

ECONOMIC ANALYSIS & PUBLIC POLICY

III

EXCHANGE RATE POLICY FOR ECONOMIC GROWTH AND DEVELOPMENT

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ORGANISATION OF JAMAICA**

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FROM THE PRESIDENT

The present exchange controls have had a negative impact on Jamaica's economic growth. Though they were intended to conserve foreign exchange in a situation of declining inflows and chronic balance-of-payments difficulties, strict controls have had the opposite result in fact.

The PSOJ is of the view that a gradual liberalization of existing controls would be a powerful aid in resolving distortions in the overall monetary policies of the country. This in turn, if synchronized with other policies, would be a stimulus to investment and more efficient resource allocation.

The subject has stirred a great deal of debate. The case made in this publication is both convincing and consistent with a free market alternative to the statist ideas which have traditionally dominated economic policy in Jamaica.

*Peter John Thwaites
President
PSOJ*

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Preface

This paper is the third in the series of publications expanding on the basic philosophy of the PSOJ, which was outlined in the document "A Policy Framework for Economic Development in Jamaica" (1985).

Jamaica's present exchange rate policy, while an improvement on what obtained before, is flawed and could be improved.

"Exchange Rate Policy for Economic Growth and Development", examines the history of Jamaica's exchange rate, focusing on today's auction system, and shows why and how we should move towards a freer system.

I wish to express my gratitude to PSOJ staff economist Ms. Maureen Hayden, Director of Membership and Communications, Mr. Hu Gentles, and other staff for their co-operation in producing this paper. My thanks to the volunteers of the PSOJ's Economic Policy Committee who have selflessly contributed their time and effort to this publication.

JOSEPH M. MATALON
CHAIRMAN
PSOJ ECONOMIC POLICY COMMITTEE
NOVEMBER 13, 1987

Executive Summary

1.

In its **Policy Framework for Economic Development** (August 1985) the PSOJ states its view that the exchange rates of the Jamaican dollar against other currencies should be determined by the forces of supply and demand in a free market.

The Organisation is aware of the constraints which exist, especially the social impact of significant upward shifts in the exchange rate. Nevertheless we accept that there must be a trade-off between substitution of imports and the expansion of domestic output. The Organisation recognizes the need for a transition period between the current auction system for allocating foreign exchange and a free market system. The Organisation is, therefore, proposing a three-year transition period. The central features of such a transition are:

- a. The creation of a special pool of foreign exchange which is sufficient to meet, at minimum, non-official daily foreign exchange needs. This will reduce the risks involved in making non-cash foreign transactions and remove a potential source of pressure on the foreign exchange auction.
- b. Government will continue to claim, as it does at present, a portion of the foreign exchange available outside of the special pool for its normal payments. It is proposed that this government claim be phased at 90 percent during the first year, 50 percent during the second year and 40 percent during the third year. In the fourth year, government would assess the foreign exchange market like any other transactor in order to obtain its full requirements.
- c. The commercial banking system will operate the special pool of foreign exchange, initially for the non-traditional export sector. With the phased shifting of 50 percent of foreign exchange from the national pool to the commercial banking sector in the second year, the commercial banks are expected to increase their sectoral allocations to cover CARICOM trade and imports of selected public sector entities. This of course presupposes that the pace of economic deregulation will be maintained so that the foreign exchange market and the rest of the economy will be synchronised in a free market system.
- d. The special pool will be self-financing and operate on a revolving basis. Therefore, it will not constitute a part of the nation's debt.

Exchange Rate Determination

The current auction will continue to operate during the proposed three-year period. However, the commercial banking system will use a **consensus** percentage of the premium of the weighted average of the three months forward rate to determine the difference between the commercial banks' exchange rate and the exchange rate determined by the auction. In addition, it is expected that the exchange rate determination mechanism adopted by the commercial banks will ensure that the differential in daily transaction rates between them will be narrow.

Initially, therefore, a two-tiered exchange rate will operate. However, the gradual shifting of the "official flows" from the auction to the commercial banking sector will ensure that the commercial banks' exchange rate will become the national exchange rate.

Source of Funding

Financing of the commercial banks' special pool may be negotiated as a consortium Commercial Bank Support Fund, to be repaid over a sufficiently long period at a concessionary interest rate. In this way the local commercial banks will become integrated into the banking system of major international money markets, providing the natural link between the domestic and international financial markets. In this regard, the domestic commercial banks will cease to operate primarily as "safety deposit boxes", bringing into play greater degrees of financial innovation into their operations.

A Definition Of The Exchange Rate Variables

2.

The exchange rate is only one price among thousands of prices that are determined daily in any economic system, but it is an important one.

We can speak of the exchange rate because the currencies of all other countries are related to one another by exchange rates. Once a rate with one other currency is determined the rates with all other currencies are automatically determined even if no transactions take place.

There are two ways of maintaining a fixed exchange rate. One is for the country's central bank to intervene in the foreign exchange market, supplying the chosen foreign currency when the price of the foreign currency rises above the chosen rate, generally called "parity", and buying the foreign currency when its price falls below parity. This method requires that the central bank has adequate reserves of the foreign resources. If it does not, the usual recourse is to prohibitions.

Prohibition makes it illegal to buy or sell any foreign currency at a price different from the official price. If the market sets a lower value on foreign currency than the official price, the central bank can buy up the surplus with local money. The problem in most under-developed countries is a **shortage** rather than a surplus of foreign exchange.

Maintaining an unrealistic exchange rate by administrative fiat and legal prohibitions invariably produces a black market in foreign currency. If the legal rate and the black market rate happen to coincide, no economic problem arises; however, the equilibrium exchange rate will change over time. Equilibrium is the point at which the total of all **voluntary** payments into the country equal the total of all voluntary payments out. The equilibrium point is in a process of continuous adjustment reflecting changes in production techniques, government policies, and different resources being brought to the market. If this process results in an over-valued currency there will be excess demand for foreign currency. The available supply has therefore to be rationed in some fashion. The standard devices used by governments are licencing of imports, foreign exchange auctions, limits on the sum of foreign currency a citizen may buy to travel abroad and measures to ensure that all export earnings are repatriated to strengthen the supply of foreign exchange.

The over-valued currency will, however, ensure that the supply of foreign exchange will always be inadequate. Local currency prices, when translated through the exchange rate into foreign currency prices, will be higher than they would be in a free market, and foreign prices, when translated into local currency, will be lower. Thus exports will be artificially expensive abroad and imports will be artificially cheap at home. This condition depresses export sales and stimulates imports, thus perpetuating the foreign exchange shortage.

An over-valued currency encourages capital flight. Assets denominated in a currency that is over-valued will be moved to where they can maintain their values, since a devaluation will result in capital loss. This in most cases will mean buying foreign currency; but this will add to the demand pressures on the endangered currency and make its eventual devaluation more likely. Capital flight might be restricted if iron-clad assurances of no devaluation could be provided. However, this is something no government can do, particularly in a country with an over-valued currency, running a balance-of-payments deficit with little or no international reserves.

Other undesirable effects follow from an over-valued currency:

- (1) foreign-made capital equipment, being artificially cheap, is more extensively used than it would normally be;

and

- (2) imported raw materials — including food — have a price advantage over domestic goods. Developing countries generally have a large pool of unemployed persons, hence there is no wisdom in substituting capital intensive production methods for labour-intensive ones. An over-valued currency, in short, aggravates the problem of unemployment and inhibits the growth of local production, especially in agriculture.

