.9
Savings & mortgage banks	0.7	1.4	7.4	5.0	5.9	7.4	7.6	6.8	8.1	10.6	14.2
Private development banks	0.2	0.4	1.6	2.6	3.7	4.6	4.6	5.1	5.6	5.4	6.7
Stock savings & loan associations	-	0.3	1.6	2.1	3.0	4.1	2.8	3.2	3.9	3.5	4.0
Rural banks	0.7	2.8	5.5	6.5	8.0	9.3	8.8	8.6	9.1	9.7	10.7
Specialized government banks	3.1	11.8	33.1	41.5	51.0	57.2	80.8	84.9	25.8 /b	24.2 /b	25.2
Nonbank Financial Intermediaries	6.1	26.8	60.3	62.0	73.6	91.3	97.7	105.6	111.8	119.2	132.8
Insurance companies	5.9	11.9	29.5	33.3	40.7	44.6	50.0	60.8	70.8	79.2	90.9
Government /a	4.0	7.7	19.5	22.0	27.0	30.9	35.9	42.7	50.5	53.8	61.2
Private	1.9	4.2	10.0	11.3	13.7	13.7	14.1	18.1	20.3	25.4	29.7
Investment institutions	0.0	10.3	25.5	23.5	25.6	28.9	27.3	23.8	23.3	20.8	21.4
Financing companies		3.5	11.9	12.1	12.9	11.8	9.6	6.2	5.6	7.0	7.4
Investment companies		2.0	5.0	5.5	5.9	9.9	10.2	11.0	10.2	4.8	5.6
Investment houses		4.8	8.6	5.9	6.8	7.2	7.5	6.6	7.5	9.0	8.4
Trust operations (fund managers)		2.6	1.7	0.8	1.1	1.5	1.9	1.6	1.3	1.6	1.8
Other financial intermediaries	0.2	2.0	3.6	4.4	6.2	16.3	18.5	19.4	16.4	17.6	18.7
Total	30.9	122.7	319.0	360.2	442.2	552.5	711.8	751.5	714.7	757.6	842.8
% of GNP	75.7	107.3	120.6	118.6	131.8	145.9	135.0	125.7	116.3	107.7	102.4
Total w/o CB	24.9	96.7	253.6	288.6	350.5	422.1	505.8	499.9	400.8	432.4	4 2.9
% of GNP	61.0	84.5	95.9	95.1	104.5	111.5	95.9	83.6	65.2	63.0	60.8
Memo Item:GNP	40.8	114.4	264.5	303.6	335.4	378.7	527.4	597.7	614.7	703.4	822.7

/a GSIS and SSS.
/b After transfer of certain assets and liabilities to the government.
Sources: World Bank Report (1988) for data on insurance companies from 1970-1986.
Phil. Financial Fact Book (1988).
Insurance Commission (for data on insurance companies in 1987 and 1988.
Government Corporate Monitoring and Coordinating Committee for assets of SSS and GSIS in 1988.

Table 2.1b

Distribution of Assets of the Financial System (excluding Central Bank)
As of December 31, 1970, 1975, 1980-1988
(in percent)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
Banking System	75.5	72.3	76.2	78.5	79.0	78.4	80.7	78.9	72.1	72.4	73.1
Commercial banks	56.6	55.0	56.8	58.5	58.6	58.8	60.0	57.2	59.0	60.1	60.7
Private	33.3	36.3	33.1	34.8	33.7	31.9	33.1	33.1	41.0	41.5	45.6
Government	18.5	18.7	16.3	16.5	17.3	17.3	17.7	15.2	8.7	7.2	7.9
Foreign	4.8	-	7.4	7.2	7.6	9.6	9.3	8.8	9.3	11.4	7.3
Thrift banks	3.6	2.2	4.2	3.4	3.6	3.8	3.0	3.0	4.4	4.5	5.1
Savings & mortgage banks	2.8	1.4	2.9	1.7	1.7	1.8	1.5	1.4	2.0	2.5	2.9
Private development banks	0.8	0.4	0.6	0.9	1.1	1.1	0.9	1.0	1.4	1.2	1.4
Stock savings & loan associations		0.3	0.6	0.7	0.9	1.0	0.6	0.6	1.0	0.8	0.8
Rural banks	2.8	2.9	2.2	2.3	2.3	2.2	1.7	1.7	2.3	2.2	2.1
Specialized government banks	12.4	12.2	13.1	14.4	14.6	13.6	16.0	17.0	6.4 /b	5.6 /b	5.1
Nonbank Financial Intermediaries	24.5	27.7	23.8	21.5	21.0	21.6	19.3	21.1	27.9	27.6	26.9
Insurance companies	23.7	12.3	11.6	11.5	11.6	10.6	9.9	12.2	17.7	18.3	18.4
Government /a	16.1	8.0	7.7	7.6	7.7	7.3	7.1	8.5	12.6	12.4	12.0
Private	7.6	4.3	3.9	3.9	3.9	3.2	2.8	3.6	5.1	5.9	6.0
Investment institutions	-	10.7	10.1	8.1	7.3	6.8	5.4	4.8	5.8	4.8	4.3
Financing companies	-	3.6	4.7	4.2	3.7	2.8	1.9	1.2	1.4	1.6	1.5
Investment companies	-	2.1	2.0	1.9	1.7	2.3	2.0	2.2	2.5	1.1	1.1
Investment houses	-	5.0	3.4	2.0	1.9	1.7	1.5	1.3	1.9	2.0	1.7
Trust operations (fund managers)	-	2.7	0.7	0.3	0.3	0.4	0.4	0.3	0.3	0.4	0.4
Other financial intermediaries	0.8	2.1	1.4	1.5	1.8	3.9	3.7	3.9	4.1	4.1	3.8
Total w/o CB	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

/a GSIS and SSS.
/b After transfer of certain assets and liabilities to the government.

The commercial banks form the dominant group in the financial system, consistently accounting for over 50 percent of its gross assets over the years. At present, the group is comprised of 29 banks of which nine have expanded commercial banking functions, including the government-owned Philippine National Bank (PNB).[4] Four of these are branches of foreign banks (Citibank N.A., Bank of America, Hongkong and Shanghai Banking Corp., and Standard Chartered Bank). PNB is the biggest among the banks, with total assets of P38.8 billion as of 1988, or three times larger than the average sized KB. It should be noted that PNB, along with the Development Bank of the Philippines, had undergone massive rehabilitation in 1986. The program called for the transfer of PNB's liabilities amounting to P53 billion to the national government and its non-performing assets to the Assets Privatization Trust. The effect of this on the commercial banking structure is clearly seen starting 1986 when PNB's historical share in KB resources of over 25 percent dipped to only 14 percent in 1986, and further to 12 percent in 1988 (Table 2.2). Apart from PNB, the next five largest banks (Bank of the Philippine Islands, Far East

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[4]Expanded commercial banks (also called "universal" banks) are allowed to offer a host of banking and non-banking services, e.g. investment or merchant banking, and own voting shares in allied and non-allied enterprises. Allied undertakings include other commercial banks (to the extent of 30 percent of total voting shares), and investments institutions (to the extent of 100 percent). Non-allied undertakings include insurance agencies (to the extent of 35 percent).

Table 2.2
Assets of the Commercial Banking System, by Banks
As of year-ends 1980, 1985-1988

Name of Commercial Bank (KB)	1980 PMillion	% Share	1985 PMillion	% Share	1986 PMillion	% Share	1987 PMillion	% Share	1988 PMillion	% Share
1.Universal Banks	79204	54.85	178042	62.31	136885	57.88	142488	54.83	180467	60.31
Government										
1.1 PNB	38652	26.77	76157	26.65	35022	14.81	31268	12.03	38758	12.95
Private	40552	28.08	101885	35.66	101863	43.07	111220	42.80	141709	47.36
1.2 Allied	7257	5.03	9131	3.20	6672	2.82	7290	2.81	9470	3.16
1.3 BPI	6442	4.47	16201	5.67	18333	7.75	20662	7.95	26280	8.78
1.4 Citytrust	1482	1.03	5124	1.79	5663	2.39	6867	2.64	8098	2.71
1.5 Equitable	2890	2.01	4069	1.42	5632	2.38	6826	2.63	8190	2.74
1.6 FEBTC	4345	3.02	12490	4.37	15430	6.52	19246	7.41	28093	9.39
1.7 Metro	5506	3.82	16368	5.73	15943	6.74	19202	7.39	25729	8.60
1.8 PCIB	4781	3.32	16510	5.78	14269	6.03	17151	6.60	19676	6.58
1.9 UCPB	4645	3.22	13898	4.86	10564	4.47	13976	5.38	16173	5.40
Manila Bank 1/	3204	2.22	8094	2.83	9357	3.96				
2. Other Domestic KBs	46469	32.18	63774	22.32	62501	26.43	68224	26.25	82848	27.69
Government										
Veterans 2/	2745	1.90								
Private	43724	30.28	63774	22.32	62501	26.43	68224	26.25	82848	27.69
2.1 Associated	1624	1.13	2583	0.90	2623	1.11	2509	0.97	2518	0.84
2.2 Boston(ex Combank)	2413	1.49	1944	0.68	1900	0.80	1751	0.67	2150	0.72
2.3 China	3542	2.46	4684	1.64	4518	1.91	5097	1.96	6015	2.01
2.4 Interbank	1641	1.14	5491	1.92	4225	1.79	5208	2.00	7274	2.43
2.5 PBCom	2744	1.90	3157	1.10	2889	1.22	3551	1.37	5010	1.67
2.6 Philbanking	2204	1.53	2735	0.96	3290	1.39	3482	1.34	3699	1.24
2.7 Philtrust	917	0.64	2335	0.82	2672	1.13	3035	1.17	3938	1.32
2.8 Pilipinas	1054	0.73	1738	0.61	1632	0.69	1596	0.61	1425	0.48
2.9 Producers	1417	0.98	2618	0.92	2619	1.11	2778	1.07	3121	1.04
2.10 Prudential	2178	1.51	4878	1.71	5672	2.40	6255	2.41	7879	2.63
2.11 Republic Planters	4880	3.39	5928	2.07	5732	2.42	6330	2.44	7604	2.54
2.12 RCBC	3720	2.58	5492	1.92	6430	2.72	8221	3.16	11169	3.73
2.13 Security	2587	1.79	6030	2.11	4657	1.97	4811	1.85	4666	1.56
2.14 Solidbank (ex Consolidated)	2979	2.07	5368	1.88	6501	2.75	6596	2.54	8837	2.95
2.15 Traders	3758	2.61	4825	1.69	3724	1.57	3408	1.31	3853	1.29
2.16 Union			3968	1.39	3417	1.44	3596	1.38	3690	1.23
IBAA 3/	2721	1.89								
Pacific 2/	3345	2.32								
3.Foreign Bank Branches	18730	12.97	43902	15.37	37096	15.69	49154	18.92	35912	12.00
3.1 Bank of America	3602	2.50	11439	4.00	10176	4.30	12793	4.92	8868	2.96
3.2 Std. Chartered	865	0.60	2602	0.91	2382	1.01	3414	1.31	2843	0.95
3.3 Citibank	12637	8.77	26382	9.23	20985	8.87	27801	10.70	19916	6.66
3.4 Hongkong-Shanghai	1626	1.13	3479	1.22	3553	1.50	5146	1.98	4285	1.43
T O T A L	144403	100.00	285718	100.00	236482	100.00	259866	100.00	299227	100.00

/1 Closed in 1987.
/2 Closed in 1985.
/3 Absorbed by PCIB in December 1985
Source: PNB Annual Report on the Commercial Banking System, various years.

Bank, Metrobank, Citibank and Philippine Commercial and Industrial Bank) chalked up 40 percent of total assets of the KBs in 1988. However, compared to commercial banks in other countries, Philippine banks are among the smallest. As of 1986, PNB and BPI merely ranked 82nd and 99th among the largest KBs in Asia, respectively.[5] Nevertheless, the stickiness of nominal interest rate for deposits, and the fact that entry into the sector has been discouraged by CB since 1972 have led to speculations that the KB structure is essentially oligopolistic. Tan points out that indices of concentration for the commercial banks, excluding PNB, have risen rather fast from 1982 to 1988.[6] The Herfindahl or H index of .045 (which means 22.2 equally-sized banks comprising the industry) in 1982 increased by 64 percent to .074 in 1988.[7]

While the banking system has from the start dominated the financial system, other non-bank financial intermediaries (NBFIs) have appeared. The largest of these are the insurance companies which are in turn dominated by the two government-owned insurance systems, the Social Security System (SSS) and the Government Service Insurance

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[5]World Bank; Philippine Financial Sector Study, 1988.

[6]Edita A. Tan, "Bank Concentration and the Structure of Interest" University of the Philippines School of Economics Discussion Paper 8915 (October 1989).

[7]HI is derived by squaring and summing the market shares of the banks in the KB sector.

System (GSIS). The former is the largest financial institution in the country as of 1988 with its assets accounting for around nine percent of the gross assets of the financial system. It should be noted, however, that the insurance sector has declined in importance during the past two decades. Its share in the total financial system's assets of 23.7 percent in 1970 dropped to 11.7 percent in 1980 and reached only 18.4 percent in 1988.

Investment institutions such as investment companies, investment houses, and financing companies as well as trust operations (fund managers) were formed in the mid-1960s through the 70's . However, their importance in the 80's has declined as a result primarily of the Deewey Dee crisis in 1981 which triggered the loss of confidence in the short-term funds markets and in the process precipitated the downfall of several finance companies and investment houses including the two largest investment houses in the country (Atrium Capital Corporation and Bancom). The number of investment institutions licensed to engage in quasi-banking functions (i.e. issue deposit substitutes) have been trimmed down from 26 in 1980 to 13 as of year-end 1989. Likewise, as of 1988, investment institutions accounted for merely 4.3 percent of the total assets of the financial system, as against their share of 10.7 percent in 1975. Similarly, smaller NBFIs such as pawnshops, lending investors, venture capital corporations, and non-bank thrift institutions have not sustained their phenomenal growth in 1983 and remain relatively unimportant.

An important characteristic of the Philippine financial system is the prevalence of interlocking directorates, i.e. the simultaneous holding of a position in the Board of Directors of several financial as well as non-financial institutions. This is a feature that is implicitly encouraged by the universal banking law, i.e. universal banks are permitted to make equity investments in allied and non-allied financial institutions (see footnote 4 on page 9). The purpose of the policy is ostensibly to reduce the fragmentation of financial intermediaries, to increase competitive conditions and economies of scale to produce greater efficiency within the financial system. However, in the money markets, such interlocking with investment institutions increases the relative importance of certain banks and consequently make these (money markets) less diversified. For example, as of year-end 1988, four commercial banks (Metrobank, Citytrust, Citibank, and BPI) directly accounted for only 13.32 percent of the total deposit substitutes of all financial institutions with quasi-banking licenses (Table 2.3) However, their affiliates' total share of 34.73 percent clearly underscore the effect of interlocking directorates on the concentration of these markets.

Table 2.3

Share of Top Three Conglomerations in Total Money Market Balances of Banks and NBQBs as of Year-end 1988

Conglomeration	% Share	
	Deposit Substitutes /1	Trading Account Securities /2
1. Metrobank /3	0.01	11.09
First Metro Investment Corp. /4	29.29	3.83
Sub-total	29.30	14.92
2. Citytrust 3/	0.03	1.68
Citibank	9.97	4.62
Citytrust Investment Phil., Inc. /4	0.36	0.05
Citytrust Finance Corp. /5	0.58	0.00
Sub-total	10.94	6.35
3. Bank of the Philippine Islands /3	3.31	6.09
AEA Development Corp. /4	1.04	0.34
BPI Credit Corp. /5	2.57	0.17
BPI Family Savings /6	-	0.89
Sub-total	6.92	7.49

/1 Deposit Substitutes are borrowings from the money markets in the form of promissory notes, certificates of participation/ assignments and repurchase agreements.

/2 Trading Account Securities include government and private securities and commercial papers purchased for money market trading.

/3 Universal banks.

/4 Investment houses.

/5 Finance companies.

/6 Thrift bank.

Source of basic data: Published financial statements
Philippine Financial Fact Book (1988).

2.2 Policy Framework, 1956-Present

2.2.1 Introduction

Regulation of the financial institutions (FIs), except insurance companies which are supervised by the Philippine Insurance Commission, is vested upon the Central Bank. While policies are set by the Monetary Board via circulars and memoranda, the Supervision and Examination Sector of the Central Bank acts as the operational arm for supervision purposes.

The Monetary Board is composed of the Central Bank Governor as Chairman, five representatives of the national government (the Secretaries of the Departments of Finance, and Budget and Management; the Chairman of the Board of Investments who is concurrently Secretary of the Department of Trade and Industry; and the Director-General of the National Economic and Development Authority), and two representatives of the private sector who are appointed by the President. The preponderance of national government representatives in the Board has been rationalized by the need for effective coordination between the economic, financial and fiscal policies of the government and the monetary, credit and exchange policies of the Central Bank.[8]

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[8]The Central Bank is also referred to as a "quasi-fiscal agent," i.e. it is primarily responsible for the marketing and stabilization of government securities and acts as the financial advisor of the government. The government, through the Secretary of Finance, must request for the Monetary Board's opinion before borrowing from the domestic and international markets.

Thus, all Central Bank policies are, in essence, formulated in consultation with the heads of the economic agencies.

CB regulations of FIs include: (a) asset creation (e.g., single borrower's limit, lending for agricultural and agrarian reform, DOSRI accounts, etc.); (b) liability creation (e.g., type of deposits, borrowings from CB, etc.); and (c) equity (e.g. minimum equity). However, the crises that struck the financial system, especially those that originated from the money markets in 1981, demonstrated the generally slow reaction of CB to practices that tended to subvert its rules and regulations. Lamberte cites that CB's measures on money market transactions such as the prohibition against the attachment of post-dated checks to "without recourse" transactions came in too late when the money market already collapsed.[7]

In addition to CB, the Securities and Exchange Commission acts as the principal supervisory body for the securities market. Its Money Market Operations Department oversees the registration of short- and long-term commercial papers, financing companies and investment houses. Although the regulations of SEC are aimed at "investors protection," SEC does not pass judgment on the worth of the securities or the issuing companies. "Investors protection" are promoted mainly by requiring the issuers to submit a

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[7]Mario B. Lamberte, "Assessment of the Problems of the Financial System: The Philippine Case." PIDS Working Paper 89-18 (August 1989).

prescribed set of information for dissemination to prospective investors. It should be noted that the Central Bank and the SEC coordinate with respect to both formulation and implementation of policies affecting commercial papers. For instance, the rules of registration on commercial papers were approved first by the Monetary Board Chairman before they were promulgated by the SEC. Also, all applications for a certificate of authority to operate a branch, an extension office or agency with quasi-banking functions are filed with the SEC, which refer the same to the Department of Financial Intermediaries of the Central Bank for comments and recommendation. CB's recommendations are generally based on the applicant's compliance with its laws, rules, and regulations such as capital adequacy and solvency, profitability and liquidity position.

Information on the creditworthiness of borrowers in the financial markets are augmented by the Credit Information Bureau, Inc. (CIBI). This was set up by the Central Bank after the 1981 crisis to coordinate information on all issuers of commercial papers. As of 1988, it has collected data, such as outstanding loans, on some 25,000 companies and 6,000 individuals, most of which are used by commercial banks.

Notwithstanding the sophistication that characterizes the Philippine financial system, it remains as one of the least developed vis-a-vis its neighboring Asian economies. The highest ratio of M_2 to GDP of 27.5 percent was recorded

in 1967, and has never been duplicated nor approached even during the advent of financial liberalization starting in 1981 (Table 2.4). The same ratio was merely 22 percent in 1987, in contrast with the 31 percent of Indonesia (Table 2.5). Malaysia and Thailand have much higher intermediation levels. Almost all studies on this phenomenon agree that government's repression of asset prices in the intermediation markets as well as the subsidized equity programs for selected institutions (rural banks and private development banks) prior to 1981 are to blamed for this. After 1981, a host of new factors have contributed in maintaining the stickiness of savings deposit rates, among them the oligopolistic character of the commercial banking system that is further nurtured by CB's aversion against the entry of new players in the sector.

The formal financial system has gone through three periods of policy environment promoted by government.[10] The first period covered the years 1956-1973 in which government policies replaced market forces in the intermediation of surplus funds through the banking system while "allowing" free market forces to operate in new markets, i.e. money markets. During the second period, 1974-1981, coverage of CB's authority was broadened to include the pricing of assets and structure of all financial institutions involved in credit allocation such as the so-called non-bank

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[10]See also Lamberte, "Financial Liberalization and the Internal Structure of Capital Markets." PIDS Staff Paper Series 85-07 (1985).

