

**FINANCING  
SOUTH AFRICA'S  
FOREIGN TRADE**

by  
**John E. Lind**  
and  
**David J. Koistinen**

March 1988



**CANICCOR RESEARCH**

P.O. Box 6819, San Francisco, CA 94101, U.S.A.  
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## FINANCING SOUTH AFRICA'S FOREIGN TRADE

### SUMMARY OF FINDINGS

Trade credits have become the major source of financing for trade with South Africa and therefore the major source of financing for the import of the capital goods required to maintain its economy. This report estimates the amount of financing that South Africa needs to keep its economy functioning and analyzes the present structure of this financing.

#### ESTIMATE OF THE AMOUNT OF CREDITS NECESSARY TO FINANCE SOUTH AFRICA'S TRADE

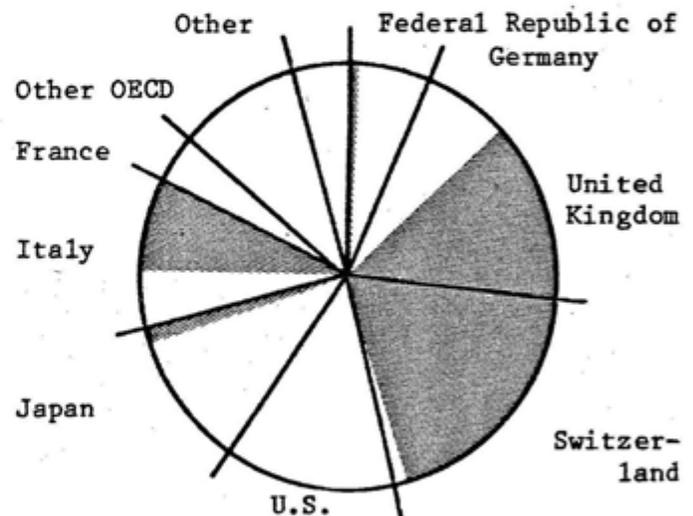
When a country has a good credit rating, it can raise capital for major projects and general operating capital in the international capital markets through general obligations like bond issues, syndicated loans, and other money market instruments. However, when its credit rating is poor, its options for raising finance are limited primarily to trade credits and other trade specific instruments. Trade credits are directly linked to the shipment of goods and services. They are often more costly in interest rates and also in the time necessary to arrange many small credits on individual items for a large project.

South Africa is now in the category of a country with a poor credit rating because of the moratorium it called on a portion of its debt in September 1985. Since that time sources of general capital have dried up and trade credits have become the major source of financing. Thus if further pressure is to be developed through the financial markets, it must be done through the prohibition of trade credits.

This report examines South Africa's trade and estimates the amount of trade credit that would be necessary to finance this trade. Most of the credits are provided on a short-term basis of 60 to 180 days and are rolled over several times a year. Only capital goods imports receive medium- and long-term credits, with average terms of about 5 years.

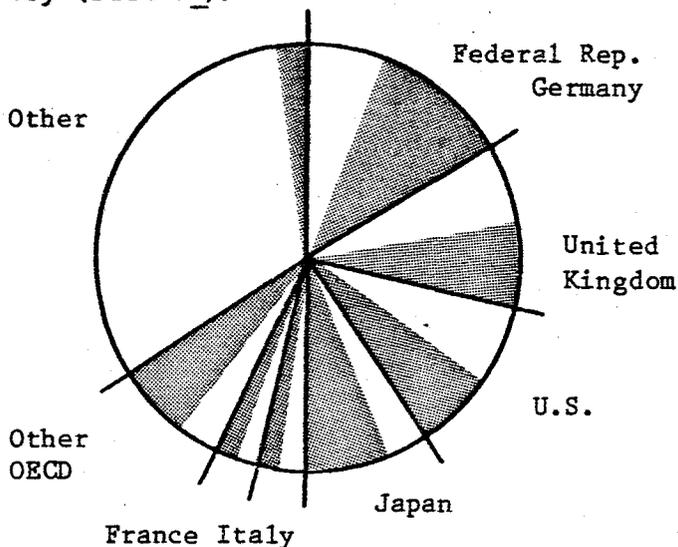
Almost all of South Africa's exports are raw materials and agricultural products which require short-term financing. Figure 1 shows what countries receive South Africa's exports and specifically where South Africa's primary export, gold, is shipped. South Africa is dependent upon imports for much of its capital goods which are necessary to keep its economy running. Capital goods require medium- and long-term financing and figure 2 shows that three quarters of these capital goods are imported from four countries: Germany, U.K., U.S. and Japan.