Finally, a most serious consequence of an over-valued currency is its long-term tendency to depress the standard of living of the country. This is the least visible effect and, therefore, is frequently not understood. The "standard of living" or per capita income of a country depends on many things, but one of the most important is the extent to which its inhabitants can specialize in production. Just as a shoemaker can be more efficient if he can spend all his time making shoes and exchanging them for, say, fresh vegetables than if he had to grow the vegetables himself in time taken away from shoemaking, so a country is more efficient if it can concentrate on producing those things in which it has a comparative advantage, and exchanging them for things that other countries are more efficient at producing. An over-valued currency conceals the real areas of comparative advantage, generates a chronic foreign exchange shortage and thus deprives potential export production of optimum resources.

The Preferred Exchange Rate Policy

The exchange rate policy which is adopted is of immense importance. It is the centrepiece of monetary policy and dictates the options that are available for fiscal policy to induce economic growth.

The factors which have influenced Jamaica's exchange rate policies in the past should be noted.

The economy is open, with an import/GDP ratio of over 50 percent. This ratio attests to the low elasticity of imports. In addition, over 60 percent of commodity exports are mineral exports, and over 80 percent of exports are classified as primary commodities.

Between 1961 and 1985 commodity exports averaged US\$492.9 million per annum, while imports averaged US\$624.4 million. At this level, imports averaged 26.7 percent more than commodity exports. Since 1981 commodity exports have averaged US\$739.9 million, while imports have averaged US\$1,133.1 million or an average of 53 percent more than commodity exports.

In 1985, 61.7 percent of total exports of goods and services would have been required if Jamaica had met the required debt payment of US\$734.0 million. However, during that year re-scheduled debt payments amounted to US\$280.6 million or 28.2 percent of the total due for payment. Therefore, the actual debt service was 38.1 percent.

Capital flight is endemic, and a significant sum of foreign exchange floats on the non-official capital market despite the fact that exchange control is enforced and all official foreign exchange transactions must be routed through the central bank.

While there has been some relaxation of import restrictions, the services account of the balance of payments continues to be stringently regulated by the central bank.

Since 1976, the accumulation of net international reserves has been positive in 1982, 1984, and 1986. The bulk of net capital inflows is attributed to government.

In the past the general set of economic policies has been inward looking. Controls have become the favoured policy option. Confidence in the value of the currency is the vital non-quantitative factor which has never been a policy target. Confidence has an inverse relationship to controls: more controls have generated less confidence. Corrective policy has to work against this historical factor. In small open economies with these characteristics optimal exchange rate policy must address the factor of confidence. Under no other condition can speculation be controlled, capital flight arrested, or the full entrepreneurial energies of production be released.

Jamaica's Exchange Rate Policies

SINCE 1962

The impact of an over-valued currency on the Jamaican economy since 1962, and the exchange rate policies that have been instituted to deal with the underlying problems are examined next.

(i) The formative years: 1962-1972

The Bank of Jamaica Law in 1960, stipulated that the parity of the Jamaican pound should be one Jamaican pound to one pound sterling. The fixed par value of the Jamaican pound and the pound sterling reflected the then government's view of development which was hinged on an unimpeded flow of private capital and private decisions about the allocation of resources. As a result the exchange rate policy pursued during the early 1960s was one of passivity. By passivity is meant that any adjustment in the par value of the currency reflected changes in the par value of the currency to which it was pegged.

In 1967 the pound sterling was devalued by 14.3 percent. To maintain its parity the Jamaican pound was also devalued by 14.3 percent setting a new par value of US\$2.40 = one Jamaican pound.

Jamaica decimalised its currency in 1969 and switched from the pound sterling to the Jamaican dollar with a rate of J\$2.00 = 1.00 and setting a new par value of US\$1.20 = J\$1.00.

The passivity of the devaluation in 1967 was reinforced by the underlying necessity to maintain traditional export earnings, and by the institutional arrangements governing exports and the external assets of the central bank. In this respect a sharp eye was kept on the following factors:

Export Demand

- (a) **Sugar, Bananas, Citrus.** The volume of exports of these commodities was small. However, sugar and bananas had a low import content and a foreign

exchange retention of about 80 percent. In addition these exports impacted heavily upon employment.

- (b) **Tourism.** This export service was another large earner of foreign exchange with an import content of about 37 percent. In addition, since rates were quoted in US dollars, expectations were for windfall profits for this industry which could provide a boost to capacity and low rates.
- (c) **Bauxite and Alumina.** Exports of these commodities had a foreign exchange retention of just under 50 percent. However, based on the average earnings per ton of ore, the devaluation was expected to realize additional tax receipts.
- (d) **Manufactures.** Exports from this sector were small primarily because the sector was still young. Although the majority of these exports went to Caricom, export prices were denominated in US dollars and positive spin-offs were expected.

Import Demand

Owing to the exchange rate adjustments, the cost of imports increased, as most imports were from non-sterling areas. In 1968 imports increased to US\$332.3 million from US\$260.6 million in 1967. However, increased capital inflows of US\$57.0 million realised an increase in reserves of US\$29.4 million. The import price index increased by 14 percent in 1968 while the export price index increased by 7.4 percent, and the net terms of trade declined by 6.3 percent, but the high level of capital inflows ensured a positive balance of payments.

Foreign Exchange Demand and the Balance of Payments

For four years over the period 1964-1970 Net International Reserves remained in surplus. While there was an increasing Current Account deficit, capital inflows were increasing at a faster pace. The increase in capital inflows reflected, in the main, inflows for industry and tourism purposes. A summary of the accounts is shown on the following page.

BALANCE OF PAYMENTS ACCOUNTS – 1984-1985
(IN MILLIONS OF US DOLLARS)

Years	Exports (Goods)	Imports (Goods)	Goods & Services (Net)		Capital Account (Net)	Net Inter- National Reserves *
1964	187.4	218.4	-53.0	-37.4	17.9	19.5
1965	185.6	218.4	-40.8	-26.2	14.2	12.0
1966	237.0	243.8	-48.6	-36.1	56.0	-19.9
1967	239.0	260.6	-72.7	-60.7	75.8	-15.1
1968	251.0	332.3	-115.7	-103.4	132.8	-29.4
1969	291.8	381.1	-137.9	-156.0	142.4	13.6
1970	342.1	449.2	-174.5	-152.6	167.5	-14.9
1971	343.3	474.1	-132.9	-112.1	150.1	-38.0
1972	362.9	508.1	-167.5	-140.8	60.7	80.1
1973	428.6	622.1	-226.0	-197.2	164.0	33.2
1974	630.7	737.6	-173.1	-151.8	205.9	-54.1
1975	714.3	881.5	-280.8	-257.0	182.5	744.5
1976	596.7	719.6	-280.6	-275.2	37.0	238.2
1977	750.6	666.7	-54.6	-34.6	18.5	16.1
1978	794.5	750.0	112.2	-86.7	9.2	77.5
1979	814.7	882.6	-222.6	-142.6	-2.3	144.9
1980	962.7	1,038.1	-275.1	-166.3	116.1	50.2
1981	974.0	1,296.7	-461.1	-336.8	246.3	90.5
1982	767.4	1,124.2	-538.3	-387.8	474.0	-86.2
1983	685.5	1,124.2	-456.5	-355.0	76.4	278.6
1984	702.3	1,037.0	-418.1	-316.3	500.1	-183.8
1985	570.2	998.8	-541.3	-419.4	342.7	76.7

* Minus = increase

Source: *The Jamaican Economy 1985* – STATIN.

Macro/Micro Structural Adjustment of the Productive Sectors

A passive exchange rate policy does not effect structural adjustment within an economy; it maintains the status quo. Evident in Jamaica's case, however, was an attempt to effect structural adjustments through back-up policies to the exchange rate. The government encouraged trade diversification, spearheading non-traditional and traditional export promotion, as well as import substitution. The major aim of these policies was to reduce the dependence on a narrow range of primary exports.