Table 2.4
Financial Development Indicators, 1956-1988
(in %)

	M2 / GNP 1/	M3 / GNP 2/	Nominal Interest Rates: Savings Deposits	Time Deposits	Secured Loans (61-90 days)	91-day T-Bills	Deposit Substitutes
I. Period of managed interest rates of traditional assets with de facto free market forces operating in money markets: 1956-1973							
1956	19.4	19.4	2.0	2.5	12.0		
1957	19.4	19.4	3.0	3.5	12.0		
1958	20.4	20.4	3.0	3.5	12.0		
1959	20.5	20.5	3.0	3.5	12.0		
1960	20.4	20.4	3.0	4.0	12.0		
1961	23.5	23.5	3.0	4.0	12.0		
1962	25.1	25.1	3.0	4.0	12.0		
1963	26.0	26.0	3.5	4.5	12.0		
1964	24.1	24.1	4.0	5.0	12.0		
1965	23.4	23.4	5.8	6.5	12.0		
1966	24.8	24.8	5.8	6.5	12.0	6.5 3/	
1967	27.5	27.5	5.8	6.0	12.0	6.4 3/	
1968	25.7	25.7	5.8	6.0	12.0	6.7 3/	
1969	26.2	26.2	6.0	7.0	12.0	8.1 3/	
1970	23.0	23.0	6.0	7.0	12.0	13.1	
1971	21.2	21.2	6.0	7.0	12.0	11.9	13.30
1972	21.2	21.2	6.0	7.0	12.0	11.9	13.90
1973	19.4	25.0	6.0	7.0	12.0	9.4	9.40
Average	22.8	23.2					
II. Period of rising but managed interest rates in all markets							
1974	16.8	24.3	6.0	9.5	12.0	10.0	31.8
1975	16.8	25.2	6.0	9.5	12.0	10.3	13.8 4/
1976	18.6	26.8	7.0	10.0	12.0	10.2	13.1 4/
1977	21.2	28.7	7.0	10.0	12.0	10.9	12.5 4/
1978	22.8	29.3	9.0	10.0	14.0	10.9	10.6 4/
1979	20.8	26.3	9.0	12.0	14.0	12.2	12.0 4/
1980	21.0	25.6	9.0	14.0	14.0	12.1	12.2 4/
Average	19.7	26.6					
III. Liberalization period							
1981	21.6	27.0	9.8	14.6	16.0	12.6	15.9 4/
1982	23.5	28.4	9.8	14.5	17.1	13.8	15.0 4/
1983	25.3	29.8	9.7	13.4	18.4	14.1	16.6 4/
1984	20.8	23.0	9.9	20.1	29.2	30.5	23.8 4/
1985	20.8	22.0	10.8	18.8	27.5	26.8	21.0 4/
1986	22.2	23.0	8.0	11.0	17.5	14.4	13.6 4/
1987	22.1	22.6	4.5	7.4	13.4	11.4	9.7 4/
1988	23.0	24.1	4.1	13.0	16.2	12.1	-
Average	22.4	25.0					

1/ M2= Currency + Deposits (demand, savings & time)
2/ M3= M2 + Deposit substitutes
3/ as of December
4/ interest on promissory notes

Sources: Lamberte, "Financial Liberalization and the Internal Structure of Capital Markets," (PIDS), 1985
Tan, "Philippine Monetary Policy and Aspects of the Philippine Market: A Review of Literature," PIDS, 1980.
CB Statistical Yearbook.

Table 2.5

M2/GNP IN SELECTED ASIAN COUNTRIES 1/

Country	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988
Indonesia	0.16	0.18	0.19	0.19	0.21	0.22	0.26	0.30	0.31	-
Malaysia	0.46	0.54	0.58	0.63	0.63	0.62	0.67	0.81	0.75	-
Philippines	0.17	0.21	0.22	0.24	0.25	0.21	0.21	0.22	0.22	0.23
Singapore	0.60	0.66	0.70	0.72	0.70	0.66	0.70	0.78	0.85	0.84
Thailand	0.34	0.39	0.39	0.45	0.50	0.56	0.60	0.63	0.67	0.66
Korea, Rep. of	0.31	0.34	0.35	0.39	0.39	0.37	0.39	0.40	0.41	0.43
Taiwan	0.56	0.64	0.64	0.75	0.86	0.92	1.08	1.17	1.32	1.44

1/ M2=M1+saving deposits + time deposits

Source: Key Indicators of Developing Member Countries of ADB Vol. XVII-July 1987; Vol. XIV-April 1983; Vol. XVIII-July 1988, Vol. XVIX, July 1989, cited in Tan (1989).

financial intermediaries with authority to engage in quasi-banking functions (NBQBs). Thus the money markets became heavily regulated. The intention was to close the gap between yields of short-term and long-term funds. The third period which started in 1981 and continues up to the present is the period of liberalization. A mix of free and administered market policies are being promoted, the former being demonstrated by the lifting of all interest rate ceilings while the latter are implemented through the imposition of record-high reserve requirements and taxes on deposit transactions.

2.2.2 Period of rigid financial repression: 1956-1973

The period 1956-73 which is considered as the period of rigid financial repression featured a mix of Central Bank policies that were aimed at increasing the supply of credit at subsidized rates to broad-based, government-identified priority areas. Lending rates were governed by the Usury Act of 1916 which prescribed ceilings of 12 and 15 percent for secured and unsecured loans, respectively. Corollarily, interest ceilings on deposits were imposed starting in 1956; these were adjusted upwards but at long time intervals and in smaller steps. Deposits were further taxed by reserve requirements imposed on savings and time deposits of commercial banks which were gradually raised from 5 percent in 1959 to 20 percent in 1970. Preferential or concessional rediscount rates were extended to a broad range of activities such as rice production and small scale

industrial loans. The wide margins between the prescribed loan rates and the Central Bank rediscount rates plus the subsidized entry of rural banks and small private development banks thus facilitated the rise of banking institutions that relied more on Central Bank support rather than on funds intermediation. The development of other forms of financial intermediation were neglected. The market for government securities did not prosper due to their unattractive yields which were fixed in at par. The equity market likewise remained underdeveloped primarily due to the low loan rates.

The repression of deposit and lending rates of the banking system paved the way for the emergence of new financial institutions that introduced new financial assets outside the purview of Central Bank regulations. Soon after, existing KBs also started issuing unregulated short-term instruments. Money market instruments began to be traded in the mid-1960s. An interbank call market which operated on a limited scale and on a day-to-day basis was augmented by the trading of short-dated debt instruments of banks and prime corporate names by few investment houses.[11] Prices of these instruments inevitably drew resources away from traditional deposits. From 1965 to 1974, deposit substitutes holdings of the private sector amounted to P7.5 billion, almost double the amount of demand deposits (P3.9

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[11] Victoria S. Licuanan, An Analysis of the Institutional Framework of the Philippine Short-term Financ Markets. Makati.

billion). Relatedly, average M_2/GNP ratio during the entire period of financial repression was 23.2 percent. On the banking sector's increasing use of deposit substitutes, Tan explains that this was partly a move "to price discriminately between small and large lenders. Instead of paying a uniform rate on all deposits, banks maximize profits by paying regulated rates to ordinary small depositors, borrowing from the CB part of its funds and offering deposit substitutes to large depositors."[12]

While new financial institutions emerged to expand the domestic financial system, its integration into the international markets was not encouraged by the Central Bank. Whereas foreign investments in the short-term funds market have not been prohibited, residents are not allowed to purchase foreign securities nor maintain bank balances overseas, although they could deposit foreign currencies in authorized domestic banks. These policies prevail up to the present. (Even the purchase of Philippine debt papers in foreign currencies by local banks require Central Bank approval). The policies were not intentionally designed to protect the domestic financial system from competition but functioned as exchange controls. The latter were imposed in view of the limited (rather than full) flexibility of the exchange rate system which started in 1970.[13] Limited

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[12]Edita A. Tan, "Philippine Monetary Policy and Aspects of the Financial Market: A Review of Literature." Survey of Philippine Development Research I. Makati: Philippine Institute for Development Studies, 1980.

flexibility which is operationalized through the purchase and sale of foreign exchange by the Central Bank and other exchange controls,[14] is a consequence of the Central Bank's mandate "to maintain the stability of the exchange rate" notwithstanding the official policy that "all exchange transactions take place in a free market."[15] Prohibiting investments in foreign assets abroad is thus seen as an important complementary strategy. Nevertheless, recent evidence shows how some practices of local residents (some of whom were government officials) rendered the policy de facto inoperative. The more infamous transgressors of the policy, the family of then President Marcos, have been reported to maintain multi-million dollar deposits in Swiss banks. Boyce and Zarsky[16] provide a list of the mechanics used by residents in the illegal export of capital (or capital flight) as follows: (a) cash transfers via personal smuggling, the use of hired couriers, the mails,

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[13]Prior to 1970, a fixed exchange rate system was in force.

[14]Other exchange controls include quantitative limitations on invisible payments such as those for travel abroad, educational expenses of students abroad and maintenance of dependents.

[15]Central Bank of the Philippines, "Trade and Payments Systems of the Philippines," June 30, 1980 (mimeographed).

[16]J.K. Boyce and L. Zarsky, "Capital Flight from the Philippines, 1962-1986. Journal of Philippine Development (Second Semester, 1988).

and wire transmission services[17]; (b) false invoicing of exports and imports[18]; (c) kickbacks on import contracts[19]; and (d) interbank transfers. The total capital flight from the Philippines from 1962 to 1986 has been estimated to reach US$10.3 billion which is one-third of the total increase in external debt outstanding of US$27.9 billion during the same period.[20]

Instead of liberalizing the interest rates of the traditional assets, i.e. deposits, the authorities responded to the rise in money market assets and intermediaries by (a) placing the non-bank FIs engaged in short-term lending under its authority; (b) enforcing specialization among various types of financial entities; and (c) imposing interest rate ceilings and taxes on money market transactions. These policies came along with the reforms introduced during 1972-1973 via amendments in the General

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[17]Wire transmission services was practiced by blackmarketeers in Manila's Binondo district (also known as the Binondo Central Bank). Binondo bankers bought dollars in the Philippine black market and smuggled them abroad for deposit in major banks. Philippine residents bought these deposits by giving pesos to an intermediary in exchange for the latter's instruction to the major bank to wire dollars to the Philippine resident's overseas account.

[18]Exporters are required to surrender their foreign currency receipts to the Central Bank's authorized agent banks for conversion into pesos. They can understate their invoice value and deposit the difference abroad.

[19]Kickbacks for contract go-between are paid abroad but are eventually paid out of dollars from the Philippines obtained via higher prices of the goods.

[20]Boyce and Zarsky (1988).

Banking Act and the Central Bank Act. The other major reforms aside from those previously mentioned are:

(a) the reduction of bank classifications into three main categories, i.e. commercial, thrift and rural banks;

(b) adoption of policies to improve the efficiency of existing banks. Entry into the commercial banking system was to be halted by preferring branch over unit banking while consolidations, mergers and foreign equity participation in domestic banks were promoted. An increase in minimum paid-in capital to P100 million was imposed;

(c) redefinition of CB's mission to exclude promotion of economic growth, which was to be the domain of the government planning agencies. Thus, Central Bank was given more flexibility in exercising powers consistent with the maintenance of monetary stability;

(d) financial institutions, i.e. "banks," "banking institutions" and "non-bank financial institutions" were redefined to indicate the extent to which each type was subject to CB regulations; and

(e) The Monetary Board was given the authority in 1973 to prescribe maximum lending rates which virtually repealed the Usury Act of 1916.

2.2.3 Period of repression in the money markets: 1974-1980

Within the framework of the above reforms, the period 1974-1980 featured interest rate reforms that were intended to reverse the flow of funds from short-term instruments (essentially money market instruments) to long-term financial assets. At the outset, however, these were undermined by the segmentation of the financial system that was underscored by the enforced specialization among the FIs, e.g. investment banking activities were assigned solely to investment houses and were set apart from regular banking activities.

While rates on long-term deposits were deregulated, ceilings of shorter-term instruments remained although these were changed from time to time. For instance ceilings on short-term time deposits were increased from 6.5 to 8.0 percent to 8-11 percent in 1974; on savings deposits from 6 to 7 percent in 1976. Intermediation in the money markets were penalized in terms of: (a) a 17 percent interest ceiling on short-term deposit substitutes; (b) increase in minimum placement on deposit substitutes to P200,000 for maturities of 730 days or less, and P100,000 for maturities of more than 730 days; (c) a reserve requirement of 20 percent on deposit substitutes of commercial banks and non-bank financial institutions; and (d) a 35 percent transactions tax on all primary borrowings in the money market.

Notwithstanding these regulations, it should be noted that the M_3/GNP ratio increased during this period reaching an average of 26.6 percent, in contrast to the 23.2 percent during the period of repression. The attractiveness of deposit substitutes was underscored by the fact that M_2/GNP ratio declined from 22.8 percent to 19.7 percent. Tan explains the seemingly minimal effect of the regulations to the ability of the issuers to arrange their portfolio "so that those of relatively low risk and transactions cost are issued in known money market papers with rates at or below the ceiling, while those with market rates above the ceiling are issued as new papers and therefore not covered by regulations."[21] NBQBs also evaded CB regulations by engaging in transactions falling outside of the latter's terms of reference. Specifically, they engaged themselves in "without recourse" transactions in which they attach their own postdated checks under a paying-agency agreement and reinforcing it with verbal commitments to buy back the paper.[22]

2.2.4 Period of liberalizatic... 1981-present

The financial liberalization program that was initiated in 1981 included reforms on pricing policies for the various financial assets as well as on the structure of the

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[21] Edita A. Tan," The Structure and Growth of the Philippine Financial Market and the Behavior of its Major Components," PIDS Working Paper Series 81-06. (June 1981).

[22] Lamberte (1989).

financial system, with the objective of fostering competitive conditions and of improving the availability of medium- and long-term funds to deficit units. Firstly, interest rate ceilings on all types of deposits and loans were lifted, while the rediscounting privileges were scaled down. Minimum placements on deposit substitutes were also reduced to P50,000 irrespective of their maturity. Secondly, the differentiation among banks and non-banks performing quasi-banking functions were reduced with the introduction of the universal banking. Under the latter, commercial banks whose capitalization reached P500 million are authorized to perform a broad range of activities including underwriting, securities dealing and equity investments in both allied and non-allied undertakings. Clearly, the focus was on bigness which was thought to help ensure the stability of the banking system.

On the other hand, regulation on other aspects of intermediation were made more stringent. Reserve requirement ratios for deposits and deposit substitutes of KBs which were supposed to be scaled down to reduce the cost of intermediation were instead jacked up to 24 percent in 1984, the highest ever since the establishment of CB. (These were later brought down to 21 percent in 1986). Moreover, two taxes were imposed for revenue generation purposes: a 5 percent tax on gross receipts of banks and a 20 percent tax on deposit and money market earnings of depositors/investors. One estimate showed that both taxes comprised 25-39 percent of the average intermediation cost

of banks (defined as the difference between the average cost of funds, and the average interest rate on loans and investments other than reserve requirements) in 1983-1986.[23]

Despite the freeing of all interest rates, M_2/GNP ratios were generally lower than those during the earlier periods of repression, although M_2/GNP ratios were slightly higher. Aside from the above mentioned policies, there were other factors that brought about these dismal records. First, the continuing high deficit spending of the government fueled double digit inflation rates for most years, especially during the 1984-1985 recession, resulting in negative real returns on deposits which remained sticky. Second, savings deposit rates were extremely low since 1985, even lower than those set by authorities during the regulated regimes. The latter factor together with abnormal bank margins among commercial banks of 5.8 percent (versus 4.4 percent average of other countries) seem to indicate a monopolistic banking structure.[24] Thirdly, trust accounts which are off-balance sheet borrowings of banks have been absorbing an increasing portion of funds from large depositors. During 1984-1988, such funds reached P181 billion of which only around 10 percent was held as cash and deposits in banks. Most of these funds are lent and invested in money market instruments, especially high-yielding government securities. Lastly, it is felt that the

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[23]World Bank, p. 67.

[24]Tan (1989).

Dewey Dee crisis in 1981 had a lasting impact on confidence, causing large depositors to invest their funds in more stable assets, e.g., trust accounts.

3.0 Money Market in the Philippines

3.1 The Philippine Money Market: Its Development

The evolving needs of an expanding economy set the stage for the development of the Philippine money market. Faced by the changing structure of a developing economy in the 60s from predominantly extractive industries into a diversifying economy where manufacturing concerns played an increasing role, the financial system had to respond by developing in a similar fashion.

New ways had to be found to mobilize untapped financial resources especially at a time when rates on traditional instruments were administratively set at lower levels. This became a take-off point for emerging financial concerns with the objective of meeting the financial requirements of new industrial ventures by raising funds through the trading of short-term debt papers whose rates were not regulated by the authorities. In 1963, Private Development Corporation of the Philippines, an investment company was set-up offering financial services through underwriting and loan syndication. Shortly thereafter, in 1964, BANCOM, the first investment house was also established. This new form of financial intermediation has attracted others especially among the established commercial banks. Since then the money market has set its mark in Philippine finance.

There were no official figures about the value of transactions from money market activities during the early

period. An unofficial estimate placed it at around P32M at the end of 1966.[25]

Prior to the 1972 banking reforms, the Philippine money market was left unregulated. Because of its novelty and the relatively higher returns compared to ordinary deposits many investors were attracted to it. This contributed to the exceptional growth of the money market. By 1972, consistent with the task of the Philippine Central Bank (CB) to supervise and regulate the financial system, the operations of non-bank financial institutions were also supervised as well. The need to rein this new form of financial intermediation i.e., the marketing of short-term debts, became a necessity as this became a challenge to the effectiveness of the CB to direct the allocation of financial resources and in pricing financial instruments.

In 1973, the investment house law was promulgated which became the basis for the establishment, operation, and regulation of investment houses. In relation to this, borrowings of investment houses and other non-bank financial institutions from twenty or more lenders at any one time for the purpose of re-lending or the purchasing of receivables and other obligations were placed under Central Bank regulation and were also known as "quasi-banking" functions. The borrowing instruments allowed by Central Bank are those introduced under Central Bank Circular 438 in 1974 and are collectively called deposit substitutes. The instruments

[25]Licuanan (1986).

comprising this are repurchase agreements, certificates of assignment, certificates of participation and dealer promissory notes (These are further discussed in Section 3.2.2.).

By 1975, the Securities Act was amended to place all debt instruments under the supervision of the Philippine Securities and Exchange Commission (SEC). All commercial papers had to be registered and comply with the minimum requirements for issuance by the SEC. For the rest of the seventies various regulations were passed to regulate the money market such as requiring firms to present authority to issue debt instruments, prescribing qualifications of officers by quasi-banks, imposing a transaction tax on all money market borrowings, and prescribing reserve requirements on interbank loans and deposit substitutes among others.

Between 1973 and 1979, the money market became highly regulated as with the rest of the financial system. Nonetheless, the volume of money market transactions, meaning the sales and purchases of money market instruments, increased from official figures of P142B in 1975 to P304B in 1980 (Table 3.1).

A second set of bank reforms was introduced in 1980. It liberalized the financial system and introduced the concept of universal banking. Commercial banks could now engage in investment banking and own allied and non-allied enterprises. Functions of investment banks were also

Table 3.1

VOLUME OF MONEY MARKET TRANSACTIONS, 1975-1988 a/
(IN MILLION PESOS)

YEAR	NOMINAL	REAL	AS PERCENTAGE OF M3
1975 b/	142263.76	84887.47	5.50
1976	190449.00	104072.77	5.95
1977	210520.97	107122.27	5.32
1978	238094.40	110933.01	5.07
1979	295488.10	119476.02	5.55
1980	303739.92	106246.61	5.08
1981	329558.00	103896.62	4.37
1982	462822.23	134581.25	5.28
1983	600561.87	156377.59	5.97
1984	505810.94	87900.01	4.48
1985	505742.25	74343.03	4.14
1986	523417.46	76212.38	4.03
1987	460855.74	62112.87	3.26
1988	780052.00	95794.52	4.59

a/ sum of monthly trading
b/ first quarter data not available

Source of basic data: Central Bank of the Philippines

expanded to include foreign exchange operations and trust functions. Underlying these reforms was the need to strengthen the condition of financial intermediaries to meet the growing need for financial services. As a requisite for expanded banking, banks were required to increase their capitalization or encouraged to merge with other allied financial institutions. The improvement in the financial standing of these banks permitted them to assume broader operations particularly in packaging financial services. The latter provided incentives for these banks to mobilize more funds for bigger operations. The benefits were translated into increased flow of savings into the system for the requirements of medium and long-term borrowers made possible through term-transformation.

Since lending long and borrowing short could give rise to liquidity problems, the CB instituted safeguards, among these was its lender-of-last-resort facility. Obviously, however, the money market not only functioned as an important source of funds for financial intermediaries but an essential counter-weight for illiquidity as this provided a ready mechanism for intermediaries to raise funds in short duration.

From that time on, the volume of money market transactions has grown surviving the liquidity crisis in 1981, then reaching a peak at the onset of the economic crisis of 1983. These crises are discussed in the following section of this paper. Since then it has

ballooned to a volume of P780B in nominal terms by the end of 1988. The money market has since become an important form of financial intermediation.

3.2 Survey of the Philippine Money Market

The Philippine money market can be classified into four main types. The interbank loans also known as the interbank call loans market, the deposit substitute, the commercial paper, and the government security markets. These markets are functionally classified according to the major players, usually the borrowers, in each market.

Interbank loans and deposit substitutes are the markets for funds by financial intermediaries. On the other hand, the market for debt instruments by private corporations, and other financial institutions without quasi-banking functions are classified under the commercial paper market. Lastly, the market for the government securities includes the issues by the Central Bank, the National Government and the various government corporations as well as government financial institutions.