Figure 1. South African Exports by Country of Destination for 1985. Shaded Portion Represents Gold Exports to these Countries



South African Exports to:	Gold	Total
	----	----
	Millions of US Dollars	
Germany	76	1006
United Kingdom	2122	3420
Switzerland	3194	3264
U.S.	1	2239
Japan	221	1852
Italy	1235	1842
France	16	644
Other OECD	--	1441
Other	--	671
<b>Total</b>	<b>6864</b>	<b>16573</b>

Figure 2. South African Imports by Source for 1985. Shaded Areas Represent Machinery (SITC 7).



South African Imports from:	Machinery	Total
	Millions of US Dollars	
Germany	1133	1690
United Kingdom	622	1279
U.S.	573	1232
Japan	695	1020
Italy	196	330
France	212	389
Other OECD	661	1260
Other	296	3155
<b>Total</b>	<b>4190</b>	<b>10356</b>

Table I shows the estimated range of the needed finance is very broad, \$5.9 billion to \$9.3 billion for 1986. This range reflects the variation in the terms of trade financing which may or may not include financing of the materials or goods during the time of further manufacture or distribution. These periods of manufacture or distribution can be financed by trade credits or by refinancing through the South African local markets. Shifting large amounts of this refinancing into the local market can, of course, have adverse effects by forcing South African domestic interest rates upward.

#### STRUCTURE OF SOUTH AFRICA'S DEBT

Chapter II examines the present structure of South Africa's foreign financing.

Much of the present debt is a result of the general purpose borrowing before 1985, together with significant amounts of interbank lending. Thus the specific trade finance must be extracted from the total debt through an analysis of currency distribution of the debt and the guarantees provided by foreign governments. The results of that analysis are given in Table II. The non-bank credits are mostly trade related, but the bank trade credits obviously blur into the general purpose lending. However, the detailed analysis suggests that minimal trade credits might amount to about \$7 billion at the end of 1986 which is in agreement with the middle of the range given by our analysis of the trade itself in Chapter I.

A slight shift is seen during 1986 away from bank financing of trade to non-bank financing, although most of the shift in trade figures is a phenomenon of shifting exchange rates between the currencies of the different major trading partners of South Africa. Thus the trade distribution among the various countries shown in figures 1 and 2 for 1985 holds roughly for the physical trade in 1986 and 1987, except that exports to the U.S. are lowered because of sanctions.

The finance provided by the institutions of the various countries is roughly in proportion to the exports of that country to South Africa. A notable exception is the large amount of Swiss bank lending for a country which has little trade except the import of South African gold. However, that gold trade means that the Swiss banks are willing to provide general financing to South Africa.

Japan is the one country for which there have not been good estimates of trade finance provided previously. This study suggests that Japanese banks have made available about \$1.6 billion in deposits and lines of credit to South Africa, though direct loans are unlikely. Another \$580 million of suppliers' credits are provided mostly by the Japanese Export-Import Bank.

#### THE EFFECT OF CUTTING OFF TRADE CREDIT

The effects of cutting off trade credits are analyzed in Chapter III in the

Table I. Estimates of the Trade Credits Necessary to Finance South Africa's Trade Credits Outstanding in Billions of U.S. Dollars

	1985		1986		1987	
	Trade	Estimated Financing	Trade	Estimated Financing	Trade (Est.)	Estimated Financing
South African:						
Exports (ex. Gold)	9.3	ST 1.3-2.1	11.0	ST 1.5-2.5	12.9	ST 1.8-2.9
Imports	10.5	ST 2.0-4.0 LT 1.7-2.2	10.5	ST 2.1-4.2 LT 1.8-2.4	13.7	ST 2.7-5.3 LT 2.1-2.8
Total (excl. Gold)	19.9	ST 3.3-6.1 LT 1.7-2.2	22.3	ST 3.6-6.7 LT 1.8-2.4	26.6	ST 4.5-8.2 LT 2.1-2.8
		Total 5.0-8.3		5.5-9.1		6.6-11.0

ST: Short-term credits of less than one year.

LT: Medium- and Long-term credits of one year or greater. Outstandings of credits with a term of 5 years represent about three times the annual new lending if in each year the new lending equals the amount of credits paid off.

Table II. Total Credits of Foreign Banks and Non-Banks in South Africa, 31 December 1986. Billion of U.S. Dollars.