The exchange rate remained unchanged between 1967 and 1971 when uncertainties resulting from the floating of major international currencies forced the decision, in August 1971, to express the Jamaican dollar in terms of gold (1.066 grammes of fine gold = J\$100) instead of gold and sterling as was previously the case. By the end of the year the Jamaican dollar followed sterling in re-valuing against the US dollar by 8.5 percent, thus setting a new parity of US\$1.303 = J\$1.00.

(ii) The Finger in the Dike: 1973-1982

By 1973 the steady capital inflows of the '60s had slowed while imports continued to expand, creating an increasingly large current account deficit. Imports and exports increased to and from dollar areas, but the import price index, hence net terms of trade, began to deteriorate. In addition, a recession developed in the market for bauxite and alumina, and output of traditional exports declined. To mitigate the impact on the balance of payments, the Jamaican dollar was devalued in January 1973, by 15.6 percent, and the decision taken to peg to the US dollar at US\$1.10 = J\$1.00, and to use this currency as the intervention currency. In February the United States devalued its currency by 10 percent and Jamaica followed by devaluing by 10 percent.

Between 1973 and 1976 the economy continued to decline. The Current Account deficit moved from minus US\$197.2 million in 1973 to minus US\$275.2 million in 1976, while the Capital Account moved from US\$164.0 million to US\$37.0 million, reflecting a shift in reserves from a deficit of US\$33.2 million to a deficit of US\$238.2 million. To address these negative economic indicators the currency was again devalued in April 1977. A dual exchange rate regime also came into force: a basic rate of US\$1.10 = J\$1.00, which applied to essential imports and transactions of the government and bauxite sectors, and a special rate of US\$1.00 = J\$1.25, applicable to other foreign transactions. The special rate represented a devaluation of 37.5 percent.

The government negotiated a stand-by arrangement with the IMF in August 1977, for US\$74.8 million, to achieve the dual objective of gradually reducing internal borrowing and rebuilding international reserves. Before the first drawing of US\$20.0 million was in place, there was a further adjustment in the special rate to US\$1.00 = J\$1.28. The basic rate remained intact. By December 1977 it had become apparent that Jamaica had breached the limit placed on domestic credit expansion required by the IMF. As a result the agreement was terminated in January 1978. Simultaneously, the exchange rate was further devalued to narrow the spread between the basic and special rates. The new parity was US\$1.00 = J\$1.05 for the basic rate and US\$1.00 = J\$1.35 for the special rate.

Macro/Micro Structural Adjustment of the Productive Sector

Under the multiple exchange rate system imports of raw material inputs for non-traditional exports were made at the basic rate, in effect providing an export subsidy which made non-traditional exports more competitive. Exports were valued at the official rate, reinforcing the effect of the subsidy.

During this period the government, through state

corporations, became a major importer, with the stated objective of dampening the price effect of devaluation adjustment on the economy. This led to a distortion of the allocative effect of market forces as resources were increasingly transferred from the private to the public sector.

By May 1978, an Extended Fund Facility arrangement had been negotiated with the IMF which required a unification of the rates. Hence, in May 1978 there was unification of both the basic and special rates to produce a new par value of US\$1.00 = J\$1.55. These measures were not considered sufficient to attain external equilibrium and a series of mini-devaluations was instituted at 1 percent to 1.5 percent per month for the ensuing twelve months. Thus, one year later, May 1979, the new par value of the Jamaica dollar was US\$1.00 = J\$1.78.

A new administration took over government in November 1980. Negotiations with the IMF, which had been broken off in early '80, were concluded in April 1981 for a new Extended Fund Facility (EFF) agreement providing access to US\$698 million for fiscal years 1982-1983 and 1983-1984. This agreement accepted the par value of US\$1.00 = J\$1.78.

Foreign Exchange Demand and the Balance of Payments

Foreign exchange demand is reflected not only by the changes in reserves, but by the level at which foreign exchange is bought and sold in the informal foreign exchange or "street" market. This market in 1979 was estimated at US\$416 million.¹ Even if this figure is added to the foreign exchange inflows to the BOJ of US\$899.3 million for 1979 (to produce a total of US\$1,315.3 million) this would reflect only a crude picture of the demand.

Between 1973 and 1979 exports increased from US\$428.6 million to US\$814.7 million, a change of US\$386.1 million. The growth of export earnings was, however, insufficient to outweigh the increased demand for foreign currency.

Imports increased from US\$622.1 million to US\$882.6 million, a growth of US\$260.5 million. Even these figures were not, therefore, representative of the true demand for imports by the domestic economy, as quantitative restrictions, exchange control regulations and domestic credit controls were responsible for holding imports at the level realized.

Between 1973 and 1979 net international reserves moved from minus US\$33.2 million to minus US\$144.9 million, declining by US\$111.8 million.

Between 1973 and 1979 the increased demand for foreign currency increased the pressures on the balance-of-payments through the depletion of reserves. In addition, capital inflows continued to decline so that the balance-of-payments continued in deficit.

1. Bank of Jamaica; Monetary Foreign Exchange Policy Department. Unpublished Paper, 1983

From as early as May 1979, evidence had grown that the Jamaican dollar was overvalued even after the previous adjustments. The increasing vibrancy of the street market for foreign currencies with rates of exchange well above the official rates was powerful evidence of this. The market was believed to be financed by:

- the re-cycling of capital which had left the country in a previous period;
- illegal exports;
- leakages from official inflows, particularly from the tourism sector;
- the diversion of emigrant remittances from the official system.

In order to re-direct the resources – estimated at US \$416.0 million² – into the official banking system, a decision was taken to formalize the street market into the “Parallel Market”, on January 10, 1983.

(iii) New Horizons 1983–1986

The parallel market officially recognised the size of the street market in foreign currency, and its importance in determining a realistic exchange rate.

Under the new arrangement the official rate of exchange (US\$1.00 = J\$1.78) was maintained by the central bank, while the parallel market rate was determined by demand and supply and was operated by the commercial banks. In the official market the commercial banks operated as agents of the central bank, while in the parallel market they operated as principals. Certain designated earners of foreign exchange were required to surrender their earnings at the official rate and were closely monitored by the central bank.

These designated earners included exporters of bauxite/alumina, sugar and bananas, and the tourism sector – operators of hotels, in-bond shops, car rental agencies and tour operators. Certain designated payments were also put at the official rate of exchange. These included public and private debt payments, basic food, petroleum and petroleum products, essential imports for the tourism sector, school books, medicines and infant feeds. Some of these items were gradually shifted from the official exchange rate to the parallel market exchange rate.

Within six months of the coming into being of the parallel market the average exchange rate settled at about US\$1.00 = J\$2.60 representing a devaluation of about 46 percent. A third rate of US\$1.00 = J\$2.25 came into effect to cover imports from CARICOM. By this time, in fact, there were four exchange rates in operation:

- the official market of the Central Bank

- the Parallel Market
- the CARICOM rate
- the street market rate.

On November 24, 1983, the rates were unified within a band of J\$3.15 – 3.30 = US\$1.00. The decision to unify the rates was influenced by:

- the continued leakage of funds from the banking system to finance the street market;
- the retention of export proceeds overseas.

An auction system was introduced to replace the parallel market system. The object was to provide an exchange rate regime with the flexibility to adjust to external market conditions. This was the first time that Jamaica had adopted a system which adjusted to the forces of demand and supply. Although the new rate was in effect a devaluation, demand pressures continued on the currency. After a series of modifications a decision was taken to introduce the “Comprehensive Auction System” on March 20, 1984.