3.2.1 Interbank Call Loans

These are very-short term, normally not exceeding twenty-four hours, bank-to-bank accommodations to cover reserve deficiencies by banks and non-bank quasi-banks. Operationally, interbank loans are accomplished through fund transfers among lending and borrowing financial intermediaries carried each day in the books of the Central

Bank when the clearing results are known.

Since interbank call loans are bank-to-bank accommodations for funds, players in this market are exclusively banks as well as non-banks granted quasi-banking licenses i.e., investment houses and finance companies. The biggest borrowers in the market are largely commercial banks. Between 1983 to 1987, commercial banks were consistently the sole users of funds for this market (see Table 3.2a) mainly to cover reserve deficiencies for their deposit and deposits substitutes.

The lending side of this market, however, has a more diverse composition. Although, commercial banks were also the biggest lenders having an average share of 85 percent between 1983-1988 (see Table 3.2b), other major lenders in the market were the government financial institutions (10%), e.g., Development Bank of the Philippines and the Land Bank, the investment houses (0.4%), and the finance companies (0.2%). The interbank market is also a ready market for investible funds among rural and thrift banks (3.7%).

In the 1970s, interbank call loans comprised less than 10 percent of the total volume of money market transactions (see Table 3.3). There was a rapid expansion of this type of market in the 80s where the volume of transactions by 1988 accounted for almost 40 percent of total money market transactions.

Between 1975 to 1979, the interbank market had an

Table 3.2a

VOLUME OF INTERBANK CALL LOAN TRANSACTIONS
BY TYPE OF BORROWER, 1983-1988 a/
(in million pesos)

BORROWER	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. Commercial Banks	198101.0	100.0	178116.7	100.0	226380.0	100.0	200691.8	99.6	172614.1	99.9	282381.5	93.0
B. Investment Houses	-	-	-	-	-	-	-	-	-	-	8392.7	2.8
C. Financing Companies	-	-	-	-	-	-	-	-	-	-	10997.6	3.6
D. Savings Banks	-	-	-	-	-	-	732.0	0.4	173.5	0.1	1731.8	0.6
E. Other Banking Inst.	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	198101.0	100.0	178116.7	100.0	226380.0	100.0	201423.8	100.0	172787.6	100.0	303503.6	100.0

a/ sum of monthly trading; no breakdown as to borrower prior to 1983.

Source of basic data: Central Bank of the Philippines

Table 3.2b

VOLUME OF INTERBANK CALL LOAN TRANSACTIONS
BY TYPE OF INVESTOR, 1983-1988 a/
(in million pesos)

INVESTOR	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. Commercial Banks	172933.6	87.3	160817.9	90.3	169796.8	75.0	194353.0	96.5	149691.5	86.6	224829.6	74.1
B. Other Banking Institutions	20350.6	10.3	10189.4	5.7	51405.2	22.7	2356.8	1.2	13806.0	8.0	34625.9	11.4
C. Investment Houses	1349.0	0.7	2748.1	1.5	280.9	0.1	73.0	0.0	4303.7	2.5	16184.5	5.3
D. Rural/Thrift Banks	3166.4	1.6	3351.8	1.9	4888.6	2.2	4640.9	2.3	4002.8	2.3	27518.4	9.1
E. Finance Companies	301.4	0.2	1009.6	0.6	8.5	0.0	-	-	983.6	0.6	345.2	0.1
TOTAL	198101.0	100.0	178116.7	100.0	226380.0	100.0	201423.8	100.0	172787.6	100.0	303503.6	100.0

a/ sum of monthly trading; no breakdown as to investor prior to 1983.

Source of basic data: Central Bank of the Philippines

Table 3.3

VOLUME OF MONEY MARKET TRANSACTIONS BY TYPE OF INSTRUMENTS, 1975-1988 a/
(in million pesos)

INSTRUMENT	1975 b/ VOLUME	%	1976 VOLUME	%	1977 VOLUME	%	1978 VOLUME	%	1979 VOLUME	%	1980 VOLUME	%	1981 VOLUME	%
A. INTERBANK CALL LOANS	10340.8	7.3	17818.0	9.4	17819.1	8.5	18371.0	7.7	42268.2	14.3	50509.3	16.6	66969.3	20.3
B. DEPOSIT SUBSTITUTES	121486.5	85.4	160873.6	84.5	181340.6	86.1	208791.1	87.7	241903.4	81.9	242083.7	79.7	237776.3	72.2
1. Promissory Notes	80750.3	56.8	119469.6	62.7	140451.1	66.7	160891.5	67.6	151203.5	51.2	144463.2	47.6	189531.8	57.5
2. Repurchase Agreements	39799.6	28.0	41048.9	21.6	40304.1	19.1	47392.3	19.9	90084.7	30.5	95660.0	31.5	47818.5	14.5
3. Certificates of Assignments	806.6	0.6	278.0	0.1	385.5	0.2	180.1	0.1	55.6	0.0	1065.2	0.4	230.2	0.1
4. Cert. of Participation	130.0	0.1	77.1	0.0	200.0	0.1	327.2	0.1	559.6	0.2	895.3	0.3	195.8	0.1
C. COMMERCIAL PAPERS	8387.5	5.9	10228.5	5.4	8958.7	4.3	7980.5	3.4	9763.4	3.3	10466.0	3.4	23922.8	7.3
1. Non-financial	7723.7	5.4	9660.5	5.1	8196.0	3.9	7232.4	3.0	7928.8	2.7	8575.9	2.8	20464.1	6.2
2. Financial	663.8	0.5	568.0	0.3	762.7	0.4	748.1	0.3	1834.6	0.6	1890.0	0.6	3458.7	1.0
D. GOVERNMENT SECURITIES	2049.0	1.4	1528.9	0.8	2402.5	1.1	2951.8	1.2	1553.1	0.5	680.9	0.2	889.6	0.3
1. DBP Bonds and other securities	182.9	0.1	86.4	0.0	118.5	0.1	162.0	0.1	226.7	0.1	55.1	0.0	150.8	0.0
2. CBCI's	1729.4	1.2	1320.3	0.7	2165.1	1.0	1948.6	0.8	1027.9	0.3	478.5	0.2	674.3	0.2
3. Treasury Bills	136.7	0.1	122.2	0.1	118.9	0.1	841.2	0.4	298.5	0.1	147.3	0.0	64.5	0.0
TOTAL	142263.8	100.0	190449.0	100.0	210521.0	100.0	238094.4	100.0	295488.1	100.0	303739.9	100.0	329558.0	100.0

INSTRUMENT	1982 VOLUME	%	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. INTERBANK CALL LOANS	133593.6	28.9	198101.0	33.0	178116.7	35.2	226380.0	44.8	201423.4	38.5	172787.6	37.5	303503.6	38.9
B. DEPOSIT SUBSTITUTES	286290.5	61.9	363604.2	60.5	258192.7	51.0	184372.4	36.5	213764.4	40.8	135087.2	29.3	108420.3	13.9
1. Promissory Notes	238308.0	51.5	244043.0	40.6	183831.3	36.3	156798.6	31.0	158656.1	30.3	131084.3	28.4	104075.7	13.3
2. Repurchase Agreements	47413.3	10.2	119291.7	19.9	73930.3	14.6	27573.7	5.5	54054.5	10.3	3765.5	0.8	4344.3	0.6
3. Certificates of Assignments	328.2	0.1	259.0	0.0	409.2	0.1	0.1	0.0	7.6	0.0	0.1	0.0	0.3	0.0
4. Cert. of Participation	241.0	0.1	10.6	0.0	22.0	0.0	-	-	1046.2	0.2	237.2	0.1	-	-
C. COMMERCIAL PAPERS	34655.3	7.5	23997.7	4.0	23390.8	4.6	20164.1	4.0	15650.8	3.0	18535.8	4.0	16950.4	2.2
1. Non-financial	22761.7	4.9	8948.8	1.5	13085.3	2.6	19912.5	3.9	15650.4	3.0	18440.5	4.0	16833.4	2.2
2. Financial	11893.6	2.6	15048.9	2.5	10305.5	2.0	251.6	0.0	0.4	0.0	95.3	0.0	117.0	0.0
D. GOVERNMENT SECURITIES	8282.9	1.8	14859.0	2.5	46110.7	9.1	74825.7	14.8	92578.9	17.7	134445.2	29.2	351177.7	45.0
1. DBP Bonds and other securities	1213.9	0.3	6098.6	1.0	23821.7	4.7	36063.4	7.1	36875.4	7.0	37882.5	8.2	55911.1	7.2
2. CBCI's	5809.5	1.3	3861.3	0.6	603.8	0.1	13.7	0.0	23.5	0.0	2.2	0.0	-	-
3. Treasury Bills	1259.5	0.3	4899.1	0.8	21685.2	4.3	38748.5	7.7	55680.0	10.6	96560.5	21.0	295266.7	37.9
TOTAL	462822.2	100.0	600561.9	100.0	505810.9	100.0	505742.3	100.0	523417.5	100.0	460855.7	100.0	780052.0	100.0

a/ sum of monthly trading
b/ first quarter data not available

Source of basic data: Central Bank of the Philippines

average share of 9 percent of the total money market transactions compared to its average share of 33 percent in the 80s (Table 3.3).

There are pieces of evidence even as early as 1979 that banks used the funds in this market not only to cover reserve deficiencies but also for their regular operations. During 1979, despite a newly imposed reserve requirement of 5 percent for interbank borrowings the previous year,the volume of interbank loan transactions almost doubled. This may be traced to the pervasive demand for short-term funds by enterprises hit by the oil price shock during that year.

Given the favorable business climate in the banking sector with a liberalized system starting with the lifting of interest restrictions on long-term loans in 1981 and eventually short-term loans in 1982, the need for more funds for expanded banking, notably among commercial banks, necessitated the increase in the volume of funds sourced via this market. Funds sourced through this market were, likewise, relatively more attractive than deposit substitutes which carry higher reserve requirements. It may be noted that required reserves for interbank funds were lowered from 5 percent to 1 percent in 1980.

Partly, the growth of this market in the 80s could also be traced to the demand for reserves, especially among banks, due to the increase in their deposit liabilities resulting from the newly liberalized deposit rates.

Interbank borrowings were resorted to by banks to cover-up reserve deficiencies whenever these banks felt the pinch of high reserve requirements on deposit liabilities which reached as high as 24 percent in the 1984. The rash of failures among banks and quasi-banks in the early 80s which dictated the need for these financial intermediaries to remain liquid always may have also been a contributing factor to the emerging importance of this market as a ready and immediate source of funds among banks.

3.2.2 Deposit Substitutes

As the term implies, deposit substitutes are alternative means by which financial intermediaries, specifically banks and non-banks with quasi-banking licenses (NBQBs) raise funds other than traditional deposits.[26] Transactions in deposit substitutes may either be through the issuance of a debt paper by the bank or quasi-bank or through the sale or transfer to a third party of existing instruments in their portfolio for purposes of raising funds. The former are primary issues which are heretofore referred as dealer promissory notes because it is the intermediary itself which issues the debt instrument. The latter may not, however, be considered secondary instruments since the sale or transfer are done with recourse to the original subscribers. The banks or NBQBs are obligated to

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[26]This class of instruments was created under Central Bank Circular No. 438 dated November 1974. Only these instruments, classified under deposit substitutes, are allowed in quasi-banking.

redeem such issues at some specified date in the future. Strictly speaking, there is no secondary market for their debt instruments.

The following instruments comprise the deposit-substitutes market:

1. Repurchase Agreements - these are existing instruments in a financial intermediary's portfolio sold in the money market with recourse, meaning the bank or quasi-bank by mutual agreement with the buyer will buy back the instrument sometime in the future. The underlying instruments are both private and government issues.

2. Certificate of Assignment - these are instruments the right to which are transferred from the financial intermediary to the assignee in which case the latter can claim credit or interest on the instrument at some agreed time in the future. The underlying instruments are also both private or government securities.

3. Certificate of Participation - these are instruments evidencing the share of a holder, to the extent of his investment or participation in the instrument, on the interest which is payable at some future time. This enables the financial intermediary to retail debt instruments denominated in large amounts. These can either be private or government securities.

4. Dealer Promissory Notes - these are debt instruments issued by the banks and quasi-banks to investors, payable at some agreed time in the future.

The relative size of the deposit substitute market to the total volume of money market transactions deserves attention. Between 1975 to 1984, deposit substitutes accounted for more than 50 percent (see Table 3.3) of total money market transactions even averaging 75 percent during this period. This reflects the importance of this market as a secondary source of funds relative to deposits for financial intermediaries with quasi-banking functions.

The deposit substitute market has been dominated by commercial banks, the largest borrowers, who are at the same time also the largest investors (see Table 3.4a and 3.4b). As borrowers they accounted for an average share of 55 percent of total deposit substitute borrowings between 1983 to 1988 although this share has been declining lately. As lenders, they accounted for an average share of 46 percent of this market during the same period.

Investment houses as the second largest group of borrowers have of late increased their borrowings through this market from 13.6 percent in 1983 to 39 percent in 1988 (see Table 3.4a). The same can also be said among finance companies which have increased their share from 9.9 percent in 1983 to 21 percent in 1988. Together these institutions account for a share of about 39 percent of

Table 3.4a

VOLUME OF DEPOSIT SUBSTITUTE TRANSACTIONS
BY TYPE OF BORROWER, 1983-1988 a/
(in million pesos)

BORROWER	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. Commercial Banks	265251.8	73.0	185636.5	71.9	114080.1	61.9	117520.0	55.0	38028.2	28.2	42823.0	39.5
B. Investment Houses	49382.2	13.6	33874.6	13.1	34146.3	18.5	42733.9	20.0	50134.1	37.1	42268.5	39.0
C. Financing Companies	36174.5	9.9	22423.2	8.7	19510.7	10.6	29862.7	14.0	39237.4	29.0	22884.2	21.1
D. Savings Banks	7456.4	2.1	10955.5	4.2	1101.0	0.6	10064.3	4.7	7251.6	5.4	444.7	0.4
E. Other Banking Inst.	5339.4	1.5	5303.0	2.1	15534.3	8.4	13583.0	6.4	435.9	0.3	-	-
TOTAL	363604.2	100.0	258192.8	100.0	184372.5	100.0	213764.0	100.0	135087.2	100.0	108420.4	100.0

a/ sum of monthly trading; no breakdown as to borrower prior to 1983.

Source of basic data: Central Bank of the Philippines

Table 3.4b

VOLUME OF DEPOSIT SUBSTITUTE TRANSACTIONS
BY TYPE OF INVESTOR, 1983-1988 a/
(in million pesos)

INVESTOR	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. Commercial Banks	134473.0	37.0	112024.1	43.4	88786.5	48.2	126564.2	59.2	71060.5	52.6	36483.8	33.7
B. Individuals	23217.9	6.4	20660.5	8.0	21590.1	11.7	21154.7	9.9	30788.9	22.8	31851.5	29.4
C. Private Corporations	52100.8	14.3	47554.3	18.4	23225.7	12.6	12866.9	6.0	10102.6	7.5	13222.9	12.2
D. Other Banking Institutions b/	52305.5	14.4	16506.8	6.4	21480.1	11.7	11601.4	5.4	1546.7	1.1	3433.6	3.2
E. Investment Houses c/	35309.5	9.7	16134.7	6.2	815.3	0.4	901.9	0.4	12535.4	9.3	15984.7	14.7
F. Trust/Pension Fund	12764.8	3.5	7111.7	2.8	4814.8	2.6	3131.7	1.5	3340.2	2.5	3995.3	3.7
G. Rural/Thrift Banks	14608.7	4.0	6246.7	2.4	7150.2	3.9	16200.3	7.6	2615.1	1.9	2023.8	1.9
H. Government Corporations	12591.4	3.5	14043.5	5.4	7725.7	4.2	6994.7	3.3	342.1	0.3	1221.4	1.1
I. Finance Companies	20093.1	5.5	11812.3	4.6	421.3	0.2	717.8	0.3	1874.0	1.4	42.8	0.0
J. Investment Companies c/	1151.0	0.3	983.7	0.4	925.7	0.5	133.7	0.1	139.5	0.1	31.7	0.0
K. Private Insurance Companies	2712.0	0.7	1640.8	0.6	387.5	0.2	101.1	0.0	307.3	0.2	77.5	0.1
L. Government Insurance Companies d/	35.3	0.0	867.1	0.3	5105.4	2.8	13346.5	6.2	387.2	0.3	-	-
M. Lending Investors e/	751.6	0.2	1522.0	0.6	56.0	0.0	45.8	0.0	3.6	0.0	51.0	0.0
N. Security Dealers	1459.2	0.4	3.2	0.0	-	-	3.1	0.0	34.6	0.0	0.3	0.0
O. National Government	30.5	0.0	1081.3	0.4	1888.3	1.0	0.3	0.0	9.5	0.0	-	-
P. Local Government	-	-	-	-	-	-	-	-	-	-	0.1	0.0
TOTAL	363604.2	100.0	258192.8	100.0	184372.4	100.0	213764.0	100.0	135087.2	100.0	108420.4	100.0

a/ sum of monthly trading; no breakdown as to investor prior to 1983.
b/ Development Bank of the Philippines and Land Bank of the Philippines
c/ Investment houses are engaged in guaranteed underwriting while investment companies are primarily engaged in investing, reinvesting or trading in securities.
d/ Social Security System and Government Service and Insurance System
e/ Persons who use their capital for the purpose of extending all types of loans oftentimes without collateral.

Source of basic data: Central Bank of the Philippines

total borrowings through deposit substitutes between 1983 to 1988.

Individuals and private corporations are two of the largest lenders in this market aside from commercial banks accounting for an average market share of 15 percent and 12 percent, respectively, between 1983 to 1988 (see Table 3.4b). Investment houses and finance companies account for only 6.5 percent and 2 percent respectively of total investments in deposit substitutes between 1983 to 1988.

Dealer promissory notes are the most popular debt instruments among all deposit substitutes accounting for an average of 77 percent of the total volume traded for all deposit substitutes between 1975 to 1988. Repurchase agreements are only the second most popular averaging 23 percent. It seemed that financial intermediaries prefer to borrow directly through the issuance of their own instruments rather than raise funds using other securities as underlying instruments.

Starting in 1975 when deposit substitutes were already formally introduced through quasi-banking, the deposit substitute market averaged 62 percent of the total volume of money market transactions. Despite this share, however, the share of this market to total volume of money market transactions started to decline from 82 percent in 1979 to only 14 percent in 1988 (see Table 3.3).

Deposits and Deposit substitutes. There seems to be a shift in the preference in sourcing funds notably among banks. The liberal deposit rates which came during the 1980 financial reforms saw the expansion of funds coming from traditional deposits. From a peak in 1981, total outstanding deposit substitutes among commercial banks were declining showing negative growth rates from 1984 onwards while outstanding deposits have increasingly grown with an average growth rate of 43 percent for the same period (see Table 3.5). Banks find it convenient to obtain funds through deposits rather than go through the requirements of issuing their own promissory notes, given the stringent rules instituted with the collapse of a few investment and finance companies at the start of the 80s. Arguably, the decline in the volume of deposit substitutes by way of repurchase agreements can also be noted due to the decline in the use of private commercial papers as underlying instruments (Table 3.3). It will be noted in the next Section that banks had preferred to sell commercial papers directly, on a without recourse basis after the Dewey Dee Crisis in 1981 which undermined the popularity of these papers.

The preference for other sources of funds other than deposit substitutes can also be explained by the increasing reserve requirements imposed on this group of instruments from 20 percent in 1980 to as high as 24 percent during the 1984 financial crisis. Despite the same reserve requirements imposed on deposits, sourcing funds through

Table. 3.5

Level of Outstanding Deposits and Deposit Substitutes of Co. mercial Banks and Quasi-Banks

	KBs		Quasi-banks
	Deposit Subs.	Deposit	Deposit Subs.
1978	11,493	43,625	6,731
1979	11,950	55,997	8,907
1980	12,371	72,630	11,327
1981	16,452	29,261	8,598
1982	16,565	93,230	9,590
1983	17,106	116,227	8,438
1984	11,275	134,552	6,401
1985	8,608	143,017	5,434
1986	4,874	138,026	6,086
1987	3,605	151,794	7,885
1988	2,543	192,125	7,131

Source: Central Bank of the Philippines

deposit substitutes involves more paper work, since one has to comply with the minimum legal requirements of issuing debt instruments in the money market. The growth of banks' funds sourced through traditional deposits and through interbank, loans, may, therefore, be said to have come at the expense of deposit substitutes.

3.2.3 Commercial Paper

The commercial paper market will be defined here as the market for debt instruments issued by private corporations (non-financial) and financial corporations without quasi-banking licenses. This market consists of debt instruments which were issued and sold outright in the market, through the financial intermediaries, for the account of an investor.[27]

Intermediation in the commercial paper market takes three forms. First is when these commercial papers are traded as underlying instruments in deposit substitutes. This form of activity, as defined in quasi-banking, occurs when financial intermediaries buy these debt instruments,

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[27]This does not include commercial papers used as underlying instruments in deposit substitutes either in repurchase agreements, by certificates of participation or assignment. The latter were already taken-up in the deposit substitute market.