The Comprehensive Auction System operated under the following conditions:

- Commercial banks were to purchase foreign currencies as agents of the central bank. All foreign currencies purchased were to be sold to the central bank daily.
- The central bank paid the commercial bank J\$0.02 per dollar for securing foreign currency. This was recouped by the central bank as commission for participation in the auction.
- The sum eligible for auction was to be the difference between total purchases by the central bank and purchases which were designated as official flows. These official flows were used to meet government debts and other public sector external payments.

Participation in the auction was governed by the following conditions:

- Bids were accepted from bona fide importers and other applicants with due and outstanding payments. All bids had to be substantiated by import documents in the case of importers, and foreign exchange approvals in the case of individuals wishing to make service payments.
- Commercial banks were allowed to participate as agents of clients or on their own account for payments for services such as travel and medical treatment.

- Applicants with foreign exchange bills outstanding for over US\$50,000 could enter the auction on their own account while those with bills of \$50,000 and less had to channel their bids through commercial banks

Rates in the auction were determined as follows:

- Exchange rates were determined within an adjustable band with an upper and lower limit with J\$0.15 on either side of the previous rate.
- All bids had to be within the range of the band, but not higher than J\$0.04 below the upper limit of the band. The auction cleared at the lowest bid for the day. Bids were placed twice weekly. The central bank reserve price was the uniform price it paid the commercial banks for foreign exchange surrendered, and it reserved the right to set this price as the minimum below which no bids were accepted.
- The exchange rate band was adjusted upwards if unsatisfied demand in the auction was greater than a pre-determined level over three consecutive auctions. In adjusting the band, the upper limit of the existing band became the mid-point of the new band.

The operation of the auction system has had other modifications, namely:

The exclusion of US\$56.0 million in arrears, to ensure that only current demands are handled by the auction.

- Bids in the auction must be accompanied by the domestic currency equivalent of the foreign currency required. (Previously participants provided a guarantee from their commercial banks that the funds were lodged with the banks.)

Between March and July 1984 the auction system settled down and nearly all bids were accepted and foreign exchange allocated. The exchange rate remained relatively stable during the period. In August '84, however, due to seasonality factors associated with Christmas and tourism, the demand for foreign exchange began to exert sustained upward pressures on the exchange rate.

The auction was further modified on November 31, 1984, against a background of increasing pressure on the cash portion of foreign exchange available. The predetermined band within which the currency floated was removed so that the rate could be more responsive to the force of demand and supply. In short, bidders could bid whatever price they chose.

Second, bidders were required to pay their bid prices at the auction. This was a disincentive to speculation as, under the previous system, bidders could bid at the top of the auction's band, but the price that they paid was the price which cleared the auction for the day. This was usually below their bid price.

The third modification was the establishment of a forward market in foreign exchange, which allowed the commercial banks to buy and sell foreign currencies forward. The premium payable depended on the differentials between local deposit rates, deposit rates overseas, and the length of time involved.

In January 1985, the Jamaican dollar cleared at J\$1 = US\$5.00. Since then the rate has not fallen below this level. From July 1986 there was a steady upward pressure on the exchange rate to a level of US\$6.40 at the end of October. For five subsequent auctions this trend was reversed and by mid-November 1985 the exchange rate was US\$1 = J\$5.50. This departure from the previous trend has resulted in what amounts to a fixing of the exchange rate. The auction has therefore become a tool for administratively allocating resources rather than a mechanism to determine the optimal allocation of foreign exchange resources at the market-determined rate.

5. Defects Of The Current Exchange Rate Policy

The exchange rate policy being pursued under the auction system has partly realized its potential as an allocative mechanism. To the extent that the auction responds to demand and supply it approaches the ideal mechanism which should be a barometer of balance-of-payments strength. Additionally, it shows the potential to reach to developments in the external accounts with a minimum time lag.

The auction system, however, is not working as effectively as it should. The regulation of its operation by the government effectively fixes the exchange rate and thus limits the influence of market forces. The auction has, therefore, failed to realize its potential as a transition mechanism in the movement from a regulated economy to a market-oriented one.

The regulation of the auction system creates pressure on the demand for cash as exchange market transactors show preference for short-term transactions. Cash transactions reduce exposure to foreign exchange risks when future payments fall due. In addition this action reduces the percentage of satisfied bids at each auction, increasing the level of "carry forwards" and "incremental demand", simultaneously. The market impulses being generated, therefore, suggest persisting expectations of devaluation.

Second, some of the demand pressures on the auction result from the constraints within available lines of credit. Many can be used only for imports of specified commodities from specified sources which do not reflect local market preference.

Third, although a forward market has been established through the commercial banking system administrative decisions about what is classified as "official" flows of foreign exchange have stifled the potential. According to the Bank of Jamaica, proceeds from bauxite/alumina, sugar, bananas, exports of commodity boards, tourism receipts, and that portion of non-traditional exports which is to be surrendered to the E.D.F. (Export Development Fund) cannot be made available for forward market sales.* If the commercial banks cannot purchase foreign exchange forward, they are unable to sell foreign exchange forward. Hence, although the forward market in foreign exchange is a legal entity, operationally it is almost non-existent. In addition the fixing of the exchange rate removes the need for a genuine forward market.

Since November 1985, official policy has maintained a ball-park figure for the exchange rate. All other aspects of monetary policy have been tailored to ensure that the exchange rate remains in the region of US\$1.00 = J\$5.50. As

a result domestic interest rates have climbed to historically high levels, sectoral credit has expanded to government, and there has been high liquidity in the banking system. These macroeconomic distortions reflect the restrictive measures of current exchange rate policies.

The Present Situation

The present auction system involves a *de facto* fixed exchange rate. Government has indicated that as a part of the 1987/88 IMF Agreement the exchange rate will be held at US\$1.00 = J\$5.50 for fifteen months from January 1987. As a result, variation in the government's release of funds to the auction and the expectation that the rate will hold has ensured that the exchange rate does remain stable.

The fixing of the exchange rate, however, has been a trade-off between perceived social costs and perceived economic costs. In respect of the social costs, it was held that a devaluation would raise the cost of living, increase factor input costs to production and increase debt servicing, budgetary expenditures, the fiscal deficit, inflation, and aggregate demand. It was felt that a further devaluation would have been too deflationary and would not have provided investment stimulation and other growth-oriented expenditures.

Additionally, stability at the current par value of the currency allows for stability in business planning and inventory control, greater use of lines of credit and other financing instruments. This in turn reduces exchange risks and the demand for cash payments in trade.

The economic costs, however, are distortions in factor prices, and camouflage our real balance-of-payments problems and indebtedness. We are induced to believe that we are earning at a level that is capable of sustaining our present standard of living. Indeed, the compensatory balance has been in disguised taxation, a tight prices-and-incomes policy, high interest rates and other elements of a contractionary monetary policy. To balance the social costs, we have put in place a mix of monetary and fiscal policies that have the same general effect as that of a devaluation. Therefore, the market operates with the expectation that the targets of monetary and fiscal policies are unlikely to be held at current levels for the targeted period without additional incentives. As a result, employment creation has been slow, investments have been less than optimal, output has not generated the desired intersectoral linkages and the accompanying multiple expansionary effect.

* The Daily Gleaner, Sunday, December 9, 1984, page 1.

Making The Transition

In the parallel market system introduced in 1983, the commercial banks operated freely in the foreign exchange market without access to adequate reserve backing. As a result the intensive bank competition for foreign exchange brought about wide variation in the offer rates for foreign exchange. This emerged as the primary cause for accelerating the decline in the value of the currency. The transition period from the auction mechanism to a free market in foreign exchange must take into account the possibility of a repetition of this negative factor, and make allowance for its control.

To make the transition a period of about three years may be required for acclimatization to a market-oriented system, so as to reduce wide variations in the value of the currency. Stability and predictability are important requirements so as to minimize disruption of production planning and investment. A degree of certainty must characterize the business environment.