Further, for functional segregation, all commercial paper issues by financial institutions with or without quasi-banking license e.g., banks and non-bank quasi-banks for purposes of raising funds for their end-use are classified under deposit substitutes. These were also properly dealt with in the earlier section and were referred to as dealer promissory notes or simply promissory notes.

keep these in their loan portfolio and later use these as underlying instruments. Another form of trading the instrument is when the original transaction involves the commercial paper as a primary issue which the financial intermediary buys and later sells outright and without recourse as in dealership. Lastly, when there is a matching between the borrowers and the investor, in which case intermediation takes the form of brokerage.

The non-financial corporate sector, has used this market more often than the financial institutions (without quasi-banking license) in obtaining funds through the issuances of commercial papers. The data available between 1983 to 1988 show non-financial corporations accounting for an average share of 82 percent against 18 percent for financial corporations on the total volume of trading for outright sale of commercial papers in the money market (see Table 3.6a). Non-financial corporate borrowers have, between 1985 to 1988, had almost a 100 percent share in the market with financial corporate borrowers having a neglible share of the market. On the other hand, the major investors were individuals accounting for 54 percent average share on investment on commercial paper sold without recourse, followed by private corporations, 29 percent. Investments through trust and pension funds account for 11 percent of the total investment on these instruments (see Table 3.6b).

The popularity of the commercial paper as an investment alternative for those with surplus funds enabled it to

Table 3.6a

VOLUME OF COMMERCIAL PAPER TRANSACTIONS
BY TYPE OF BORROWER, 1983-1988 a/
(in million pesos)

BORROWER	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. Non-Financial	9049.1	37.7	13085.3	55.9	19912.5	98.8	15650.4	100.0	18440.5	99.5	16833.3	99.3
B. Financial	14948.6	62.3	10305.5	44.1	251.6	1.2	0.4	0.0	95.3	0.5	117.0	0.7
TOTAL	23997.7	100.0	23390.8	100.0	20164.1	100.0	15650.8	100.0	18535.8	100.0	16950.3	100.0

a/ sum of monthly trading; no breakdown as to borrower prior to 1983

Source of basic data: Central Bank of the Philippines

Table 3.6b

VOLUME OF COMMERCIAL PAPER TRANSACTIONS
BY TYPE OF INVESTOR, 1983-1988 a/
(in million pesos)

INVESTOR	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. Commercial Banks	150.5	0.6	24.2	0.1	55.3	0.3	53.7	0.3	497.4	2.7	801.2	4.7
B. Individuals	14689.4	61.2	13528.5	57.8	11260.2	55.8	7207.6	46.1	9915.1	53.5	8140.9	48.0
C. Private Corporations	6305.4	26.3	6094.6	26.1	4922.1	24.4	4218.0	27.0	5815.4	31.4	6301.1	37.2
D. Other Banking Institutions	0.5	0.0	1.0	0.0	2.7	0.0	-	-	22.3	0.1	2.5	0.0
E. Investment Houses	5.0	0.0	18.8	0.1	1.3	0.0	30.0	0.2	135.6	0.7	129.3	0.8
F. Trust/Pension Fund	1187.0	4.9	3133.6	13.4	3514.2	17.4	2693.5	17.2	853.7	4.6	964.7	5.7
G. Rural/Thrift Banks	55.7	0.2	379.6	1.6	222.2	1.1	76.4	0.5	54.1	0.3	87.9	0.5
H. Government Corporations	13.0	0.1	92.4	0.4	5.5	0.0	0.7	0.0	151.1	0.8	31.2	0.2
I. Finance Companies	1130.3	4.7	59.7	0.3	32.3	0.2	16.3	0.1	149.0	0.8	87.6	0.5
J. Investment Companies	1.1	0.0	1.0	0.0	34.8	0.2	422.3	2.7	82.6	0.4	165.1	1.0
K. Private Insurance Companies	277.4	1.2	38.9	0.2	108.7	0.5	821.8	5.3	629.1	3.4	238.6	1.4
L. Government Insurance Companies	-	-	-	-	-	-	-	-	-	-	-	-
M. Lending Investors	178.9	0.7	17.7	0.1	4.9	0.0	110.2	0.7	20.6	0.1	0.2	0.0
N. Security Dealers	0.5	0.0	1.0	0.0	-	-	0.4	0.0	1.3	0.0	-	-
O. National Government	3.0	0.0	-	-	-	-	-	-	208.5	1.1	-	-
P. Local Government	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	23997.7	100.0	23390.8	100.0	20164.1	100.0	15650.8	100.0	18535.8	100.0	16950.4	100.0

a/ sum of monthly trading; no breakdown as to investor prior to 1983.

Source of basic data: Central Bank of the Philippines

stand-out of the rest of the money market. In fact the Philippine money market had almost become synonymous to the commercial paper market. Yet, the volume of transactions involving commercial paper issues sold outright averaged only 4.2 percent of the total volume of money market transaction from 1975 to 1988 (Table 3.6c).

The high profile of the commercial paper market from the inception of the entire money market to the time it was regulated in 1972 that deserves a closer look. Corollarily, through the years, the commercial paper market has been the focus of some important banking regulations.

In the seventies, most private corporations turned their efforts towards sourcing their fund requirements via the money market. The growing number of these firms prompted the need to regulate the issuance of commercial papers as a form of control to protect investors and as a matter of achieving monetary targets. In 1975, the Securities and Exchange Commission (SEC) required all corporate issuers to seek the initial approval of the Commission before issuing commercial papers. On November of the same year, the Central Bank required all banks and non-banks quasi-banks to observe the rules of registration by the SEC regarding commercial papers. At the start of 1976, the CB issued a circular for all banks and quasi-banks to present evidence of authority when issuing instruments and/or to require from corporate

Table 3.6c

VOLUME OF MONEY MARKET TRANSACTIONS
BY INSTRUMENT, 1975-1988
(in million pesos)

INSTRUMENT	1975-1988 /a VOLUME (PM)	%
A. INTERBANK CALL LOANS	1638001.55	29.52%
B. DEPOSIT SUBSTITUTES	2943986.92	53.05%
1. Promissory Notes	2203557.97	39.71%
2. Repurchase Agreement	732481.284	13.20%
3. Certificates of Assignment	4005.66	0.07%
4. Cert. of Participation	3942.003	0.07%
C. COMMERCIAL PAPERS	233052.236	4.20%
1. Non-financial	185413.86	3.34%
2. Financial	47638.38	0.86%
D. GOVERNMENT SECURITIES	734335.943	13.23%
1. DBP bonds and other securities	198849.018	3.58%
2. CBCI's	19658.08	0.35%
3. Treasury Bills	515828.84	9.30%
TOTAL	5549376.65	100.00%

/a first quarter data for year 1975 not available

Source of basic data: Central Bank of the Philippines.

issuers this authority before selling or buying their commercial papers.

Despite the regulations introduced in 1975 to 1976, the volume of transactions involving issues of commercial papers sold without recourse increased by 12 percent. Somehow the high-yielding debt instruments were a lure to investors.

Despite the regulations on the money market brought about by the 1972 banking reforms, the Central Bank's influence to allocate financial resources through credit was severely challenged. For one commercial papers sold outright or without recourse have been outside the scope of quasi-banking and remained unregulated by the Central Bank. Further, the authority of the Central Bank as to the origin or issuer of the commercial paper is limited to financial intermediaries, e.g. banks and non-bank quasi-banks and not to private corporations.[28]

The popularity of commercial papers which promised fast and high returns also came at the time of a repressed financial system. Savers, particularly, investors had more reason to shift their saving preference from deposits,

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[28]The Securities and Exchange Commission (SEC) as the registrar of all corporations, public or private, financial (with or without quasi-banking license) or non-financial, exercises supervision on the activities of all corporations. The Central Bank's role is limited to supervising the operations of financial institutions in relation to monetary goals but does not act as a corporate watchdog.

which carried negative real rates, to such investment alternative as the attractive commercial papers.

In 1977, realizing this disparity of yields between ordinary deposits and commercial papers, the authorities imposed a 35 percent transaction tax on all primary borrowings. On the same year, the volume of transactions involving commercial paper sold outright dropped by 18.4 percent.

The money market continued to be very active in the second half of the seventies, with the emergence of some aspiring corporate giants associated with the then administration. These firms have extensively used the money market for their funding requirements. Somehow most of these corporations turned to the money market because these firms could no longer avail of credit from the banking system either because these firms had overborrowed or there was a shortfall of investment funds for lending by the financial system given the repressed regime.[29] Some of these expanding corporations even acquired their own investment houses and finance companies in order to tap funds through this market.

These investment houses and finance companies affiliated with these corporate giants became virtual "milking cows" through extensive loans accorded their mother companies or being used as conduits for investors' funds.

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[29] Lamberte (1989), pp. 38-39.

Following, the collapse in 1977 of a commercial bank which had extensive exposure to its sister investment company, the Central Bank acted to avert parallel cases in the future and to restore the confidence by the public to financial intermediaries.

In 1977, the CB issued a circular limiting the credit accommodations by non-banks to its directors, officers, stockholders, subsidiaries and affiliates. This was followed in 1978 by another regulations on interlocking directorates and officerships in banks and non-banks quasi-banks.

Despite these regulations, the commercial paper market maintained an almost invariable trading volume between 1978 to 1980. In fact its share to the total volume of transactions on the entire money market was fairly constant (Table 3.3).

During the first quarter of 1981, just as when investor confidence was about to be restored, a businessman with hundreds of millions of debt owed by his firms through the money market fled the country directly affecting 13 commercial banks and 11 investment houses and finance companies. A massive pre-termination ensued hurting heavily the non-bank quasi-banks which were highly dependent on the money market for funds. Among the first to fold up were the so called financing arms of the corporate giants.

In 1981, the volume of new issuances of commercial paper by corporations declined starting from its level in the first quarter (see Table 3.7). During 1981 and 1982, intermediaries, notably commercial banks, in an obvious maneuver to extricate themselves out of the mess sold commercial papers in the market on a without recourse basis instead of using these as underlying instruments in deposit substitutes. The volume of transactions involving outright sale of commercial papers rose relative to the volume of repurchase agreements involving private instruments (see Table 3.3). Table 3.8 shows that the volume of deposit substitute transactions involving private securities in repurchase agreements drastically dropped by 31 percent in 1981 from its level in 1980. A further decrease in this volume occurred in 1982. On this basis, the volume of commercial papers sold outright without recourse remained high during 1981 and 1982.

Before the year ended with a looming liquidity crisis threatening to affect the entire system, the CB issued various circulars to enhance stability of the market in general and to provide protection to investors in particular. Among these were:

a. the need for full disclosure of the financial standing and performance of a corporate issuer before given the authority to issue commercial papers;

b. limiting the outstanding liabilities of a corporate issuer to at most 300% of its networth;

Table 3.7

TOTAL COMMERCIAL PAPER ISSUANCES
BY REGISTERED ISSUERS, 1979-1982
(in million pesos)

	1979	1980	1981	1982
January	2874	3036	3945	2663
February	2369	3475	3609	2259
March	2591	3374	4295	2404
April	2652	3711	3699	2023
May	2844	4227	3160	2182
June	2840	3430	3226	1979
July	3033	3311	3467	1781
August	3483	3579	2709	1420
September	3259	4493	2821	1477
October	3252	3355	2791	961
November	3189	3661	2360	940
December	3002	3673	2148	663
TOTAL	35388	43325	38230	20752

Source: Licuanan, 1986

Table 3.8

VOLUME OF MONEY MARKET TRANSACTIONS
BY INSTRUMENT, 1980-1982 (in million pesos) a/

INSTRUMENT	1980		1981		1982	
	VOLUME	%	VOLUME	%	VOLUME	%
A. INTERBANK CALL LOANS	50509.3	16.6	66969.3	20.3	133593.6	28.9
B. DEPOSIT SUBSTITUTES	242083.7	79.7	237776.3	72.2	286290.5	61.9
1. Promissory Notes	144463.2	47.6	189531.8	57.5	238308.0	51.5
2. Repurchase Agreement (Priv.)	60369.7	19.9	20610.7	6.3	13840.5	3.0
3. Repurchase Agreement (Gov't.)	35290.3	11.6	27207.8	8.3	33572.8	7.3
4. Cert. of Assignment	1065.2	0.4	230.2	0.1	328.2	0.1
5. Cert. of Participation	895.3	0.3	195.8	0.1	241.0	0.1
C. COMMERCIAL PAPER	10466.0	3.4	23922.8	7.3	34655.3	7.5
1. Non-Financial	8575.9	2.8	20464.1	6.2	22761.7	4.9
2. Financial	1890.0	0.6	3458.7	1.0	11893.6	2.6
D. GOVERNMENT SECURITIES	680.9	0.2	889.6	0.3	8282.9	1.8
TOTAL	303739.9	100.0	329558.0	100.0	462822.2	100.0

a/ sum of monthly trading

Source of basic data: Central Bank of the Philippines

c. requiring corporate issuers to secure at least a 20 percent credit line from authorized banks before they can issue commercial papers;

d. providing incentives to commercial banks which issue a credit line to prospective commercial paper issuers through special credit accommodations by the Central Bank.

Also, during 1981, to prop up the market, the CB extended a massive bail out to some of these banks and non-bank quasi-banks. To discourage pre-terminations, the pre-termination clause as an option of the lender was removed from the commercial paper. In 1982, the CB also helped set-up a credit rating agency to furnish information on the creditworthiness of corporations.

The drastic drop in the volume of transactions which occurred in 1983 was expected. The 15-month transition period granted by the Central Bank to some corporations during which they could issue commercial papers without the necessary credit line, as mentioned above, already expired. With the application to all corporate issuers of the credit line requirement in 1983, the number of firms intending to issue commercial papers suddenly declined. A political crisis also began to grip the economy at that time.

From 1983 to 1988, the share in the volume of money market transactions of commercial papers sold outright averaged only 3.6 percent compared to 4.5 percent in the

second half of the seventies. Total peso volume also showed a constant decline.

3.2.4 Government Securities

Instruments in this market consist of issues by the Central Bank, e.g., Central Bank Certificate of Indebtedness (CBCIs) and CB Bills, the National Government, e.g., Treasury Bills and debt instruments of government corporations and financial institutions, e.g. DBP bonds. The scope of the government securities market as discussed here includes only the marketable type traded in the market and does not include some special CB issues, such as those used by banks and non-banks quasi-banks for branching requirements. Normally, government securities are relegated to their institutional roles as a tool for monetary and fiscal policies such as in the control of money, allocation of credit, and as instruments for public sector debt. Nevertheless, the government securities market has grown in importance relative to the entire money market especially in the 80s owing to the increasing acceptance of these instruments as a form of alternative investment.

In the 70s, the primary government securities sold without recourse to investors were the CBCIs and the Treasury Bills. Owing to their unattractive yield relative to other money market instruments such as commercial papers, the combined market share of all government securities to the volume of money market transactions averaged only 1

percent. Likewise, the growth rates of this type of market were negligible.

In most cases, issues of government securities notably CBCIs ended up in the balance sheets of financial intermediaries either as required investments to the credit policies of the government such as in the agricultural and agrarian credit programs. In 1975, repurchase agreements with the CB on the holdings of CBCIs and other government securities by banks and non-bank quasi-banks were allowed mainly as a means to control credit. Most of these instruments were also used as collaterals by financial intermediaries with CB's rediscount window.

With the banking reforms in the 80s, a rationalization program for government securities was instituted by monetary authorities to make these competitive in the market. First, starting in 1981, CBCIs, were slowly phased-out, although there were re-issues in 1983 and 1984, in favor of Treasury Bills making the latter the instrument of public debt and at the same time as a primary open-market tool by the CB. Second, a securities dealership network was instituted which included 9 commercial banks and 6 non-bank quasi-banks.

The share of this market to the total volume of money market transactions has markedly increased in 1982 with the operation of the dealership network of these 15 financial intermediaries. During the same year new Treasury Bills at competitive market rates were issued to replace

maturing CBCIs. Between 1982 to 1988, the share of this market averaged 17 percent (Table 3.3). Particularly during the financial crisis in 1984, the total volume of transactions involving government securities more than doubled from the previous year's level owing to the attractively higher yields of these instruments which was intended to moderate the liquidity expansion at that time. The Central Bank from 1983 to the 3rd quarter of 1986 has both auctioned and negotiated the sale of primary government securities such as the CBCIs and Treasury Bills. Lately, during the 80s, the dominant share of this market, particularly for Treasury Bills, has provided monetary authorities a medium to influence the rates of other instruments in the market.

The biggest investors for government securities, based on their average share between 1983-1988, are private corporations (29%), commercial banks (17%) and individuals (13%) (see Table 3.9). By instrument, for treasury bills the top three investors are private corporations, commercial banks and individuals (see Table 3.9b). For DBP Bonds and other government securities, the top investors are private corporations, other banking institutions, and commercial banks (see Table 3.9c). The phased-out CBCIs have attracted investments from trust pension funds, from government corporations, commercial banks and private corporations as well as private insurance companies (see Table 3.9d).

Table 3.9

VOLUME OF GOVERNMENT SECURITY TRANSACTIONS
BY TYPE OF INVESTOR, 1983-1988 a/
(in million pesos)

INVESTOR	1983 VOLUME	1983 %	1984 VOLUME	1984 %	1985 VOLUME	1985 %	1986 VOLUME	1986 %	1987 VOLUME	1987 %	1988 VOLUME	1988 %
A. Commercial Banks	2751.7	18.5	6443.1	14.0	8001.9	10.7	8022.3	8.7	26304.2	19.6	87049.8	24.8
B. Individuals	1242.6	8.4	6286.9	13.6	11182.0	14.9	19047.7	20.6	14153.8	10.5	38376.7	10.9
C. Private Corporations	1311.9	8.8	11790.1	25.6	23331.6	31.2	34706.9	37.5	53634.0	39.9	119024.2	33.9
D. Other Banking Institutions	3826.3	25.8	8462.5	18.4	11537.4	15.4	6858.0	7.4	3714.8	2.8	7842.8	2.2
E. Investment Houses	192.8	1.3	1309.1	2.8	532.4	0.7	48.9	0.1	832.3	0.6	22009.7	6.3
F. Trust/Pension Fund	1499.2	10.1	2984.3	6.5	5029.4	6.7	10252.1	11.1	13055.7	9.7	27696.6	7.9
G. Rural/Thrift Banks	168.9	1.1	290.7	0.6	6220.9	8.3	2059.0	2.2	3993.7	3.0	12888.1	3.7
H. Government Corporations	1672.5	11.3	2519.6	5.5	2175.5	2.9	2342.2	2.5	4466.2	3.3	12475.3	3.6
I. Finance Companies	36.5	0.2	83.5	0.2	128.5	0.2	496.2	0.5	3207.7	2.4	4595.8	1.3
J. Investment Companies	78.0	0.5	81.2	0.2	826.1	1.1	1688.2	1.8	3004.4	2.2	3705.4	1.1
K. Private Insurance Companies	2050.9	13.8	5843.3	12.7	5846.2	7.8	5875.4	6.3	3789.2	2.8	4464.6	1.3
L. Government Insurance Companies	-	-	1.9	0.0	10.4	0.0	979.8	1.1	3769.8	2.8	9676.7	2.8
M. Lending Investors	-	-	14.3	0.0	2.0	0.0	59.4	0.1	90.1	0.1	606.7	0.2
N. Security Dealers	27.8	0.2	0.4	0.0	1.3	0.0	110.0	0.1	124.0	0.1	473.0	0.1
O. National Government	-	-	-	-	-	-	32.7	0.0	305.3	0.2	287.2	0.1
P. Local Government	-	-	-	-	-	-	-	-	-	-	5.0	0.0
TOTAL	14859.0	100.0	46110.7	100.0	74825.7	100.0	92578.9	100.0	134445.2	100.0	351177.7	100.0

a/ sum of monthly trading; no breakdown as to investor prior to 1983

Source of basic data: Central Bank of the Philippines

Table 3.9a

VOLUME OF GOVERNMENT SECURITY TRANSACTIONS
BY TYPE OF BORROWER, 1983-1988 a/
(in million pesos)

BORROWER	1983 VOLUME	%	1984 VOLUME	%	1985 VOLUME	%	1986 VOLUME	%	1987 VOLUME	%	1988 VOLUME	%
A. Treasury Bills b/ (National Gov't.)	4899.1	33.0	21685.2	47.0	38748.5	51.8	55680.0	60.1	96560.5	71.8	295266.7	84.1
B. CBCI's b/ (Central Bank)	3861.3	26.0	603.8	1.3	13.7	0.0	23.5	0.0	2.2	0.0	-	-
C. DBP Bonds	111.7	0.8	350.7	0.8	20.0	0.0	-	-	262.1	0.2	136.8	0.0
D. Other Government Inst.	5986.9	40.3	23471.0	50.9	36043.4	48.2	36875.4	39.8	37620.4	28.0	55774.4	15.9
TOTAL	14859.0	100.0	46110.7	100.0	74825.7	100.0	92578.9	100.0	134445.2	100.0	351177.8	100.0

a/ sum of monthly trading; no breakdown as to borrower prior to 1983
b/ all maturities

Source of basic data: Central Bank of the Philippines

Table 3.9b

VOLUME OF TREASURY BILL TRANSACTIONS
BY TYPE OF INVESTOR, 1983-1988 a/
(in million pesos)

INVESTOR	1983 VOLUME	1983 %	1984 VOLUME	1984 %	1985 VOLUME	1985 %	1986 VOLUME	1986 %	1987 VOLUME	1987 %	1988 VOLUME	1988 %
A. Commercial Banks	1480.8	30.2	4936.7	22.8	4617.7	11.9	6954.7	12.5	18878.4	19.6	78112.6	26.5
B. Individuals	636.1	13.0	3618.4	16.7	7021.7	18.1	15102.0	27.1	11444.8	11.9	35425.4	12.0
C. Private Corporations	517.6	10.6	7538.9	34.8	14768.7	38.1	18432.5	33.1	33339.3	34.5	90103.0	30.5
D. Other Banking Institutions	535.8	10.9	318.4	1.5	138.8	0.4	276.9	0.5	2714.6	2.8	5824.4	2.0
E. Investment Houses	92.3	1.9	1.6	0.0	264.9	0.7	40.7	0.1	783.3	0.8	19457.2	6.6
F. Trust/Pension Fund	261.5	5.3	994.7	4.6	1962.8	5.1	6036.2	10.8	11043.8	11.4	25567.5	8.7
G. Rural/Thrift Banks	38.4	0.8	221.0	1.0	4631.9	12.0	1217.0	2.2	3248.1	3.4	11691.8	4.0
H. Government Corporations	1.0	0.0	-	-	703.5	1.8	2174.4	3.9	2647.5	2.7	9056.9	3.1
I. Finance Companies	2.5	0.1	50.6	0.2	105.8	0.3	287.9	0.5	2811.4	2.9	4143.2	1.4
J. Investment Companies	67.8	1.4	-	-	151.6	0.4	858.8	1.5	2960.2	3.1	3541.5	1.2
K. Private Insurance Companies	1265.4	25.8	4005.1	18.5	4368.4	11.3	4180.5	7.5	3110.7	3.2	3538.0	1.2
L. Government Insurance Companies	-	-	-	-	9.4	0.0	7.0	0.0	3203.5	3.3	7744.9	2.6
M. Lending Investors	-	-	-	-	2.0	0.0	2.8	0.0	52.2	0.1	604.7	0.2
N. Security Dealers	-	-	-	-	1.3	0.0	108.5	0.2	77.2	0.1	435.3	0.1
O. National Government	-	-	-	-	-	-	-	-	245.4	0.3	15.2	0.0
P. Local Government	-	-	-	-	-	-	-	-	-	-	5.0	0.0
TOTAL	4899.1	100.0	21685.2	100.0	38748.5	100.0	55680.0	100.0	96560.5	100.0	295266.7	100.0

a/ sum of monthly trading; no breakdown as to investor prior to 1983.