During the transition the present auction system would be replaced by a foreign exchange market centred on the commercial banking sector, as opposed to the central bank. The central bank would revert to a more regulatory role.

The transition period requires certain facilities:

- i) There must be a special pool of foreign exchange that is sufficient to meet, at minimum, non-official daily foreign exchange needs. This will operate to (a) reduce fears about the foreign exchange risks involved in making non-cash foreign transactions; (b) remove a potential source of pressure on the foreign exchange auction.
- ii) The auction is to be phased out over a period as a concomitant to the introduction of the new system.
- iii) Government will continue to claim, as it does at present, a portion of the foreign exchange available outside of the special pool for its normal payments. It is proposed that this be phased at 90 percent during the first year, 50 during the second year and 40 during the third year. In the fourth year, government will access the foreign exchange market as any other transactor in order to obtain its full requirements.
- iv) The commercial banking system will operate the special pool of foreign exchange, initially for the non-traditional export sector in order to ensure incremental additions over time. With the phased shifting of 50 percent of foreign exchange from the central bank pool to the commercial banking sector in the second year,

the commercial banking sector is expected to increase its sectoral allocations to cover CARICOM trade and imports by selected public sectors entities. This of course presupposes that the pace of economic deregulation will be maintained so that a free foreign exchange market will be consistent with the general economic climate.

In this way the local commercial banks will become integrated into the banking system of international money markets, providing the natural link between the domestic and international financial markets. In this regard, the domestic commercial banks will cease to operate primarily as "safety deposit boxes", bringing into play a greater degree of financial innovation in their operations.

Exchange Rate Determination

The current auction will continue to operate during the proposed three-year period, and it will continue to determine the exchange rate as it was designed to do. However, the commercial banking system will use a **consensus** percentage of the premium of the weighted average of the three-month forward rate to determine the difference between the commercial banks' exchange rate and the exchange rate determined by the auction.

Initially, therefore, a two-tiered exchange rate will operate. However, the phased shifting of the official flows from the auction to the commercial banking sector will also shift emphasis to the commercial banks' exchange rate so that this rate will eventually become the country's sole exchange rate.

Source of Funding

The main source of financing for this special pool is non-traditional exports. A percentage of the earnings from non-traditional exports should be directed to this pool to finance imports for the following period. As confidence increases, additional non-traditional exports will generate a larger share to the pool of funds. The special pool will initially be self-financing and operate on a revolving basis and should not, therefore, constitute a part of the nation's debt.

It may be advisable however, for the government to negotiate support facilities. Should draw-downs become necessary they can be in tranches and can be made conditional on negotiated rules related to (a) the phased liberalization of exchange controls during the three-year period; (b) non-traditional exports' targeted performance; (c) the pace of adjustment of the foreign exchange market from being government controlled to private sector influenced. The government will continue to have regulatory functions through the central bank.

Exchange Rate determination at the end of the transition period

It is expected that the exchange rate determination mechanism adopted by the commercial banks during the transition period will be fine-tuned so that the differentials in the exchange rate quoted will be narrow enough to be negligible. Hence, the rate which emerges for daily transactions will be reflected as the nationally applicable exchange rate.

The desired exchange rate policy for a small open economy such as ours must take cognizance of the operations of the commodity market (goods and services) and the asset market (stocks, bonds and other financial instruments). A market-determined exchange rate will make the distinction between the traded and non-traded sectors of the commodity market. Within the traded sector, a realistic exchange rate releases productive resources for greater output as resources are transferred between the domestic sector and the export sector in the most efficient manner. In the case where the domestic resource base is limited, increased imports are translated into increased exports or increased levels of efficient import substitution activity. The preferred exchange rate policy to do this is an undervalued exchange rate. An over-valued rate increases activities in the non-traded sector. The distortion increases the relative weight of services as opposed to real output in economic activity.

An undervalued exchange rate takes a longer period to work its way through the economy. This is more readily seen in the case of the commodity market than in the case of the asset market. This is so because the gestation period for investment to transform itself into tangible output is longer. Therefore, when the emphasis is on activities in the commodities market, a reasonable time-frame is required before results are obtained that can be read as reflecting realistic underlying economic trends.

In the case of the asset market, information flows and capital reaction to uncertainty are faster, because expectations are linked to more transitory factors. The position of an undervalued currency is by itself incapable of providing the level of confidence and certainty needed in order to operate an effective exchange rate policy. Other factors must be brought into play. In this regard, the asset market is further assured by the continuous dismantling of import controls, and the liberalization of other controls on the services account of the balance of payment. In essence, the asset market is best reassured by continuous liberalization of exchange control leading to its total removal.

Because the asset market responds more quickly to perceptions of decontrol a market-determined exchange rate must be predicated on policy synchronisation. Decontrol of the merchandise and services account must respond to the signals that emanate from production. Otherwise, if the asset market is first liberalized, structural defects in the real sector will cause a build-up of funds

in the asset market for which there will be few users. In this regard, capital flight and black market activity may be unintentionally boosted by a lack of policy synchronisation in respect of operations of the asset and commodities market.

There are costs associated with both an overvalued exchange rate and an undervalued exchange rate. The market determined exchange rate will adjust in such a way as to minimize the costs involved. An overvalued currency minimizes the costs involved. An overvalued currency minimizes the social costs in the short term, but maximizes economic costs as output for export ceases to be competitive. The import subsidy which this exchange rate generates provides a false measure of social progress. This subsidy can only be maintained by increased domestic and external loans, but is only tenable in the short term by political expediency, capital surplus in major industrialized countries, and a willingness by external creditors to finance an unrealistic standard of living in the borrowing country. In the long term it is untenable. The capacity to repay and shifting geopolitical considerations are likely to enforce a realistic appraisal of the exchange rate. To the extent that structural defects are entrenched by a policy of subsidy, enforced adjustment will be more dislocating. An exchange rate policy which is not predicated on the free play of the foreign exchange market supports an overvalued currency, camouflages the real internal price adjustments that are necessary, and creates a false atmosphere of economic well-being.

In the case of an undervalued exchange rate the social costs are immediate. However, the duration of that cost is the measure of the extent by which the productive sectors of the economy respond to increased output opportunities. An undervalued exchange rate policy allows for a longer period before any significant change in the exchange rate is warranted, while the rate exerts its own equilibrating influence on the import/export ratio. It also favours non-traditional exports and tends to accelerate industrialization.

The preferred exchange rate policy must, therefore, be one that accepts a foreign exchange market that sets its own exchange rate on the basis of the demand for and the supply of foreign currencies. This captures the level of operational and structural defects of the commodities and asset markets. In addition, such a policy will reveal the real short-term and long-term costs and benefits – both social and economic. It will certainly minimize the long-term costs! The preferred exchange rate policy must be one which determines the exchange rate in a decontrolled foreign exchange market. The information generated from the limited operation of this market under the auction system suggests that the emergent exchange rate will be an undervalued one.

In this foreign exchange market the banking sector will be free to establish daily exchange rates based on the domestic demand/supply relationship and conditions in the major international money markets. The banking sector, therefore, will operate independently rather than as agents for the central banks.

Appendix – Exchange Rates 1967-1986

DATE	PREVIOUS RATE	REVISED RATE	% CHANGE IN JS VS. US\$	COMMENTS
21/11/67	US\$2.80 = J1	US\$2.40 = J1	-14.3	Following devaluation of pound sterling on 18/11/67:
8/9/69	US\$2.40 = J1	US\$1.20 = J\$1.00		Following decimalization and switch to J\$ at 1 = J\$2.00
Dec. 1971	US\$1.20 = J\$1.00 US\$1.00 = J\$0.83	US\$1.303 = J\$1.00 US\$1.00 = J\$0.77	+ 8.58	Realignment of currencies and revaluation of the pound sterling by 8.58 against US\$
17/1/73	US\$1.303 = J\$1.00 or US\$1.00 = J\$0.767	US\$1.10 = J\$1.00 or US\$1.00 = J\$0.909	-18.5	Active devaluation designed to correct imbalance in the external sector
22/4/77	US\$1.10 = J\$1.00 or US\$1.00 = J\$0.909	Basic US\$0.80 = J\$1.00 or US\$1.00 = J\$0.909 Special US\$0.80 = J\$1.00 or US\$1.00 = J\$1.25	-37.5	Adoption of dual exchange rate system
24/10/77	Basic US\$1.10 = J\$1.00 or US\$1.00 = J\$0.909 Special US\$0.80 = J\$1.00 or US\$1.00 = J\$1.25	Special US\$0.78 = J\$1.00 or US\$1.00 = J\$1.28	- 2.4	Minor adjustment in special rate.
13/1/78	Basic US\$1.10 = J\$1.00 or US\$1.00 = J\$0.909 Special US\$0.78 = J\$1.00 or US\$1.00 = J\$1.28	Basic US\$0.95 = J\$1.00 or US\$1.00 = J\$1.05 Special US\$0.74 = J\$1.00 or US\$1.00 = J\$1.35	-15.5 - 5.5	Devaluation of both rates
9/5/78	Basic US\$0.95 = J\$1.00 or US\$1.00 = J\$1.05 Special US\$0.74 = J\$1.00 or US\$1.00 = J\$1.35	Basic US\$0.65 = J\$1.00 or US\$1.00 = J\$1.55 Special US\$0.65 = J\$1.00 or US\$1.00 = J\$1.55	-47.6 -14.8	Devaluation of both rates bringing the basic to the level of the special rate thus ending the dual exchange rate system
9/6/78	US\$0.65 = J\$1.00 or US\$1.00 = J\$1.55	US\$0.64 = J\$1.00 or US\$1.00 = J\$1.57	- 1.5	Beginning of the monthly mini devaluations
14/7/78	US\$0.64 = J\$1.00 or US\$1.00 = J\$1.57	US\$0.63 = J\$1.00 or US\$1.00 = J\$1.60	- 1.5	Mini devaluation
11/8/78	US\$0.63 = J\$1.00 or US\$1.00 = J\$1.60	US\$0.62 = J\$1.00 or US\$1.00 = J\$1.62	- 1.5	"

DATE	PREVIOUS RATE	REVISED RATE	% CHANGE IN JS VS. USS	COMMENTS
15/9/78	US\$0.62 = J\$1.00 or US\$1.00 = J\$1.62	US\$0.60 = J\$1.00 or US\$1.00 = J\$1.65	- 1.5	"
13/10/78	US\$0.61 = J\$1.00 or US\$1.00 = J\$1.65	US\$0.68 = J\$1.00 or US\$1.00 = J\$1.66	- 1.0	"
10/11/78	US\$0.60 = J\$1.00 or US\$1.00 = J\$1.66	US\$0.60 = J\$1.00 or US\$1.00 = J\$1.67	- 1.0	"
15/12/78	US\$0.60 = J\$1.00 or US\$1.00 = J\$1.67	US\$0.59 = J\$1.00 or US\$1.00 = J\$1.69	- 1.0	"
12/1 /79	US\$0.59 = J\$1.00 or US\$1.00 = J\$1.69	US\$0.58 = J\$1.00 or US\$1.00 = J\$1.71	- 1.0	"
9/2/79	US\$0.58 = J\$1.00 or US\$1.00 = J\$1.71	US\$0.58 = J\$1.00 or US\$1.00 = J\$1.73	- 1.0	Mini devaluation
9/3/79	US\$0.58 = J\$1.00 or US\$1.00 = J\$1.73	US\$0.57 = J\$1.00 or US\$1.00 = J\$1.75	- 1.0	"
13/4/79	US\$0.57 = J\$1.00 or US\$1.00 = J\$1.75	US\$0.57 = J\$1.00 or US\$1.00 = J\$1.76	- 1.0	"
2/5/79	US\$0.57 = J\$1.00 or US\$1.00 = J\$1.76	US\$0.56 = J\$1.00 or US\$1.00 = J\$1.78	- 1.0	End of mini devaluation
10/1/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		Introduction of a formalized parallel foreign exchange market whereby each commercial bank determines own rate on a daily basis.
		Parallel Rate US\$0.41 = J\$1.00 US\$1.00 = J\$2.45	-37.6	
31/1/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		Continuous adjustment in parallel market exchange rate, stabilizing towards 31/1/83. Average difference of J\$0.10 in buying and selling rate.
	Parallel Rate US\$0.41 = J\$1.00 US\$1.00 = J\$2.45	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.76	-12.7	
26/2/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		
	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.76	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.80		
31/3/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		

DATE	PREVIOUS RATE	REVISED RATE	% CHANGE IN JS VS. USS	COMMENTS
	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.80	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.75		
29/4/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		
	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.75	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.76		
18/5/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		Introduction of Caricom rate of exchange
	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.76	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.76		
		Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25	-26.4	
8/6/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		Minor downward adjustment in parallel rates.
	Parallel Rate US\$0.36 = J\$1.00 US\$1.00 = J\$2.76	Parallel Rate US\$0.37 = J\$1.00 US\$1.00 = J\$2.71	+1.8	
	Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25	Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25		
30/6/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		
	Parallel Rate US\$0.37 = J\$1.00 US\$1.00 = J\$2.71	Parallel Rate US\$0.37 = J\$1.00 US\$1.00 = J\$2.71		
	Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25	Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25		
29/7/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78		
	Parallel Rate US\$0.27 = J\$1.00 US\$1.00 = J\$2.71	Parallel Rate US\$0.37 = J\$1.00 US\$1.00 = J\$2.71		
	Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25	Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25		

DATE	PREVIOUS RATE	REVISED RATE	% CHANGE IN JS VS. US\$	COMMENTS
30/8/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78 Parallel Rate US\$0.37 = J\$1.78 US\$1.00 = J\$2.71 Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78 Parallel Rate US\$0.34 = J\$1.00 US\$1.00 = J\$2.96 Caricom Rate US\$0.44 = J\$1.00 US\$1.00 = J\$2.25		Adjustment in operation of parallel market whereby all commercial banks trade at a single rate determined on a weekly basis. Margin of J\$0.05 between buying and selling rate. Upward adjustment in parallel rate.
24/11/83	Official Rate US\$0.56 = J\$1.00 US\$1.00 = J\$1.78	Official Rate US\$0.32 = J\$1.00 US\$1.00 = J\$3.15 (A) US\$0.33 = J\$1.00 US\$1.00 = J\$3.00 (L) US\$0.30 = J\$1.00 US\$1.00 = J\$3.30 (U)		Unification of official, parallel and Caricom rates within prescribed band, with a range of J\$0.15 on either side of mid-point. Band will be reviewed fortnightly
28/12/83	US\$0.32 = J\$1.00 US\$1.00 = J\$3.15 US\$0.33 = J\$1.00 US\$1.00 = J\$3.00 US\$0.30 = J\$1.00 US\$1.00 = J\$3.30	US\$0.30 = J\$1.00 US\$1.00 = J\$3.30 (A) US\$0.33 = J\$1.00 US\$1.00 = J\$3.00 (L) US\$0.30 = J\$1.00 US\$1.00 = J\$3.30 (U)	4.8	No adjustment in band, but change in actual selling rate
5/1/84	Official Rate US\$0.30 = J\$1.00 US\$1.00 = J\$3.30 US\$0.33 = J\$1.00 US\$1.00 = J\$3.00 US\$0.30 = J\$1.00 US\$1.00 = J\$3.30	Official Rate US\$0.29 = J\$1.00 US\$1.00 = J\$3.40 (A) US\$0.32 = J\$1.00 US\$1.00 = J\$3.10 (L) US\$0.29 = J\$1.00 US\$1.00 = J\$3.40 (U)	- 3.0	Review and adjustment of band Upper limit is equal to selling rate in exchange transactions
19/1/84	US\$0.29 = J\$1.00 US\$1.00 = J\$3.40 US\$0.32 = J\$1.00 US\$1.00 = J\$3.10 US\$0.29 = J\$1.00 US\$1.00 = J\$3.40	US\$0.30 = J\$1.00 US\$1.00 = J\$3.30 (A) US\$0.31 = J\$1.00 US\$1.00 = J\$3.25 (L) US\$0.28 = J\$1.00 US\$1.00 = J\$3.55 (U)	+ 2.9	Review and adjustment of band Actual selling rate declines within new band
20/3/84	US\$0.31 = J\$1.00 US\$1.00 = J\$3.25 US\$0.28 = J\$1.00 US\$1.00 = J\$3.55	US\$0.31 = J\$1.00 US\$1.00 = J\$3.25 (L) US\$0.28 = J\$1.00 US\$1.00 = J\$3.55 (U)	- 7.6	Introduction of a new foreign exchange system. Exchange rate determined by auction held twice weekly. Bids are conducted within a prescribed band as set by Parity Orders. Upper limit is equal to actual selling rate in exchange transaction