Source of basic data: Central Bank of the Philippines

Table 3.9c

VOLUME OF DBP BONDS AND OTHER GOVERNMENT SECURITY TRANSACTIONS
BY TYPE OF INVESTOR, 1983-1988 a/
(in million pesos)

INVESTOR	1983 VOLUME	1983 %	1984 VOLUME	1984 %	1985 VOLUME	1985 %	1986 VOLUME	1986 %	1987 VOLUME	1987 %	1988 VOLUME	1988 %
A. Commercial Banks	780.5	12.8	1322.6	5.6	3379.4	9.4	1067.7	2.9	7423.7	19.6	8937.2	16.0
B. Individuals	297.0	4.9	2640.8	11.1	4159.0	11.5	3945.7	10.7	2709.0	7.2	2951.3	5.3
C. Private Corporations	386.5	6.3	4019.3	16.9	8558.4	23.7	16251.4	44.1	20294.5	53.6	28921.2	51.7
D. Other Banking Institutions	3255.4	53.4	8142.1	34.2	11398.6	31.6	6581.1	17.8	1000.2	2.6	2018.5	3.6
E. Investment Houses	46.1	0.8	1307.5	5.5	267.5	0.7	8.2	0.0	49.0	0.1	2552.4	4.6
F. Trust/Pension Fund	204.9	3.4	1920.4	8.1	3066.6	8.5	4215.9	11.4	2011.9	5.3	2129.0	3.8
G. Rural/Thrift Banks	106.1	1.7	20.3	0.1	1587.9	4.4	841.9	2.3	745.6	2.0	1196.3	2.1
H. Government Corporations	821.1	13.5	2519.6	10.6	1472.0	4.1	167.8	0.5	1818.7	4.8	3418.5	6.1
I. Finance Companies	34.0	0.6	21.9	0.1	22.8	0.1	208.3	0.6	396.3	1.0	452.6	0.8
J. Investment Companies	10.2	0.2	81.2	0.3	674.5	1.9	829.4	2.2	44.2	0.1	163.9	0.3
K. Private Insurance Companies	129.0	2.1	1809.9	7.6	1475.8	4.1	1694.4	4.6	678.4	1.8	926.7	1.7
L. Government Insurance Companies	-	-	1.9	0.0	1.0	0.0	972.8	2.6	566.3	1.5	1931.8	3.5
M. Lending Investors	-	-	14.3	0.1	-	-	56.6	0.2	37.9	0.1	2.0	0.0
N. Security Dealers	27.8	0.5	-	-	-	-	1.5	0.0	46.8	0.1	37.7	0.1
O. National Government	-	-	-	-	-	-	32.7	0.1	59.9	0.2	272.0	0.5
P. Local Government	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	6098.6	100.0	23821.7	100.0	36063.4	100.0	36875.4	100.0	37882.5	100.0	55911.1	100.0

a/ sum of monthly trading; no breakdown as to investor prior to 1983.

Source of basic data: Central Bank of the Philippines

Table 3.9d

VOLUME OF CBCI TRANSACTIONS
BY TYPE OF INVESTOR, 1983-1988 a/
(in million pesos)

INVESTOR	1983 VOLUME	1983 %	1984 VOLUME	1984 %	1985 VOLUME	1985 %	1986 VOLUME	1986 %	1987 VOLUME	1987 %	1988 VOLUME	1988 %
A. Commercial Banks	490.4	12.7	183.8	30.4	4.9	35.3	-	-	2.1	95.1	-	-
B. Individuals	309.5	8.0	27.7	4.6	1.4	9.8	-	-	-	-	-	-
C. Private Corporations	407.8	10.6	231.8	38.4	4.5	32.9	23.0	97.9	0.1	4.9	-	-
D. Other Banking Institutions	35.1	0.9	2.0	0.3	-	-	-	-	-	-	-	-
E. Investment Houses	54.4	1.4	-	-	-	-	-	-	-	-	-	-
F. Trust/Pension Fund	1032.8	26.7	69.3	11.5	-	-	-	-	-	-	-	-
G. Rural/Thrift Banks	24.5	0.6	49.5	8.2	1.0	7.3	-	-	-	-	-	-
H. Government Corporations	850.4	22.0	-	-	-	-	-	-	-	-	-	-
I. Finance Companies	-	-	11.0	1.8	-	-	-	-	-	-	-	-
J. Investment Companies	-	-	-	-	-	-	-	-	-	-	-	-
K. Private Insurance Companies	656.4	17.0	28.2	4.7	2.0	14.6	0.5	2.1	-	-	-	-
L. Government Insurance Companies	-	-	-	-	-	-	-	-	-	-	-	-
M. Lending Investors	-	-	-	-	-	-	-	-	-	-	-	-
N. Security Dealers	-	-	0.4	0.1	-	-	-	-	-	-	-	-
O. National Government	-	-	-	-	-	-	-	-	-	-	-	-
P. Local Government	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	3861.3	100.0	603.8	100.0	13.7	100.0	23.5	100.0	2.2	100.0	-	-

a/ sum of monthly trading; no breakdown as to investor prior to 1983.

Source of basic data: Central Bank of the Philippines

3.3 The Foreign Exchange Market

A total of twenty currencies comprise the basket of foreign currencies traded at official rates in the foreign exchange market. Of the twenty, twelve form part of the official reserves of the Philippines led by the US dollar.[50] The US dollar is considered the major currency mainly because of the traditional ties of the peso to the dollar. After the shift from a fixed foreign exchange rate regime to a "managed" floating rate in February 1970, the US dollar has been the major currency for intervention in the foreign exchange market by monetary authorities.

Trading in the foreign exchange market involves both forward and spot transactions. The peso-dollar exchange rate is based from the results of the previous day's trading participated by banks at the FOREX Trading Center.[51] The rates of the peso against the other currencies are based on the rates at New York as well as the existing peso-dollar exchange rate. Beginning in the 70's, the Central Bank exercised direct control over the movement of the peso against the US dollar through intervention at the trading

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[50] Currencies as official reserves: US Dollar, Japanese Yen, Pound Sterling, Canadian Dollar, Swiss Franc, Deutsche Mark, French Franc, Dutch Guilder, Austrian Schilling, Hongkong Dollar, Singapore Dollar, Belgian Franc.

[51] The CB allows all authorized foreign exchange dealers to quote spot buying and selling rates by a certain percentage below and above the guiding rate. The guiding rate is the weighted average of the rates for all sales made off-floor of the trading center and is posted daily at the beginning of each day.

floor. Starting in 1972, there was a marked increase in CB intervention. Pante points out that as a percentage of foreign exchange transactions among commercial banks, CB purchases and sales of dollar increased from 9.4 percent in 1970 to 60 percent in 1972.[32]

For the rest of the 70's, it was an adopted official policy by monetary authorities to defend the peso against the dollar, a task quite formidable given the persistent current account deficit experienced by the economy during the period.[33] Devaluation of the peso was allowed during the period 1973 to 1981 but at a minimal rate. Between 1973 to 1981, the peso depreciated by only 20.1 percent compared to 64 percent between 1970 to 1973. Much of the effort to prop-up the value of the peso during the period characterized by balance of payment difficulty due to the 1973-74 oil crisis, was focused on the massive foreign borrowings by monetary authorities. These were intended mainly to build-up international reserves in order to shield the peso against undue speculation given a worsening current account balance. Bautista explains that authorities adopted this policy because of the scare brought about by the unexpected current account deficit in 1974 and the perceived instability in the world market at that time.[34]

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[32]Filologo Pante, Jr. "Exchange Rate Flexibility and Intervention Policy in the Philippines, 1973-1981. PIDS Staff Paper 83-01 (February 1983).

[33]CB Annual Report, 1970: "Generally, the Central Bank (or an agent acting on its behalf) stand ready to provide foreign exchange at the current rate to maintain the stability of the exchange rate".

[34]R.M. Bautista, "The Balance of Payments Adjustment Process in the Philippines." Paper presented at the UNCTAD/UNDP Round Expert Group Meeting on the Balance of Payments Adjustment in Development Countries (1978).

This resulted in an overvalued peso which penalized exports but rewarded imports further aggravating an existing current account deficit. A drastic devaluation was inevitable when the country experienced a severe balance of payments crises in 1983. Between 1983 to 1984, the peso was devalued twice mainly to discourage imports. Likewise, several exchange rate control measures were implemented. Among these were:

(a) requiring all non-bank authorized foreign exchange dealers to sell to the CB US$100,000 a month;

(b) instituting a dollar pooling scheme for priority uses by requiring all banks to sell all dollar receipts to CB;

(c) imposing a 10 percent excise tax on all foreign exchange sold by the CB or any of its authorized foreign exchange dealers;

(d) giving banks access to the CB's special credit facility for sales to CB of any of the acceptable foreign currencies and/or deposits of US dollar notes.

Further, the CB imposed stricter standards in approving all foreign borrowings and guarantees limiting these to high priority projects, refinancing of maturing obligations and working capital only for overseas projects. Allowable foreign exchange allowed Philipine overseas companies were reduced and monitoring of debt obligations by the private

sector was imposed by requiring these to submit monthly reports on all foreign obligations.

The BOP crisis of 1983-84 unmasked the inherent weakness of the peso vis-a-vis the dollar. The Philippines was no stranger to unfavorable trade developments in the 80s since the country has also experienced balance of payment difficulties in the 70s. The only difference is that in earlier periods the peso was artificially strengthened by a strong capital account.

Not until the 80s that speculations on the peso-dollar rate became more evident given the pattern on which the exchange rate began to continuously deteriorate. Starting in 1980, the strong dollar, the recession in most industrial economies, and the country's debt service began to exact a toll on the country's reserves. Monetary authorities tried to stave-off speculations by steadily but gradually allowing the peso to depreciate. Debtors and traders have sought forward exchange cover through swaps. Financial intermediaries notably commercial banks have also been active participants in the market. Table 3.10 shows that total dollars bought from CB exceeded dollars sold in the future exchange market indicating that banks are profiting from the dollar trade. In effect the CB has been providing these banks dollar subsidies.

Realizing the futility of further defending the peso as well as the need to let the peso seek its real value, all exchange controls were lifted in 1984. The CB also finally

Table 3.10

OUTSTANDING VOLUME OF FORWARD EXCHANGE CONTRACTS
BY COMMERCIAL BANKS, 1978-1988 a/
(in million pesos)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
1. Bought	7566	13693	20902	25131	34265	49574	70518	31976	24140	23945	26781
2. Sold	4368	9013	15281	19493	24537	34146	48489	10570	9227	10970	12561
TOTAL	11934	22706	36183	44624	58802	83720	119007	42546	33367	34915	39342

a/ year-end figures

Source: Central Bank of the Philippines

stopped accommodating, forward exchange covers due to heavy losses when a brief unrestricted trading sharply depreciated the peso from P14.002 in Oct. 1983 to P18.002 in June 1984.

Developments in the foreign exchange market have also influenced measures on the money market. The intensified marketing of CBCIs and lately T-Bills, a strategy used during 1983-84 to mop up excess liquidity, was adopted partly to minimize speculations on the dollar. At present, however, the CB still exercises the option to intervene in the trading at the flow of the FOREX Center as a measure to maintain the existing rate and/or prevent severe fluctuations in pursuit of monetary and economic targets.

3.4 Key Events

In the early part of 1981 the Philippine economy experienced a major financial crisis when Dewey Dee, a prominent Filipino-Chinese businessman, suddenly fled the country leaving behind P635 million (or 2.7 percent of the country's money supply) in unpaid debts. The sources of these debts were unsecured loans from several financial institutions, overborrowing from the money market, and loans from foreign banks with Central Bank approval. When this scandal surfaced public reaction was instantaneous: money market placements were pre-terminated and deposits withdrawn to be placed in what were believed to be safer repositories such as local branches of foreign banks. In the wake of this crisis, several institutions which had actively participated in the money market went bankrupt.

Subsequently there was a decline in the commercial paper market and in the importance of investment houses and financial institutions as money market institutions. On the whole, however, the money still grew by 8.5 percent in 1981 which was slightly lower than the 1976-80 average growth rate of 12 percent.

The most recent economic crisis occurred in 1983 when the Philippines experienced severe balance-of-payments difficulties. Although this particular BOP crisis has had long historical roots, it was the Aquino assassination and the Central Bank disclosures on international reserves that precipitated the crisis. During this period, international lending institutions ceased further lending to the Philippines and called in their maturing loans in the second half of 1983.

The response to the crisis in the monetary sector was generally restrictive and deflationary. Reserve requirements were increased, the Central Bank rediscounting window was practically closed and the CB bills which carried relatively high interest rates were introduced to help mop up excess liquidity. Although the unprecedentedly high rates offered on these bills seemed to have arrested capital outflows that might have put further pressure on the peso, they induced high interest rates in the whole system, resulting in massive decline in trade and inventory financing.

4.0 Effect of Policy on Performance of the Money Market

In this section we attempt to relate specific policies implemented during the period 1975-88 to the behavior of the money market as reflected in the data. To facilitate the analysis, the relevant figures are summarized into various performance measures which were based on those recommended in the terms of reference.[35] The way these performance measures are computed is discussed in Section 4.1. These numbers were then subjected to statistical tests and qualitative analysis. Based on the result of these exercises some broad conclusions were made on the effect of policy on efficiency and stability of the market. The rest of section 4 takes care of the last two topics.

4.1 Performance Measures

Behavior of the money market will be analyzed along two dimensions, namely: efficiency and stability. The former is to be evaluated in terms of whether the interest rate of the principal instruments in a given market moves in consonance with some reference interest rate, and also that the spreads between the reference rate and the particular market rate are consistent with reasonable differences in risk or transactions cost.[36] A more rigorous definition states that

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[35] See PIFS (May 1988).

[36] Definition obtained from Cole, Slade, et al. (1990).

a market is considered efficient when prices and interest rates of money market instruments correctly reflect available information.

In order to identify a reference rate we applied a *unit root test* to the rates of various instruments. (The test and the results are presented in Appendix 3.) The first difference of those rates that were determined to have unit roots were then checked if they exhibited a pattern that closely follows the assumptions of independent and identically distributed error terms (i.i.d.). The objective of such a combination of tests is to determine whether the behavior of a particular market follows a *random walk*; if such is the case then the market is considered to be efficient since a random walk indicates that all information is being fully utilized by the agents involved, effectively discounting the possibility of arbitrage resulting in economic profits.

Many rates were considered as the possible reference rate, namely: the 91-day Treasury bill rate, the Interbank Call Loan rate, Promissory Notes (selected maturities), Government Repurchase Agreements (selected maturities), and Private Repurchase Agreements (selected maturities) . While several rates qualified as the reference rate, we decided to adopt the 91-day Treasury Bill rate for this purpose for the following reasons. First, it is the most widely quoted rate, with bankers using it as a basis for setting lending

rates. Second, government issued securities are mostly in the form of 91-day Treasury bills. Lastly, in different econometric studies concerning the linkage between real and financial sectors, it is the 91-day Treasury bill rate that has consistently turned out to be a significant transmission mechanism.

A direct measure of operating efficiency is the spread between the price of funds in the market under study and the reference rate. If r is the market rate, the spread is computed to be $r - \delta$ where δ is the reference rate. We computed the monthly spreads for a selected subset of instruments and then computed an annual average [equal to $\Sigma(r - \delta)/12$]. We term this measure the average spread.

An indirect measure of operating efficiency is liquidity. A market for an intermediated instrument is considered liquid, or deep and broad if it has many suppliers and borrowers over a wide range of prices. We simplified our analysis by using as a measure of liquidity the monthly range of interest rates, averaged over a whole year. The range is defined to be the difference between the highest rate and lowest rate accepted by the seller of the instrument.[37] We term this measure the range average. However, in the subsequent analysis it was observed that

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[37]Most of rates presented are those of primary issues. Thus high and low rates are bidders' offers accepted by the sellers. Technically this would not reflect a high and low rate for a particular transaction but rather for a particular period of time.

this measure could also be an indicator of the stability of the market especially since the range, like the variance, is a measure of dispersion.

A second indirect measure of operating efficiency is the concentration of financial institutions in the market. A small number of financial institutions in the market would reduce efficiency by permitting collusion in the pricing of financial services. We counted the number of institutions who held approximately 55 percent of the market share and compared it across time.

Stability was relatively difficult to measure for this study. It was suggested to use the variance in the price and volume as an indicator of stability with a smaller variance indicative of greater stability in the money market. However, data on the variance of a particular instrument's rate over a monthly period was not readily available. An alternative was to compute the variance across the 12-month period although such a figure is of limited usefulness compared to an average monthly variance.

4.2 Data Analysis

4.2.1 The Effect of Policy

At its inception the money market was allowed to develop in a relatively unregulated atmosphere until its rapid expansion was deemed detrimental to the growth of the real sector. Beginning in 1973, the money market was

subjected to various regulations and controls culminating in the CB policy of 1977 wherein the different instruments were slapped a 35 percent tax and ceilings were imposed on the interest rates of deposit substitutes. It has been hypothesized that controls on pricing within the money market will decrease the efficiency, but may increase the stability, of those markets.

This hypothesis cannot be effectively tested due to lack of complete data for the period 1975-81 (in fact data for 1981 is missing for almost all instruments). However, data for the years when these were available are presented in Table 4.1. It should be noted that the range average declined markedly from 1975 to 1977 and again from 1977 to 1980. Granted that the range average is a measure of liquidity, the downward movement in the figures implies a narrower band within which interest rates fluctuated and hence a decline in efficiency. But this analysis is not supported by the direct indicator of operating efficiency which is the spread average.

Looking at Table 4.1, the figures for 1977 and 1980 are smaller in absolute value than those of 1975. Assuming that these years are representative of the general trend, it would seem that efficiency in the money market generally increased. But such a conclusion may be misleading since even the 91-day T-bill rate experienced a similar decrease in its range average. (Please refer to Figure 4.1.) One

TABLE 4.1
SPREAD AND RANGE AVERAGE BEFORE 1981

A. SPREAD AVERAGE

INSTRUMENT	YEAR 1975	1976	1977	1978	1979	1980
1. Interbank Call Loans	1.362	1.225	1.076	-0.397	1.319	-0.266
2. Promissory Notes (Demand)	4.306	-	1.690	-	-	0.072
3. Promissory Notes (1-7 Day Maturity)	2.228	-	2.432	-	-	0.621
4. Promissory Notes (8-15 Day Maturity)	3.060	-	1.358	-	-	1.216
5. Promissory Notes (31-45 Day Maturity)	4.519	-	1.972	-	-	2.726
6. Gov't. Repurchase Agreement (Demand)	4.870	-	2.177	-	-	0.154
7. Gov't. Repurchase Agreement (1-7 Day Maturity)	2.294	-	2.610	-	-	-0.279
8. Gov't. Repurchase Agreement (8-15 Day Maturity)	2.431	-	1.969	-	-	1.767
9. Gov't. Repurchase Agreement (16-30 Day Maturity)	3.657	-	1.167	-	-	2.143
10. Priv. Repurchase Agreement (Demand)	6.009	-	2.793	-	-	-0.270
11. Priv. Repurchase Agreement (1-7 Day Maturity)	4.036	-	1.107	-	-	-1.621
12. Priv. Repurchase Agreement (31-45 Day Maturity)	5.298	-	2.958	-	-	3.193
13. Commercial Papers (Non-Financial)	5.441	3.904	2.668	0.537	2.064	3.923
14. Commercial Papers (Financial)	4.252	4.307	3.094	0.383	3.143	5.277

B. RANGE AVERAGE

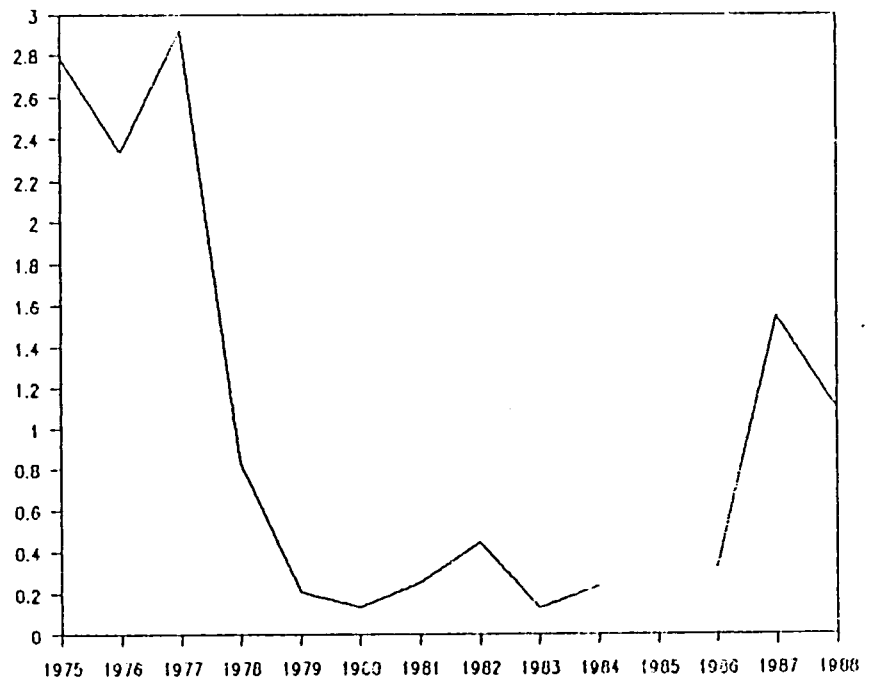
INSTRUMENT	YEAR 1975	1976	1977	1978	1979	1980
1. Interbank Call Loans	12.357	-	13.800	-	-	10.096
2. Promissory Notes (Demand)	38.821	-	15.111	-	-	11.118
3. Promissory Notes (1-7 Day Maturity)	30.000	-	10.333	-	-	1.644
4. Promissory Notes (8-15 Day Maturity)	22.357	-	15.111	-	-	2.388
5. Promissory Notes (31-45 Day Maturity)	19.107	-	14.106	-	-	4.445
6. Gov't. Repurchase Agreement (Demand)	32.786	-	13.778	-	-	8.900
7. Gov't. Repurchase Agreement (1-7 Day Maturity)	20.518	-	5.361	-	-	2.746
8. Gov't. Repurchase Agreement (8-15 Day Maturity)	13.821	-	7.722	-	-	1.488
9. Gov't. Repurchase Agreement (16-30 Day Maturity)	15.221	-	7.750	-	-	1.634
10. Priv. Repurchase Agreement (Demand)	38.143	-	13.611	-	-	6.755
11. Priv. Repurchase Agreement (1-7 Day Maturity)	28.861	-	8.367	-	-	1.499
12. Priv. Repurchase Agreement (31-45 Day Maturity)	17.786	-	9.409	-	-	2.792
13. Commercial Papers (Non-Financial)	26.357	-	22.636	-	-	9.530
14. Commercial Papers (Financial)	15.036	-	12.525	-	-	10.804

Source of Basic Data: Central Bank of the Philippines

Figure 4.1
91-day T-bill Rate Range Average, 1975-88

RANGE AVERAGE: 91-DAY TBILL RATE

YEAR	RATE
1975	2.7849
1976	2.3369
1977	2.9150
1978	0.8331
1979	0.2085
1980	0.1316
1981	0.2478
1982	0.4478
1983	0.1256
1984*	0.2359
1985	N.A.
1986*	0.3204
1987	1.5455
1988	1.0976



* 1984 data based on Jun-Jul
1986 data based on Oct-Dec

Source of basic data: Central Bank of the Philippines

may surmise that the repression prevailing in the financial system at that time led to a general narrowing of the range within which interest rates could fluctuate, whether the latter were from an efficient market or not.

The range average could also be interpreted to mean that there was greater stability in the market. This is likely since this measure experienced a big jump in 1982 compared to the figures in 1980. This is readily observed when comparing Table 4.1 to Figure 4.2. Right in the middle of these two years is the occurrence of the Dewey Dee crisis (as described in Section 3.3). It is highly probable that the scandal induced greater instability in the market which is then reflected in the data.

A slight complication arises though as a result of the fact that it was during the same year of the financial crisis that the Central Bank began implementing its liberalization program. While this may have also contributed to the significant increase in the market's instability, theoretically efficiency should have also been enhanced. Following the definition of a liquid market and its relation to efficiency, the rise in the range average could also be attributed to the increase in efficiency. The latter could also be gleaned from the

relatively low spread average for instruments with an on demand maturity.[30]

From this discussion we conclude that the range average is both an indicator of stability and efficiency. As for the spread average, in a regime of controlled interest rates this measure ceases to be a reliable gauge of efficiency. One could also look at Figures 4.2 and 4.3 and observe data points during the crisis year 1984 for instruments with on demand maturities. There is a high correlation (albeit negative) between the spread average and the range average.

Thus far adequate evidence has been presented to support the hypothesis that controls on pricing will lead to a decline in efficiency but an increase in stability. During the time that the money market was effectively regulated, the range average declined. After the liberalization program in 1981, the range average increased and this was accompanied by low values for the spread average. Further support for this conjecture is provided by running cointegration tests using the reference rate and various market rates. If two or more variables are

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[30]We choose to emphasize the behavior of instruments with an on demand maturity since these accounted for more than 60 percent of the transactions (please refer to Table 4.2). One could also observe from the graphs in Figure 4.2 and Figure 4.3 that during the period 1982-88 these instruments generally behaved in the same manner.

Table 4.2

MONEY MARKET TRANSACTIONS BY MATURITY OF PAPER
VOLUME AND SHARE, 1975-1988 /a

MATURITY	ALL YEARS VOLUME	%
A. DEMAND (IBCL)	1573651.1	34.35
B. DEMAND	1311159.3	28.62
C. 1-7 DAY MATURITY	204195.2	4.46
D. 8-15 DAY MATURITY	175859.3	3.84
E. 16-30 DAY MATURITY	431397.2	9.42
F. 31-45 DAY MATURITY	440328	9.61
G. 46-60 DAY MATURITY	184480.7	4.03
H. 61-90 DAY MATURITY	164456.2	3.59
I. 91-120 DAY MATURITY	38562.8	0.84
J. 121-180 DAY MATURITY	21545.6	0.47
K. 181-730 DAY MATURITY	22782.6	0.50
L. OVER 730 DAY MATURITY	12441.7	0.27
TOTAL	4580859.7	100.00

/a first quarter data for year 1975 not available

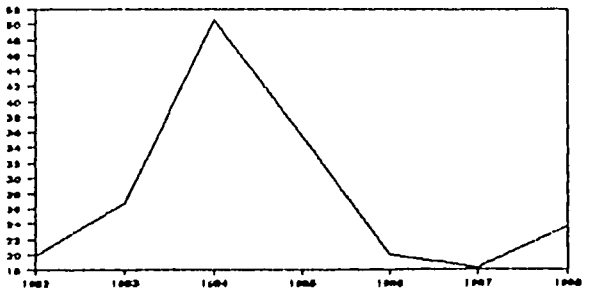
Source: Central Bank of the Philippines

Figure 4.2

Range Average, 1982-88

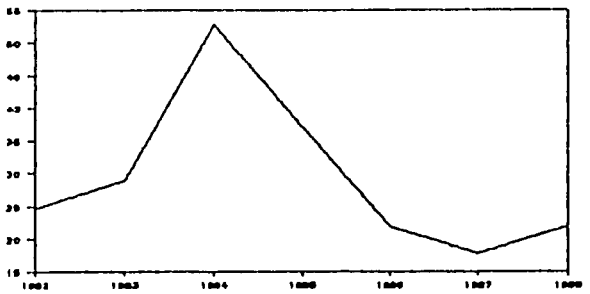
RANGE AVERAGE:INTERBANK CALL LOAN RATE

YEAR	RATE
1982	19.8333
1983	26.7083
1984	50.6667
1985	35.4583
1986	20.0455
1987	18.3229
1988	23.6603



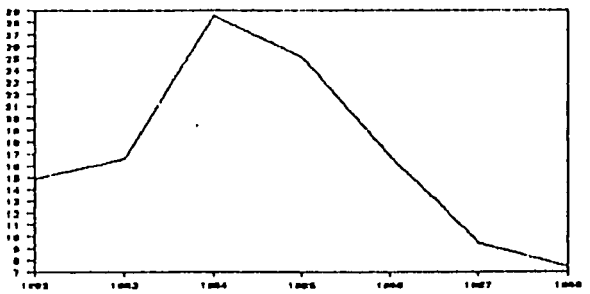
RANGE AVERAGE:PROMISSORY NOTES (Demand)

YEAR	RATE
1982	24.5417
1983	28.9063
1984	52.8500
1985	37.2500
1986	22.0455
1987	17.8342
1988	21.9671



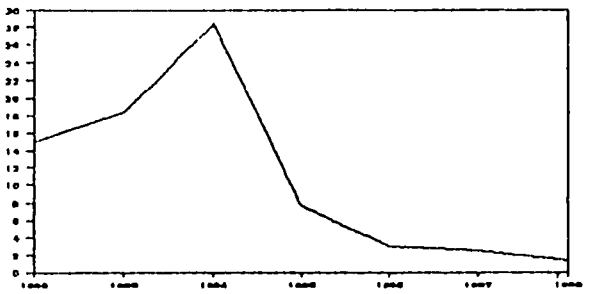
RANGE AVERAGE:PROMISSORY NOTES (1- to 7- day maturity)

YEAR	RATE
1982	14.8937
1983	16.6086
1984	28.5494
1985	25.0833
1986	16.8045
1987	9.4747
1988	7.4896



RANGE AVERAGE:PROMISSORY NOTES (8- to 15- day maturity)

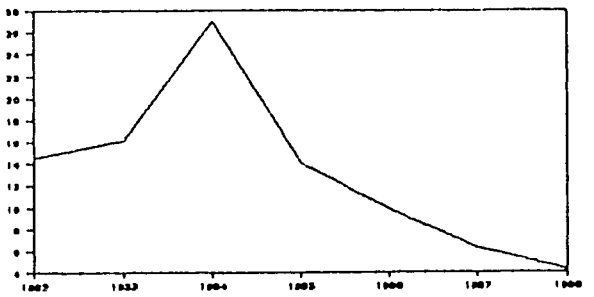
YEAR	RATE
1982	15.0125
1983	18.4093
1984	28.5271
1985	7.7569
1986	2.9722
1987	2.5000
1988	1.4286



Source of basic data: Central Bank of the Philippines

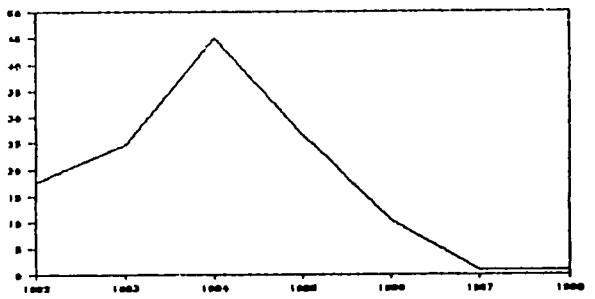
RANGE AVERAGE:PROMISSORY NOTES (31- to 45- day maturity)

YEAR	RATE
1982	14.5400
1983	16.1583
1984	27.0412
1985	14.1154
1986	9.8973
1987	6.2646
1988	4.3542



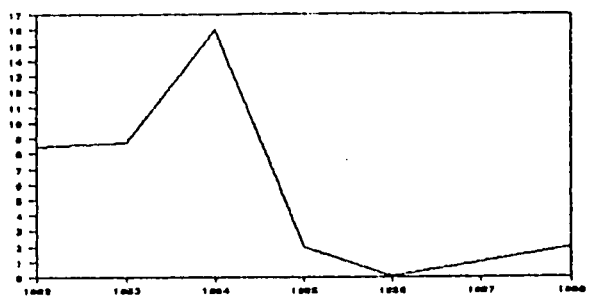
RANGE AVERAGE:GOVERNMENT REPURCHASE AGREEMENT (Demand)

YEAR	RATE
1982	17.5000
1983	24.5833
1984	45.1667
1985	26.5000
1986	10.2917
1987	0.8929
1988	0.9643



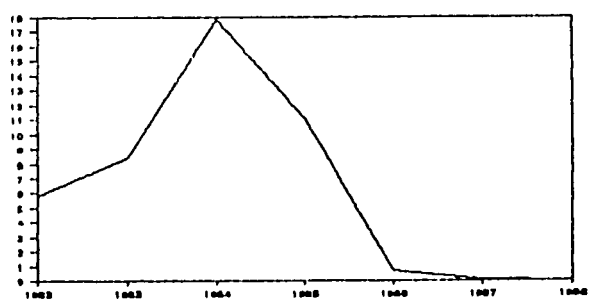
RANGE AVERAGE:GOV'T.REPURCHASE AGREEMENT (1- to 7- day mat.)

YEAR	RATE
1982	8.4715
1983	8.7509
1984	16.0490
1985	2.0000
1986	0.1166
1987	1.0000
1988	2.0000



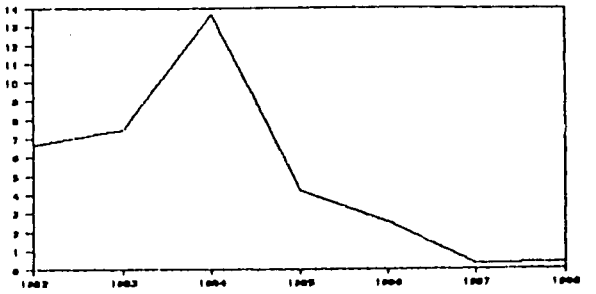
RANGE AVERAGE:GOV'T.REPURCHASE AGREEMENT (8- to 15- day mat.)

YEAR	RATE
1982	5.8125
1983	8.4163
1984	17.8875
1985	11.0000
1986	0.6580
1987	0.1000
1988	0.0000



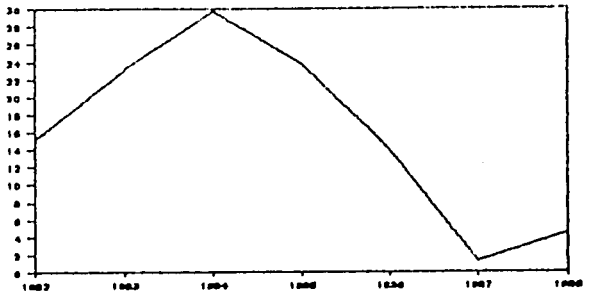
RANGE AVERAGE:GOV'T.REPURCHASE AGREEMENT (16- to 30- day mat.)

YEAR	RATE
1982	6.6883
1983	7.4817
1984	13.6692
1985	4.2292
1986	2.5375
1987	0.2813
1988	0.3571



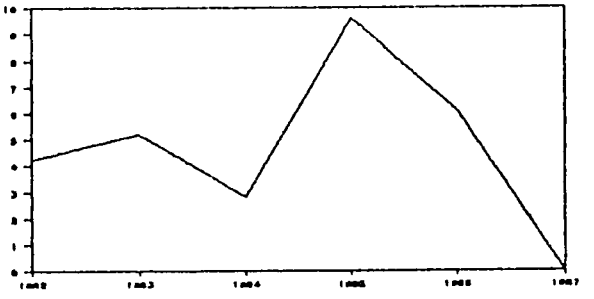
RANGE AVERAGE:PRIVATE REPURCHASE AGREEMENT (Demand)

YEAR	RATE
1982	15.0833
1983	23.2396
1984	29.7087
1985	23.7500
1986	13.9000
1987	1.2500
1988	4.5000



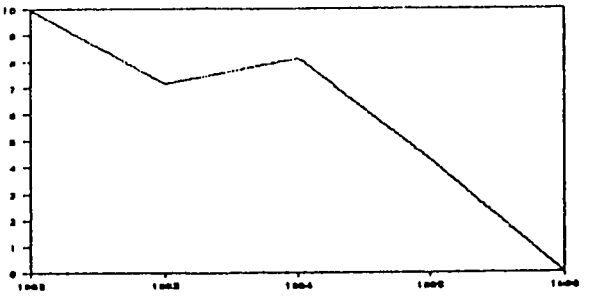
RANGE AVERAGE:PRIV.REPURCHASE AGREEMENT (1- to 7- day mat.)

YEAR	RATE
1982	4.2309
1983	5.2015
1984	2.8250
1985	9.5833
1986	6.1429
1987	0.0000



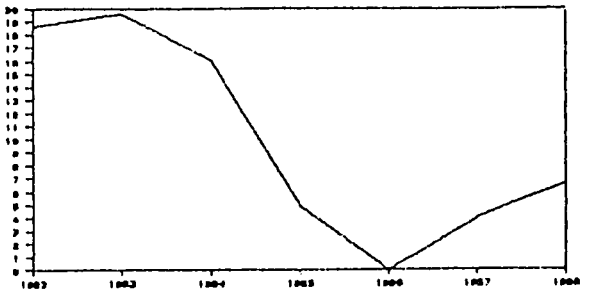
RANGE AVERAGE:PRIV.REPURCHASE AGREEMENT (31- to 45- day mat.)