DATE	PREVIOUS RATE	REVISED RATE	% CHANGE IN JS VS. US\$	COMMENTS
29/3/84	US\$0.31 = J\$1.00 US\$1.00 = J\$3.25	US\$0.29 = J\$1.00 US\$1.00 = J\$3.40 (L)	- 4.2	Adjustment of band
	US\$0.28 = J\$1.00 US\$1.00 = J\$3.55	US\$0.27 = J\$1.00 US\$1.00 = J\$3.70 (U)		Upper limit is equal to actual selling rate in exchange trans- actions
10/4/84	US\$0.29 = J\$1.00 US\$1.00 = J\$3.40	US\$0.28 = J\$1.00 (L) US\$1.00 = J\$3.55	- 4.0	Adjustment of band
	US\$0.27 = J\$1.00 US\$1.00 = J\$3.70	US\$0.26 = J\$1.00 US\$1.00 = J\$3.85 (U)		Upper limit is equal to actual selling rate in exchange transactions
18/4/84	US\$0.28 = J\$1.00 US\$1.00 = J\$3.55	US\$0.27 = J\$1.00 US\$1.00 = J\$3.70 (L)		Adjustment of band
	US\$0.26 = J\$1.00 US\$1.00 = J\$3.85	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00 (U)	- 3.9	Upper limit is equal to actual selling rate in exchange transactions
2/5/84	US\$0.27 = J\$1.00 US\$1.00 = J\$3.70	US\$0.26 = J\$1.00 US\$1.00 = J\$3.85 (L)		Adjustment of band
	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00	US\$0.24 = J\$1.00 US\$1.00 = J\$4.15 (U)		
	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00 (A)		Actual selling rate differs from upper limit
9/5/84	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00	US\$0.24 = J\$1.00 US\$1.00 = J\$4.05 (A)	- 1.2	
11/5/84	US\$0.24 = J\$1.00 US\$1.00 = J\$4.05	US\$0.24 = J\$1.00 (A) US\$1.00 = J\$4.15	- 2.5	
6/5/84	US\$0.24 = J\$1.00 US\$1.00 = J\$4.15	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00 (A)	+ 3.6	
18/5/84	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00	US\$0.25 = J\$1.00 US\$1.00 = J\$3.89 (A)	+ 2.7	
8/6/84	US\$0.25 = J\$1.00 US\$1.00 = J\$3.89	US\$0.25 = J\$1.00 US\$1.00 = J\$3.94 (A)	- 1.3	
18/6/84	US\$0.25 = J\$1.00 US\$1.00 = J\$3.94	US\$0.25 = J\$1.00 US\$1.00 = J\$3.89 (A)	+ 1.3	
22/6/84	US\$0.25 = J\$1.00 US\$1.00 = J\$3.89	US\$0.25 = J\$1.00 US\$1.00 = J\$3.94 (A)	- 1.3	
27/6/84	US\$0.25 = J\$1.00 US\$1.00 = J\$3.94	US\$0.25 = J\$1.00 US\$1.00 = J\$3.89 (A)	+ 1.3	
20/7/84	US\$0.25 = J\$1.00 US\$1.00 = J\$3.89	US\$0.25 = J\$1.00 US\$1.00 = J\$3.94 (A)		
25/7/84	US\$0.25 = J\$1.00 US\$1.00 = J\$3.94	US\$0.25 = J\$1.00 US\$1.00 = J\$4.00		

* Parallel Rate - Average selling rate of commercial banks

Key: U - Upper Limit; L - Lower Limit; A - Actual selling rate

DATE	J\$ VS. US\$	% CHANGE IN J\$ VS. US\$	COMMENTS
1/8/84	US\$1.00 = J\$3.89	+2.7	
3/8/84	US\$1.00 = J\$4.04	-3.9	
10/8/84	US\$1.00 = J\$4.09	-1.2	
15/8/84	US\$1.00 = J\$4.14	-1.2	
17/8/84	US\$1.00 = J\$4.15	-0.2	
22/8/84	US\$1.00 = J\$3.89	+6.3	
24/8/84	US\$1.00 = J\$4.40	-3.9	
29/8/84	US\$1.00 = J\$4.15	-2.7	
5/9/84	US\$1.00 = J\$3.89	+6.3	
7/9/84	US\$1.00 = J\$4.15	-6.7	
19/9/84	US\$1.00 = J\$4.30 (A)	-3.6	
	US\$1.00 = J\$4.00 (L)		
	US\$1.00 = J\$4.30 (U)		
21/9/84	US\$1.00 = J\$4.15	+3.5	
26/9/84	US\$1.00 = J\$4.30	-3.6	New Parity Order adjusting limits of foreign exchange band
3/10/84	US\$1.00 = J\$4.15	+3.5	
5/10/84	US\$1.00 = J\$4.30	-3.6	
18/10/84	US\$1.00 = J\$4.40 (A)	-2.3	New Parity Order adjusting limits of foreign exchange band
	US\$1.00 = J\$4.15 (L)		
	US\$1.00 = J\$4.45 (U)		
24/10/84	US\$1.00 = J\$4.45	-1.1	No adjustment in band, but change in actual selling rate
30/10/84	US\$1.00 = J\$4.60	-3.4	New Parity Order adjusting limits of foreign exchange
	US\$1.00 = J\$4.30 (L)		
	US\$1.00 = J\$4.60 (U)		
8/11/84	US\$1.00 = J\$4.75 (A)	-3.3	New Parity Order adjusting limits of foreign exchange band
	US\$1.00 = J\$4.45 (L)		
	US\$1.00 = J\$4.75 (U)		
22/11/84	US\$1.00 = J\$4.90 (U)	-3.2	New Parity Order adjusting limits of foreign exchange band