YEAR	RATE
1982	9.9792
1983	7.1667
1984	8.1250
1985	4.2937
1986	0.0000



RANGE AVERAGE:COMMERCIAL PAPER W/O RECOURSE (Financial)

YEAR	RATE
1982	18.5952
1983	19.6250
1984	16.0833
1985	4.9167
1986	0.0000
1987	3.9840
1988	6.6580



RANGE AVERAGE:COMMERCIAL PAPER W/O RECOURSE (Non-Financial)

YEAR	RATE
1982	16.0173
1983	12.6250
1984	23.0833
1985	25.3187
1986	8.8125
1987	8.0167
1988	8.6231

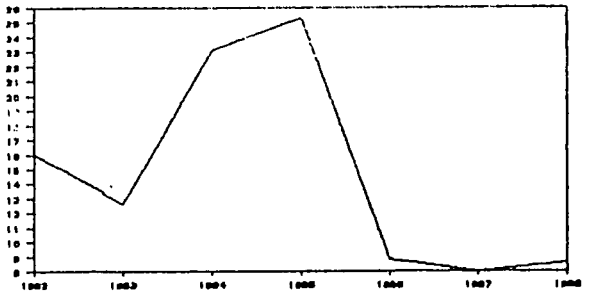
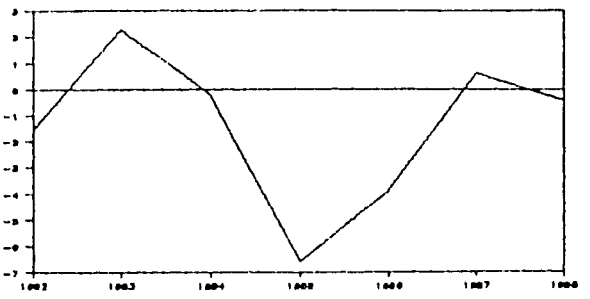


Figure 4.3
Spread Average, 1982-88

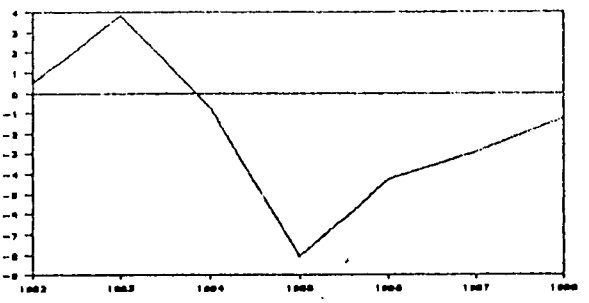
SPREAD AVERAGE:INTERBANK CALL LOAN RATE

YEAR	RATE
1982	-1.5393
1983	2.2592
1984	-0.2392
1985	-6.5628
1986	-3.8327
1987	0.6200
1988	-0.4087



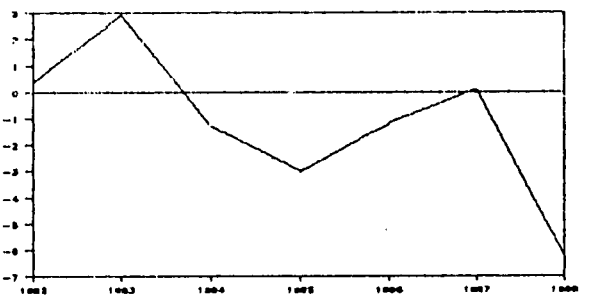
SPREAD AVERAGE:PROMISSORY NOTES (Demand)

YEAR	RATE
1982	0.5075
1983	3.8548
1984	-0.7331
1985	-8.0725
1986	-4.2906
1987	-2.9047
1988	-1.2698



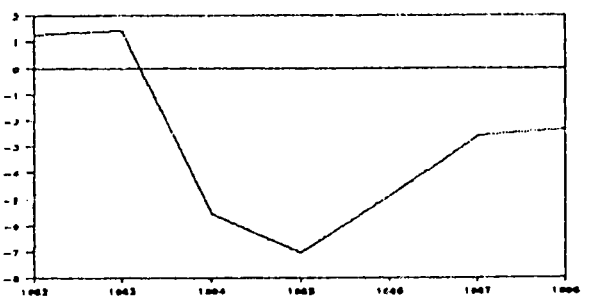
SPREAD AVERAGE:PROMISSORY NOTES (1- to 7- day maturity)

YEAR	RATE
1982	0.3593
1983	2.9279
1984	-1.2822
1985	-3.0406
1986	-1.1797
1987	0.1037
1988	-6.1987



SPREAD AVERAGE:PROMISSORY NOTES (8- to 15- day maturity)

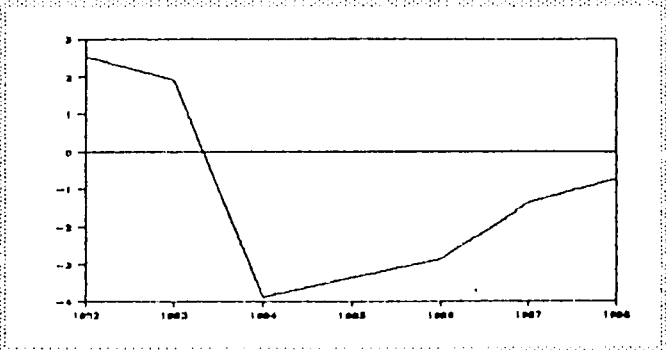
YEAR	RATE
1982	1.2645
1983	1.4376
1984	-5.5721
1985	-7.0272
1986	-4.9031
1987	-2.5684
1988	-2.3189



Source of basic data: Central Bank of the Philippines

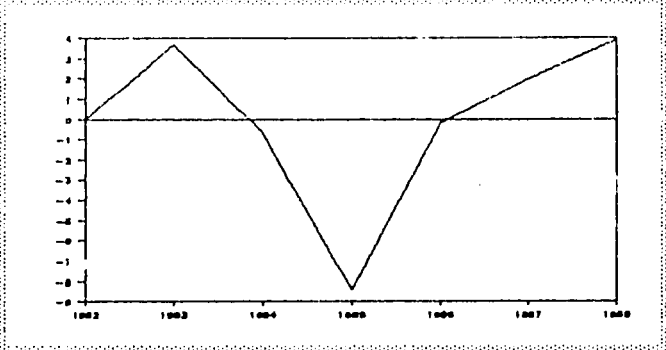
SPREAD AVERAGE:PROMISSORY NOTES (31- to 45- day maturity)

YEAR	RATE
1982	2.5438
1983	1.9020
1984	-3.8853
1985	-3.3601
1986	-2.8575
1987	-1.3620
1988	-0.7385



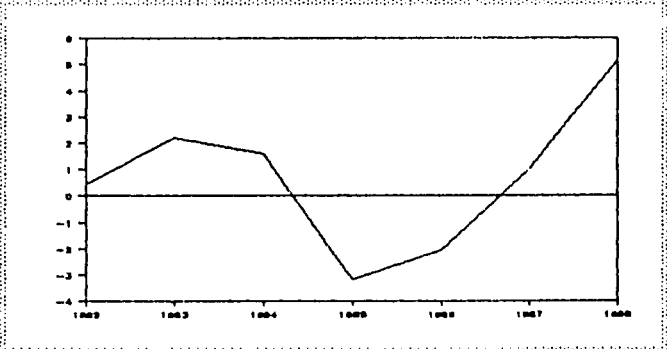
SPREAD AVERAGE:GOV'T.REPURCHASE AGREEMENT (Demand)

YEAR	RATE
1982	0.0088
1983	3.6687
1984	-0.7162
1985	-8.4082
1986	-0.2060
1987	1.9571
1988	3.9087



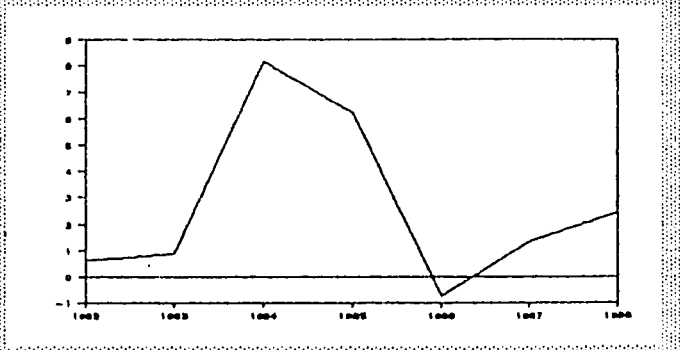
SPREAD AVERAGE:GOV'T.REPURCHASE AGREEMENT (1- to 7- day mat.)

YEAR	RATE
1982	0.4220
1983	2.1961
1984	1.5833
1985	-3.1850
1986	-2.0476
1987	1.0127
1988	5.1500



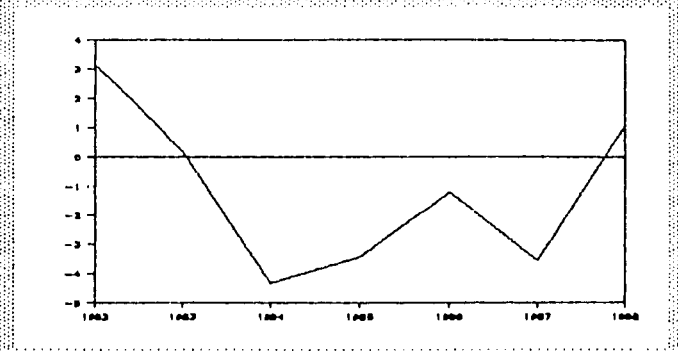
SPREAD AVERAGE:GOV'T.REPURCHASE AGREEMENT (8- to 15- day mat.)

YEAR	RATE
1982	0.6170
1983	0.8506
1984	8.1964
1985	6.2190
1986	-0.7580
1987	1.3022
1988	2.4250



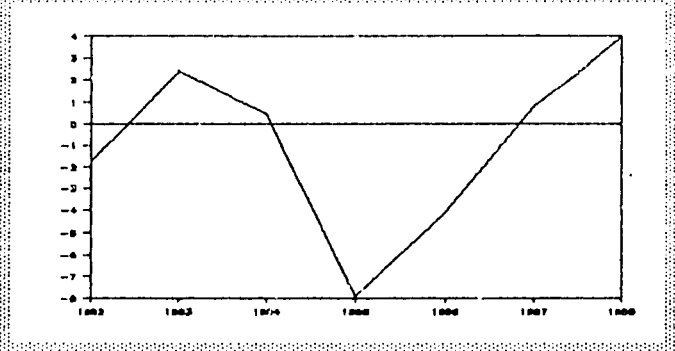
SPREAD AVERAGE:GOV'T.REPURCHASE AGREEMENT (16- to 30- day mat.)

YEAR	RATE
1982	1.1565
1983	0.1797
1984	-4.3353
1985	-3.4398
1986	-1.2024
1987	-3.5531
1988	1.0627



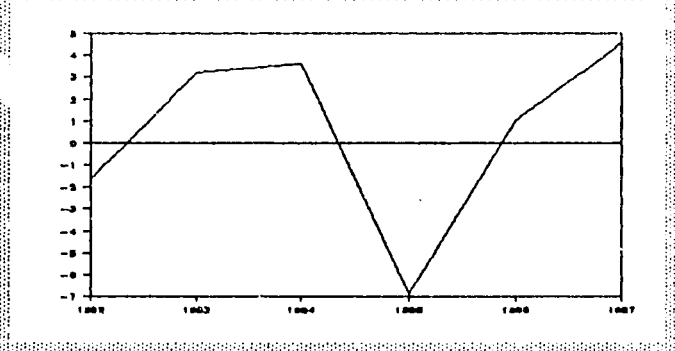
SPREAD AVERAGE:PRIVATE REPURCHASE AGREEMENT (Demand)

YEAR	RATE
1982	-1.7614
1983	2.4413
1984	0.4466
1985	-7.8724
1986	-4.0851
1987	0.7895
1988	3.9437



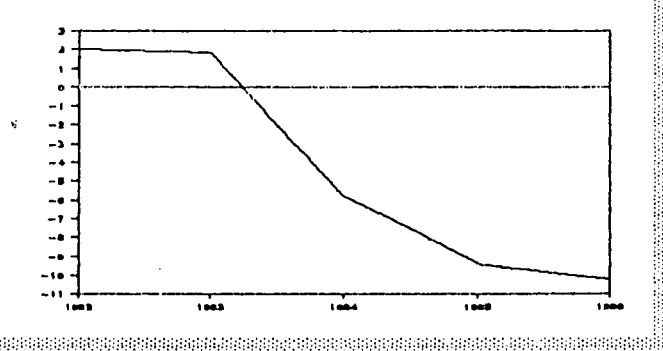
SPREAD AVERAGE:PRIV. REPURCHASE AGREEMENT (1- to 7- day mat.)

YEAR	RATE
1982	-1.6117
1983	3.2262
1984	3.5994
1985	-6.8352
1986	1.0217
1987	4.5875



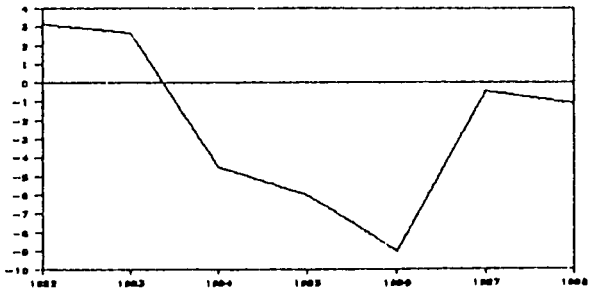
SPREAD AVERAGE:PRIV. REPURCHASE AGREEMENT (31- to 45- day mat.)

YEAR	RATE
1982	2.0440
1983	1.8730
1984	-5.7500
1985	-9.4260
1986	-10.2140



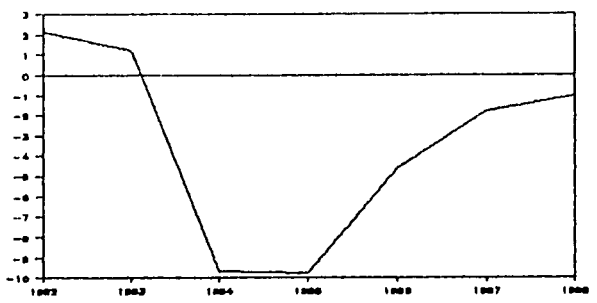
SPREAD AVERAGE:COMMERCIAL PAPER W/O RECOURSE (Financial)

YEAR	RATE
1982	3.1466
1983	2.6680
1984	-4.4919
1985	-6.0093
1986	-9.0590
1987	-0.4310
1988	-1.0550



SPREAD AVERAGE:COMMERCIAL PAPER W/O RECOURSE (Non-Financial)

YEAR	RATE
1982	2.1426
1983	1.2087
1984	-9.6758
1985	-9.7553
1986	-4.6140
1987	-1.7488
1988	-1.0033



cointegrated in the sense of Engle and Granger, there would exist an equilibrium condition among them.[37]

Table 4.3 shows the result of the cointegration tests. For almost all rates, especiall for those with on demand maturity, and when using all years where data are available we find that the market rates are cointegrated with the reference rate. On the other hand, if we divide the sample period into two subsets, one before 1981, when financial reforms were introduced, and the other after 1981, we obtain mixed results. The latter show that a market rate may not be cointegrated with the reference rate before 1981 and cointegrated later on, but not the other way around. This outcome lends support to the hypothesis that distortions were introduced by the imposition of interest rate ceilings and other forms of control. These, however, were reduced with the introduction of the liberalization program.

In 1980 the Central Bank fundamentally altered the structure of the financial system by introducing the concept of Universal Banking. By imposing a minimal capital requirement of P500 million to qualify as a universal bank, this reform act effectively regulated the number of participants and granted a privilege to a select group of financial institutions. The original objective behind the promulgation of this act was to reduce specialization and

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[37] R.F. Engle and C.W.J. Granger, "Co-Integration and Error Correction Representation, Estimation and Testing," Econometrica, 55: 2 (March 1987).

Table 4.3
Testing for Co-Integration
with 91-Day Treasury Bill Rate

INSTRUMENT	ALL YEARS	BEFORE 1981	AFTER 1981
Interbank Call Loan	Coint	NA	Coint
Promissory Notes (Demand)	Coint	Not Coint	Coint
Promissory Notes (1-7 Day)	Coint	Not Coint	Coint
Promissory Notes (8-15 Day)	Not Coint	Not Coint	Not Coint
Government Repurchase Agreement (Demand)	Coint	Not Coint	Coint
Government Repurchase Agreement (1- 7 Day)	Coint	Coint	Coint
Government Repurchase Agreement (8-15 Day)	Not Coint	Not Coint	Not Coint
Government Repurchase Agreement (16-30 Day)	Coint	Not Coint	Coint
Private Repurchase Agreement (Demand)	Coint	Not Coint	Coint
Private Repurchase Agreement (1- 7 Day)	Coint	Not Coint	Not Coint
Private Repurchase Agreement (8-15 Day)	Not Coint	Not Coint	Not Coint
Private Repurchase Agreement (31-45 Day)	Not Coint	Not Coint	Not Coint

thus eliminate market segmentation, increase allocative efficiency, and enhance the stability of the financial system. It is hypothesized, however, that the operational efficiency will decrease resulting from the potential oligopolistic structure. In this case, a more appropriate measure of efficiency is the concentration ratio defined in Section 4.1.

Table 4.4 presents the list of specific financial institutions which comprise 55 percent of the market share in trading account securities.[40] It can be seen that in 1979 14 institutions contributed to 55 percent of the market share. In 1985 the list was pruned down to 8 and the figure reached a low of 5 in 1987. What is more striking is that investment houses and financing companies were eased out completely from the picture from 1985 onward; and during the recovery years of 1986-88 it was mostly Universal Banks that dominated the scene. Judging from this data we can conclude that to the extent greater concentration is a measure of less efficiency, there has been a decline in operating efficiency in the money market. The effects of such inefficiencies have also been alluded to in Section 2.

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[40]Due to limitations in the data we are only able to present the figures for the years 1979-80 and 1985-88. However, these may be assumed to be representative periods since the 1981-85 period was one where the financial sector experienced a number of convulsions.

Table 4.4
TRADING ACCOUNT SECURITIES OF BANK AND NON-BANK FINANCIAL INTERMEDIARIES
SELECTED YEARS

1979			1980			1985		
INSTITUTION	VOLUME (PM)	%	INSTITUTION	VOLUME (PM)	%	INSTITUTION	VOLUME (PM)	%
ALLIED*	762	7.12	ATRIUM	1004	8.10	ALLIED*	2514	15.12
RCBC*	666	6.22	ALLIED*	786	6.34	BPI*	1391	8.37
AYALA INVT.	567	5.30	PNB*	761	6.14	FEBTC*	1242	7.47
METRO BANK*	555	5.18	AYALA INVT.	755	6.09	PCIB*	1131	6.80
CITIBANK*	430	4.02	STATE IHI	571	4.61	SOLID*	873	5.25
CHINA*	396	3.70	UNION*	569	4.59	CITYTRUST*	798	4.80
BANCOM	392	3.66	CHINA*	429	3.46	UCPB*	779	4.69
FILINVEST	385	3.60	ASIA-PACIFIC	415	3.35	SECURITY*	758	4.56
INV & UNDERW	375	3.50	PACIFIC*	382	3.08			
BPI*	347	3.24	BPI*	380	3.07			
PACIFIC*	320	2.99	PCIB*	350	2.82			
STATE IHI	297	2.77	METRO BANK*	348	2.81			
PBCOM*	288	2.69	BANCOM	314	2.53			
PHIL-AM	275	2.57						

1986			1987			1988		
INSTITUTION	VOLUME (PM)	%	INSTITUTION	VOLUME (PM)	%	INSTITUTION	VOLUME (PM)	%
FEBTC*	2481	13.76	PNB*	3203	18.42	PNB*	5249	20.80
BPI*	2420	13.42	FEBTC*	2945	16.94	METRO BANK*	2800	11.09
METRO BANK*	1752	9.71	PCIB*	1750	10.07	PCIB*	2181	8.64
CITYTRUST*	1252	6.94	METRO BANK*	1210	6.96	BPI*	1537	6.09
BPI FAMILY*	1157	6.42	UCBP*	1166	6.71	FEBTC*	1529	6.06
SOLIDBANK*	1100	6.10				INTERBANK*	1337	5.30

* - banks, otherwise, NBQB's

Source of basic data: Published financial statements

4.2.2 Analysis of Key Events

The effect of government policy on the behavior of the money market can also be observed by analyzing specific key events, the response of the government to any instability spawned by the occurrence of these events, and the resulting reaction of the money market. The events to be analyzed have been described in an earlier part of this paper.

The first key event listed is the Dewey Dee scandal in 1981. However, a rigorous analysis of this crisis is not possible for two reasons. First, data for the money market for 1981 was not provided by the Central Bank. And second, post-1981 data are also influenced by major policies instituted in 1980 and 1981.

Instead we focus our attention on the Balance-of-Payments crisis in 1983, triggered off by the assassination of a key political figure. Looking at Figure 4.2, we can observe that the range average for almost all instruments peaked in 1984 (this is true for all instruments with on demand maturity). Simultaneously, the spread average declined to negligible levels (again, true for all instruments with on demand maturity). However, the spread average bottomed out in 1985 and in most cases the absolute value was the greatest for the period 1982-88.

The substance of these figures can be gleaned from the sequence of policies that materialized. Because of the

increase in market instability the government sought to control the transactions involved. While these efforts met with some success, it was only at the cost of reduced efficiency. What is left unanswered is the nature of the policy response.

During the last quarter of 1984 the Central Bank began to earnestly sell the much celebrated "Jobo" bills which carried a much higher rate than other instruments.[41] The main objective for floating these attractive bonds was to arrest capital outflows. In addition the high interest rates reduced domestic absorption thus freeing resources that were used to meet external debt obligations. At this time also, the government required that all public offices invest all their surplus funds in CB bills or Treasury bills.

Other policy responses of the government to the crisis included three major currency devaluations which were accompanied by severe foreign exchange restrictions and wide ranging import controls which included the creation of a foreign exchange pool for priority import payments by

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[41] The Central Bank introduced the CB bills (or "Jobo" bills) under MB Resolution No. 416 dated 16 March 1984 but began stepping up sales of these instruments only in September. Thus the main effects were not felt until 1985. During this period transactions in Treasury bills on an auction basis were suspended and instead rates were determined on a negotiated basis. Hence while the 91-day Treasury bill rate remains as the reference rate for the period September 1984-October 1986, its value generally followed the trend of CB bills.

requiring banks to sell 100 percent of their foreign exchange receipts to the Central Bank and the setting up of priorities in the allocation of foreign exchange. Tighter money supply was also instituted by raising reserve requirements.[42]

That the portfolio restriction contributed to the decline in operating efficiency, is a hypothesis that is supported by the data. However, one critical factor that gave rise to the larger spread between the reference rate and yields of other instruments is the fact the former was held at an artificially high level. The Central Bank achieved its objective of mitigating speculative activity and financial instability by effectively choking off expenditure demand and suppressing the other sectors of the money market. Transactions in money market instruments excluding Treasury bills and interbank call loans declined rapidly during the period 1983-85 and have since not recovered (please refer to Table 3.3).

Government financial and fiscal policy following the BOP crisis of 1983 have not been fundamentally altered; the former, because of lack of any other suitable term can be described as *elitist*. A basic macroeconomic identity as modified by Cohen (1987) can be used as a reference point to describe the general thrust of government policy.

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[42]For a more detailed and exhaustive discussion of the government response to the Balance-of-Payments crisis, see Lamberte, et al (1985).

Assuming no capital accumulation and that all external debt is government debt (which closely approximates reality in the Philippines), the following identity can be derived:

$$TB = (T - G) + D - (1+\tau)D_{-1}.$$

The trade balance, TB, is the sum of the government's primary surplus (taxes, T, less government spending, G, which includes repayments on the external debt) and of the net new savings which are drained from the domestic financial markets. τ is the domestic interest rate.

The government's primary surplus in turn could be decomposed into resources from money creation or the seigniorage tax, S, and the primary surplus due to an excess of tax revenue, Z. The revised identity thus reads as:

$$TB = S + Z + D - (1+\tau)D_{-1}.$$

The increase in money supply has generally been maintained at controllable levels. Inflation since 1985 has reached a maximum of 14 percent. It can be assumed that the inflation tax has been used to the limit allowed by IMF conditionalities. The tax system has been described as regressive with the government relying heavily on indirect taxes to generate additional revenues. Estimates have also shown the tax system to be inelastic.

Putting aside the option of a currency devaluation, in order to restrain the current account deficit (caused

primarily by a currency estimated to be 22 - 25 percent overvalued), the government has to resort to domestic savings. It can do this (and as a matter of fact has done it) by making government financial instruments more attractive than other money market instruments. This in turn has led to a significant degree of crowding-out that has maintained real interest rates at a very high level, which in fact are the highest in Asia. As can be observed from Table 4.5 real interest rates have been at their highest level over the past five years. The rise in the variable G due to the external debt overhang only exacerbates the situation.

This process of course cannot be pursued indefinitely. The government, however, is generally unvarying with its conduct of policy. It avoids implementing stronger measures that would increase direct taxes while at the same it time intervenes in the exchange rate market to prevent a drastic drop in the value of the peso. The main beneficiaries of an overvalued currency are the import substituting industries which are themselves heavily import-dependent. These sectors have been favored with protectionist measures. In the same vein, the bulk of additional direct taxes would come form the upper income brackets. A high interest rate policy, on the other hand, would benefit large savers and of course the large commercial banks. Small savers are constrained to savings deposits which bear ridiculously low yields. Smaller banks

TABLE 4.5

REAL INTEREST RATE
1970-1989
(in percent)

Year	91-day T-bill Rate	Inflation Rate	Real Interest Rate
1970	13.14	14.85	-1.71
1971	11.95	21.90	-9.95
1972	11.92	8.23	3.69
1973	9.43	16.50	-7.08
1974	10.05	34.16	-24.12
1975	10.34	6.78	3.56
1976	10.19	9.23	0.96
1977	10.90	9.93	0.97
1978	10.89	7.29	3.60
1979	12.25	16.51	-4.26
1980	12.14	17.60	-5.46
1981	12.61	12.39	0.22
1982	13.81	10.21	3.60
1983	14.17	10.17	4.01
1984	30.53	50.35	-19.81
1985	26.81	23.10	3.71
1986	14.43	0.75	13.68
1987	11.39	3.79	7.60
1988	14.67	8.76	5.91
1989	19.33	10.60	8.73
1990*	26.00	13.00	13.00

* January to May 1990

SOURCE: Central Bank, Department of Economic Research

which on a relative basis are more dependent on income from loans are faced with lower demand for credit. It goes without saying that high real interest rates slow down economic growth by dampening real consumption and investment expenditures.

The net result of this combination of macroeconomic policies would a more skewed income distribution which forms a symbiotic relationship with the oligopolistic structure of the banking system. For example, smaller banks hard pressed to generate income from loans, would be hesitant to compete with larger banks by offering a higher savings deposity rate. The larger banks would simply match their rates thus negating any possible increase in the flow of savings deposits to the smaller banks. In the end the latter have at most the same volume of deposits but at a lower spread, a condition that may prove disastrous. The smaller bank would simply be content to follow the actions of their bigger counterparts.

We may conclude from this brief analysis that the macroeconomic policy stance of the government has spawned the inefficiencies in the financial system, in general, and the money market, in particular.

4.3 Some Broad Conclusions

Apart from the hypotheses that were proven one clear point stands out in the analysis: there is a trade-off between operating efficiency, on one hand, and stability, on the other. Policies designed to induce stability in the financial system have met with success only at the expense of a reduction in operating efficiency, and vice-versa.

Based on the analysis in Section 4.2 it would seem that the Central Bank has placed greater weight on the role of stability and this attitude has engendered an oligopolistic structure in the financial system that could have led to rent-seeking activity. As a result not only has development in the money market stagnated but the overall financial deepening of the economy as well. There could have also been adverse effects on the income distribution but empirical studies have to be conducted to justify this point.

It is now left to policy makers to design reforms that would assure a more efficient structure but not at the sacrifice of a financial crash.

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Appendix 1

List of Major Banks and Non-Banks With Quasi-Banking Functions

A. COMMERCIAL BANKS (KBs)

1. Expanded KBs (EKBs)

Philippine National Bank (Government)	PNB
Allied Banking Corporation	Allied
Bank of the Philippine Islands	BPI
Citytrust Banking Corporation	Citytrust
Equitable Banking Corporation	Equitable
Far East Bank and Trust Company	FEBTC
Metropolitan Bank and Trust Company	Metrobank
Philippine Commercial International Bank	PCIB
United Coconut Planters Bank	UCPB

2. Non-EKBs

Associated Bank	Associated
Boston Bank	Boston (formerly Combank)
China Banking Corporation	China Bank
International Corporate Bank	Interbank
Philippine Bank of Communications	PBCom
Philippine Banking Corporation	Philbanking
Philippine Trust Company	Philtrust
Pilipinas Bank	Pilipinas
Producers Bank of the Philippines	Producers
Prudential Bank and Trust Company	PBTC
Republic Planters Bank	Republic
Rizal Commercial Banking CorporaTION	RCBC
Security Bank	Security
Consolidated Bank and Trust Company	Solidbank
Traders Royal Bank	Traders
Union Bank of the Philippines	UBP
Family Bank	Family

3. Foreign Banks

Bank of America	BA
Standard Chartered	Chartered
Citibank	Citibank
Hongkong and Shanghai Banking Corporation	Hongkong-Shanghai

B. THRIFT BANKS

Asiatrust Development Bank	Asiatrust
Banco de Oro and Mortgage Bank	Banco de Oro
Bank of the Philippine Islands Family Bank	BPI Family Bank

C. SPECIAL GOVERNMENT BANKS

Land Bank of the Philippines	LBP
Development Bank of the Philippines	DBP

D. NON-BANKS With QUASI-BANKING Licenses (NBQBs)

1. Investment Houses

AEA Development Corporation	AEA
Ansecor Capital and Investment Corporation	Ascor
Citytrust Investment Philippines	Citicorp
First Metro Investment Corporation	First Metro
Multinational Investment Bancorporation	Multinational
Private Development Corporation of the Philippines	PDCP
State Investment House Incorporated	State IHI
Philippine Pacific Capital Corporation	PPCC

2. Finance Companies

Bank of America Finance Corporation	BA Finance
BPI Credit	BPIC
Cebu International Finance Corporation	CIFC
Citytrust Finance Corporation	Citytrust Finance
General Credit Corporation	GCC
First Malayan Leasing and Finance Coporation	Malayan
Paramount Finance Corporation	Paramount

APPENDIX 2

PESOS PER U.S. DOLLAR RATE*
1975-1989
MONTHLY AVERAGES

PERIOD	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1975	7.0664	7.0522	7.0261	7.0177	7.0178	7.0150	7.2719	7.5018	7.5091	7.5001	7.4975	7.4992
1976	7.4856	7.4693	7.4533	7.4354	7.4304	7.4309	7.4298	7.4297	7.4290	7.4283	7.4282	7.4282
1977	7.4279	7.4272	7.4262	7.4109	7.4049	7.3981	7.3961	7.3940	7.3934	7.3892	7.3869	7.3791
1978	7.3715	7.3715	7.3735	7.3668	7.3635	7.3632	7.3609	7.3617	7.3613	7.3590	7.3650	7.3712
1979	7.3762	7.3767	7.3777	7.3796	7.3783	7.3739	7.3706	7.3717	7.3722	7.3709	7.3718	7.4110
1980	7.4167	7.4179	7.4259	7.4434	7.5095	7.5209	7.5432	7.5562	7.5622	7.5669	7.5802	7.5942
1981	7.6323	7.6676	7.7303	7.7904	7.8504	7.9360	7.9491	7.9516	7.9920	8.0641	8.1009	8.1312
1982	8.2542	8.2831	8.3405	8.3792	8.4161	8.4509	8.4878	8.5293	8.6380	8.7664	8.8752	9.0594
1983	9.2865	9.4644	9.6057	9.8693	10.0316	10.3846	11.0017	11.0016	11.0018	13.7016	14.0020	14.0020
1984	14.0020	14.0020	14.0020	14.0020	14.0020	17.4020	18.0020	18.0020	18.0020	19.1482	19.9590	19.8593
1985	18.9794	18.2557	18.4778	18.4841	18.4800	18.4727	18.5810	18.6047	18.6157	18.7039	18.7368	18.8963
1986	19.0417	20.4608	20.7810	20.5045	20.5002	20.5520	20.4542	20.4316	20.5092	20.4372	20.4360	20.5198
1987	20.4629	20.5252	20.5625	20.5048	20.4732	20.4564	20.4500	20.4387	20.6005	20.7062	20.8171	20.8148
1988	20.8461	20.9030	21.0277	21.0296	20.9540	20.9487	21.0247	21.0591	21.2485	21.3616	21.3771	21.3560
1989	21.3421	21.3574	21.3388	21.4136	21.5622	21.6569	21.8614	21.89	21.9398	21.9483	22.0626	22.3352

* Per Bankers Association of the Philippines reference rate starting December 13, 1984.

Source: Central Bank of the Philippines

APPENDIX 3

A requirement of the study is to identify a reference rate which is the price of a short-term low-risk instrument in a free, liquid market. Since this reference rate would be used as a basis to measure efficiency in other markets, we simplified the process by determining which particular interest rate followed a random walk. This was done by applying the unit root test developed by Dickey and Fuller (1981) and later determining whether the first difference of the rate or rates with unit roots exhibited a pattern similar to error terms that are independent and identically distributed (i.i.d.). As mentioned in the text a random walk implies that all information pertinent in the market is being fully utilized, effectively discounting the possibility of arbitrage resulting in economic profit.

The unit root test for a particular interest rate r is based on the following model:

$$r = \delta r_{-1} + u,$$

where u is a stochastic disturbance term representing white noise. The null hypothesis is that $\delta = 1$ with the alternative hypothesis that the series is stationary (for the case that $|\delta| < 1$) or explosive (for the case that $|\delta| > 1$).

Using the augmented Dickey-Fuller test to guard against error terms (u in the above model) that are not i.i.d., the actual model estimated using ordinary least squares is

$$\Delta r = \alpha + \beta r_{-1} + \tau_1 \Delta r_{-1} + \tau_2 \Delta r_{-2} + \ldots + \tau_p \Delta r_{-p} + u.$$

This is done in order to generate consistent estimates. If β is insignificant then the null hypothesis cannot be rejected and we conclude that the series has a unit root. On the other hand if β is negative and significant, the null hypothesis is rejected in favor of the alternative that the series is stationary. A positive and significant coefficient for β is indicative of an explosive series.

The model was run for p = 2 and p = 4 with the choice of the regression equation being based on a higher adjusted coefficient of determination.

The results for the various interest rates are presented in Table A3.1 and Table A3.2. To show that an interest rate r has a unit root it must not be integrated of order zero and its first difference must be integrated of order 0 [i.e. r must be I(1)]. The critical region for the test of significance was obtained from the tables generated by Dickey and Fuller.

Based on the results we conclude that almost all interest rates have unit roots. The behavior of the first difference of the 91-day Treasury bill rate is plotted against time and its behavior reasonably approximates white

Table A3.1

Determination of Order of Integration
[Test for I (0)]

Dependent Variable ΔX_t	α	X_{t-1}	ΔX_{t-1}	ΔX_{t-2}	ΔX_{t-3}	ΔX_{t-4}
	Explanatory Variables					
Interbank Call Loan						
	2.420	-.149	-.168	-.157	-.249	-0.23
	(1.83)	(1.94)	(1.44)	(1.42)	(2.32)	(0.22)
Promissory Notes (Demand)						
	1.914	-.121	-.214	-.269	-.248	-.194
	(1.58)	(1.72)	(2.02)	(2.63)	(2.49)	(2.0)
Promissory Notes (1-7 Day)						
	1.723	-1.03	-.470	-.370	-.424	-.035
	(1.45)	(1.53)	(4.23)	(3.43)	(4.12)	(0.37)
Promissory Notes (8-15 Day)						
	2.067	-.133	-.523	-.166	-.130	-.013
	(1.74)	(1.81)	(4.47)	(1.27)	(1.03)	(0.11)
Government Repurchase Agreement (Demand)						
	3.534	-.198	-.111	-.195	-.172	-0.75
	(2.17)	(2.15)	(0.90)	(1.65)	(1.53)	(0.68)
Government Repurchase Agreement (1- 7 Day)						
	1.598	-.090	-.423	-.023	-.222	-.314
	(1.21)	(1.16)	(4.01)	(0.21)	(1.98)	(3.81)
Government Repurchase Agreement (8-15 Day)						
	2.63	-.141	.102	.112		
	(1.94)	(2.20)	(0.79)	(0.87)		
Government Repurchase Agreement (16-30 Day)						
	1.459	-.098	.151	-.004	-.359	.187
	(1.76)	(1.82)	(1.39)	(0.04)	(3.67)	(1.28)

Table A3.1 (con't.)

Dependent Variable	Explanatory Variables					
ΔX_t	α	X_{t-1}	ΔX_{t-1}	ΔX_{t-2}	ΔX_{t-3}	ΔX_{t-4}
Private Repurchase Agreement (Demand)						
	3.524	-.223	-.192	-.248	-.248	-.023
	(1.97)	(2.05)	(1.40)	(1.92)	(2.07)	(0.20)
Private Repurchase Agreement (1- 7 Day)						
	4.751	-.319	-.127	-.096		
	(2.36)	(2.59)	(0.76)	(0.75)		
Private Repurchase Agreement (8-15 Day)						
	16.51	-1.148	1.041	0.874	.736	.742
	(4.64)	(4.57)*	(3.81)	(3.16)	(3.09)	(3.72)
Private Repurchase Agreement (31-45 Day)						
	2.386	-.144	-.282	.054	.139	.293
	(1.34)	(1.94)	(2.18)	(0.41)	(1.07)	(2.46)
91-day Treasury Bill Rate						
	.712	-.047	.373	-.039		
	(2.22)	(2.38)	(4.31)	(0.50)		

* significant at the 5 percent level

Table A3.2
Determination of Order of Integration
[Test for I/(1)]

Interest Rate: X_t ; $Z_t = \Delta X_t$

Dependent Variable		Explanatory Variables				
ΔZ_t	α	Z_{t-1}	ΔZ_{t-1}	ΔZ_{t-2}	ΔZ_{t-3}	ΔZ_{t-4}
Interbank Call Loan						
	.029	-1.778	.523	.298		
	(0.06)	(8.73)*	(3.36)	(2.97)		
Promissory Notes (Demand)						
	-.041	-1.994	.711	.395	.123	.082
	(0.10)	(6.07)*	(2.57)	(1.79)	(0.77)	(0.83)
Promissory Notes (1-7 Day)						
	.021	-2.377	.848	.438		
	(0.05)	(12.06)*	(5.73)	(5.16)		
Promissory Notes (8-15 Day)						
	.018	-1.728	.108	-.112		
	(0.05)	(6.44)*	(0.54)	(1.07)		
Government Repurchase Agreement (Demand)						
	.175	-1.721	.498	.225		
	(0.36)	(8.03)*	(3.10)	(2.12)		
Government Repurchase Agreement (1- 7 Day)						
	-.379	-2.118	.541	.276		
	(0.70)	(7.84)*	(2.77)	(2.79)		
Government Repurchase Agreement (8-15 Day)						
	-.023	-1.035	.074	.120		
	(0.03)	(4.75)*	(0.41)	(0.92)		
Government Repurchase Agreement (16-30 Day)						
	.031	-1.435	.459	.395		
	(0.11)	(6.72)*	(3.49)	(4.10)		

Table A3.2 (con't.)

Interest Rate: Y_t ; $Z_t = \Delta Y_t$

Dependent Variable		Explanatory Variables				
ΔZ_t	α	Z_{t-1}	ΔZ_{t-1}	ΔZ_{t-2}	ΔZ_{t-3}	ΔZ_{t-4}
Private Repurchase Agreement (Demand)						
	.110	-1.996	.662	.314		
	(0.15)	(8.90)*	(3.97)	(2.93)		
Private Repurchase Agreement (1- 7 Day)						
	-.053	-1.764	.329	.087		
	(0.08)	(5.32)*	(1.37)	(0.71)		
Private Repurchase Agreement (8-15 Day)						
	.196	-1.386	.494	.486	.323	.618
	(0.49)	(3.50)*	(1.13)	(1.21)	(1.07)	(3.0)
Private Repurchase Agreement (31-45 Day)						
	-.05	-1.44	.049	.023		
	(0.21)	(5.48)*	(0.24)	(0.19)		
91-day Treasury Bill Rate						
	.029	-.746	.103	.047		
	(0.22)	(6.93)*	(1.11)	(0.59)		

* significant at the 5 percent level

noise. (Please refer to Figure A3.1) Because of this result and also due to reasons cited in the text, the 91-day Treasury bill rate is used as the reference rate.

In addition, a cointegration test in was conducted between a particular market rate and the reference rate δ. Following the Granger two step procedure [Hall and Henry (1988)], we first regress r against δ. If the resulting residual terms are stationary or I(Ø) [determined by using an augmented Dickey-Fuller test], we conclude that the two variables are cointegrated.

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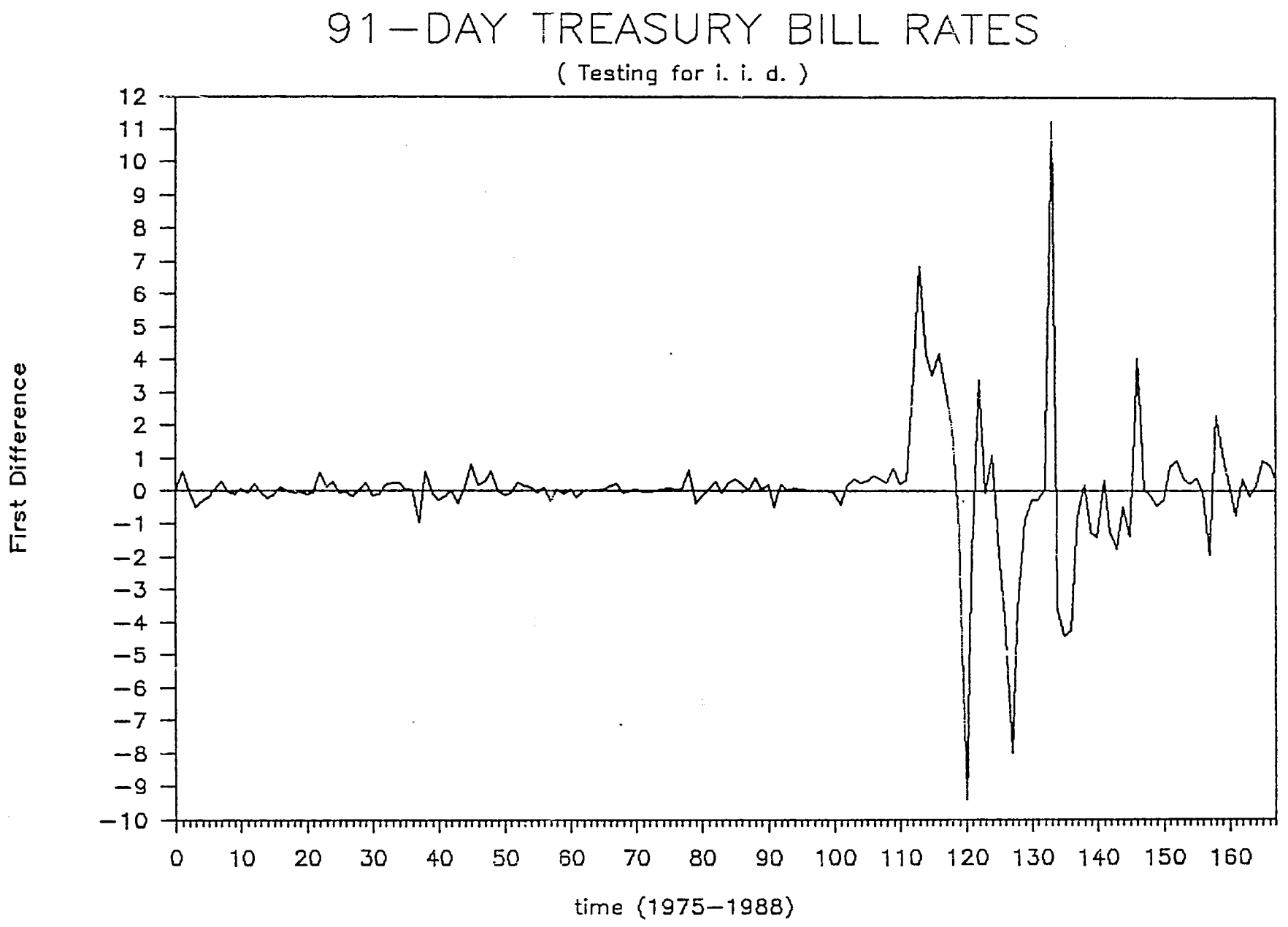
Figure A3.1


91-DAY TREASURY BILL RATES
(Testing for i. i. d.)
First Difference
12
11
10
9
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
time (1975-1988)