DATE	J\$ VS. US\$	% CHANGE IN J\$ VS. US\$	COMMENTS
	US\$1.00 = J\$4.60 (L) US\$1.00 = J\$4.90 (U)		
29/11/84	US\$1.00 = J\$4.86 (A)	+ 0.8	Modification of foreign exchange auction system allowing J\$ to float freely rather than in a prescribed band
7/12/84	US\$1.00 = J\$4.00	+17.7	
11/12/84	US\$1.00 = J\$4.40	-10.0	
14/12/84	US\$1.00 = J\$4.60	- 4.6	
19/12/84	US\$1.00 = J\$4.85	- 5.4	
21/12/84	US\$1.00 = J\$4.95	- 2.1	
4/1/85	US\$1.00 = J\$4.90	+ 1.0	
9/1/85	US\$1.00 = J\$4.95	- 1.0	
11/1/85	US\$1.00 = J\$4.97	- 0.4	
18/1/85	US\$1.00 = J\$5.00	- 0.6	
22/1/85	US\$1.00 = J\$5.05	- 1.0	
25/1/85	US\$1.00 = J\$5.10	- 1.0	
29/1/85	US\$1.00 = J\$5.15	- 1.0	
1/2/85	US\$1.00 = J\$5.20	- 1.0	
6/2/85	US\$1.00 = J\$5.26	- 1.2	
8/2/85	US\$1.00 = J\$5.33	- 1.3	
13/2/85	US\$1.00 = J\$5.42	- 1.7	
15/2/85	US\$1.00 = J\$5.54	- 2.2	
19/2/85	US\$1.00 = J\$5.48	+ 1.1	
27/2/85	US\$1.00 = J\$5.06	+ 7.7	
1/3/85	US\$1.00 = J\$5.10	- 0.8	
6/3/85	US\$1.00 = J\$5.19	- 1.8	
8/3/85	US\$1.00 = J\$5.29	- 1.2	
13/3/85	US\$1.00 = J\$5.40	- 2.1	
15/3/85	US\$1.00 = J\$5.50	- 1.9	
20/3/85	US\$1.00 = J\$5.30	+ 3.6	
22/3/85	US\$1.00 = J\$5.37	- 1.3	

DATE	J\$ VS.	US\$	% CHANGE IN J\$ VS. US\$				
27/3/85	US\$1.00 =	J\$5.48	- 2.0	2/10/85	US\$1.00 =	J\$5.98	- 0.5
29/3/85	US\$1.00 =	J\$5.50	- 0.4	4/10/85	US\$1.00 =	J\$6.01	- 0.5
17/4/85	US\$1.00 =	J\$5.46	+ 0.7	9/10/85	US\$1.00 =	J\$6.05	- 0.7
19/4/85	US\$1.00 =	J\$5.50	- 0.7	11/10/85	US\$1.00 =	J\$6.10	- 0.8
3/5/85	US\$1.00 =	J\$5.51	- 0.2	16/10/85	US\$1.00 =	J\$6.17	- 1.1
8/5/85	US\$1.00 =	J\$5.53	- 0.4	18/10/85	US\$1.00 =	J\$6.27	- 1.6
10/5/85	US\$1.00 =	J\$5.50	+ 0.6	25/10/85	US\$1.00 =	J\$6.40	- 2.1
15/5/85	US\$1.00 =	J\$5.51	- 0.2	30/10/85	US\$1.00 =	J\$6.00	+ 6.3
22/5/85	US\$1.00 =	J\$5.52	- 0.2	1/11/85	US\$1.00 =	J\$5.95	+ 0.8
5/6/86	US\$1.00 =	J\$5.54	- 0.4	6/11/85	US\$1.00 =	J\$5.80	+ 2.5
7/6/85	US\$1.00 =	J\$5.56	- 0.4	8/11/85	US\$1.00 =	J\$5.76	+ 0.7
12/6/85	US\$1.00 =	J\$5.58	- 0.4	13/11/85	US\$1.00 =	J\$5.65	+ 1.9
19/6/85	US\$1.00 =	J\$5.60	- 0.4	15/11/85	US\$1.00 =	J\$5.50	+ 2.7
21/6/85	US\$1.00 =	J\$5.62	- 0.4	9/1/86	US\$1.00 =	J\$5.51	- 0.2
28/6/85	US\$1.00 =	J\$5.64	- 0.4	14/1/86	US\$1.00 =	J\$5.50	+ 0.2
3/7/85	US\$1.00 =	J\$5.67	- 0.5	21/1/86	US\$1.00 =	J\$5.51	- 0.2
5/7/85	US\$1.00 =	J\$5.71	- 0.7	23/1/86	US\$1.00 =	J\$5.50	+ 0.2
10/7/85	US\$1.00 =	J\$5.75	- 0.7	28/1/86	US\$1.00 =	J\$5.51	- 0.2
12/7/85	US\$1.00 =	J\$5.78	- 0.5	30/1/86	US\$1.00 =	J\$5.50	+ 0.2
9/8/85	US\$1.00 =	J\$5.77	+ 0.2				
28/8/85	US\$1.00 =	J\$5.78	- 0.2	18/2/86	US\$1.00 =	J\$5.48	+ 3.6
4/9/85	US\$1.00 =	J\$5.80	- 0.3	20/2/86	US\$1.00 =	J\$5.50	- 3.6
6/9/85	US\$1.00 =	J\$5.81	- 0.2	6/3/86	US\$1.00 =	J\$5.51	- 0.2
11/9/85	US\$1.00 =	J\$5.83	- 0.3	11/3/86	US\$1.00 =	J\$5.50	+ 0.2
13/9/85	US\$1.00 =	J\$5.85	- 0.3	25/3/86	US\$1.00 =	J\$5.48	+ 0.4
18/9/85	US\$1.00 =	J\$5.87	- 0.3	8/4/86	US\$1.00 =	J\$5.49	- 0.2
20/9/85	US\$1.00 =	J\$5.90	- 0.5	10/4/86	US\$1.00 =	J\$5.50	- 0.2
25/9/85	US\$1.00 =	J\$5.94	- 0.7	16/5/86	US\$1.00 =	J\$5.49	+ 0.2
27/9/85	US\$1.00 =	J\$5.95	- 0.2	28/6/86	US\$1.00 =	J\$5.48	+ 0.2
2/10/85	US\$1.00 =	J\$		10/6/86	US\$1.00 =	J\$5.49	- 0.2

DATE	JS VS.	US\$	% CHANGE IN JS VS. US\$
12/6/86	US\$1.00 =	J\$5.50	- 0.2
10/7/86	US\$1.00 =	J\$5.51	- 0.2
15/7/86	US\$1.00 =	J\$5.50	+ 0.2
22/7/86	US\$1.00 =	J\$5.49	- 0.2
24/7/86	US\$1.00 =	J\$5.50	+ 0.2
7/8/86	US\$1.00 =	J\$5.49	- 0.2
12/8/86	US\$1.00 =	J\$5.51	- 0.4
14/8/86	US\$1.00 =	J\$5.50	+ 0.2
19/8/86	US\$1.00 =	J\$5.51	- 0.2
21/8/86	US\$1.00 =	J\$5.48	+ 0.5
2/9/86	US\$1.00 =	J\$5.50	- 0.4
9/9/86	US\$1.00 =	J\$5.51	- 0.2
11/9/86	US\$1.00 =	J\$5.50	+ 0.2
16/9/86	US\$1.00 =	J\$5.48	+ 0.4
18/9/86	US\$1.00 =	J\$5.49	- 0.2
23/9/86	US\$1.00 =	J\$5.48	+ 0.2
25/9/86	US\$1.00 =	J\$5.49	- 0.2
16/10/86	US\$1.00 =	J\$5.50	- 0.2
23/10/86	US\$1.00 =	J\$5.51	- 0.2
18/11/86	US\$1.00 =	J\$5.51	- 0.2
25/11/86	US\$1.00 =	J\$5.52	- 0.2
27/11/86	US\$1.00 =	J\$5.50	+ 0.4
9/12/86	US\$1.00 =	J\$5.51	- 0.2
11/12/86	US\$1.00 =	J\$5.50	+ 0.2
16/12/86	US\$1.00 =	J\$5.51	- 0.2