Country	Banks			Non-Banks		Estimated Total Exposure
	Total	Total Without Interbank	OECD Gov't. Guaranteed	Total	OECD Gov't. Guaranteed	
U.K.	3.62	2.32	0.83	0.4	0.25	4.0
U.S.	2.96	1.06	0.0	0.4	0.0	3.4
Germany	1.87	1.45		0.9	0.21	2.8
Switz.	1.68			0.1	0.0	1.8
France	2.03			0.2	0.16	2.2
Japan	1.56		0.0	0.6	0.58	2.1
Others	2.41			0.4	0.16	2.8
Total	16.13	8.94	1.80	2.88	1.36	19.1

Without Interbank: Total bank exposure less interbank lending.

OECD Gov't. Guarantees: Guarantees by governments of OECD member countries given separately for bank and non-bank credits. The latter includes credits by government trade finance agencies.

light of the present outlook for the South African economy. Basically the South African economy is suffering a lack of capital investment which is necessary to promote an economic growth rate comparable to its population growth rate. This lack of investment does not come from a lack of funds at present since trade credits are available for financing and there is a net inflow of funds on the balance on current account. Rather it is the lack of confidence by the business community because of the present political situation.

At the most, South Africa is only financing its exports. However, imports require three times that amount of financing which includes significant long-term credits for capital goods. If trade credits were instantly cut off and assuming no other financing, \$4 billion to \$7 billion would be required to finance the trade with more than \$3 billion to \$5 billion required the first three to six months. The foreign assets of South Africa's monetary sector at the end of the third quarter of 1987 were only about \$4.7 billion. Thus a rapid cut off of trade credit would engender a major fiscal crisis. Even if the trade credits were slowly cut off by South Africa's major trading partners one-by-one, this process would generate significant financial pressures of the order of \$500 million to \$1 billion per country imposing sanctions against trade credits.

**CHAPTER I**  
**TRADE FINANCE: THE VOLUME REQUIRED**

**WHAT TRADE FINANCE IS AND HOW IT WORKS**

Trade credits are used to finance almost all international sales of goods. Bulky goods are shipped over long distances, taking from a week to over a month to arrive in the port of destination. Raw materials and semifinished materials such as steel are further manufactured and imported finished goods must be distributed. The cost of the goods during the transport must be borne by some one, and the cost of the goods during further processing and/or distribution may also be included in this trade finance.

Finally, when a large installation or plant is being built, long-term financing is need until the plant begins to earn revenue. This may include financing to the supplier of goods since there are large production costs which may not be covered by current revenue. Major capital projects typically require finance extending for 5-10 years.

When South Africa had a good credit rating in the first half of the 1980s, trade finance for capital projects could often be raised through general purpose borrowing on the capital markets of London, Frankfurt and Zurich. That is, bonds were issued and large loans from syndicates of banks were available.

Now capital purchases must be financed by trade credits tied to the specific items being purchased. For example, in 1987, the official German export promotion bank Kreditanstalt fuer Wiederaufbau provided a credit of DM32 million (\$18 million) to Siemens AG in Germany to produce, supply and perhaps provide longer-term financing for repayment of a telephone system for ESKOM, the South African Electricity Supply Commission (Frankfurter Rundschau, 23 January 1988).

In the discussion below, the rather broad time ranges for the terms of trade finance reflect the variations in trade financing arrangements. Some trade credits only cover the period of transport. Others include financing for manufacturing

before shipment and some include finance for manufacturing and/or distribution after shipment. The latter processes may be refinanced locally instead of being part of the trade finance. If the export promotion banks in the OECD countries stop guaranteeing trade credits for exports to South Africa, banks and suppliers will be less willing to give generous terms, and local financing will become essential. The choice of the type of trade finance depends on various factors including differences between domestic and international interest rates.

The length or term of trade credits vary according to the type of merchandise being sold. Standard terms are:

- a. consumables, small manufactured items, spare parts, raw materials, farm products-- 30-180 days
- b. industrial and agricultural equipment, general aviation aircraft-- 180 days-5 years
- c. industrial plants, commercial jet aircraft, locomotives-- 5-10 years.

(From the **International Finance Handbook** by Abraham M. George and Ian H. Giddy, Wiley Interscience, NY, 1983.)

Trade finance can be provided by the supplier or by the buyer directly involved in a transaction, or these parties can bring in a bank to play an intermediary role.

Suppliers' and buyers' credits are the most straight forward examples of trade credits. For a supplier's credit, an exporter provides the finance-- shipping the product and collecting payment with interest from the buyer at a later date. This time lag allows for transport halfway across the globe in the case of South Africa and gives the buyer an opportunity to assemble the payment money. Sales on open account are a commonly used form of supplier's credit. Here a firm, typically a large corporation, ships goods to a

subsidiary or a regular customer and receives payment at a later date. In the case of a buyer's credit, the purchaser obtains the credit and pays the shipper directly.

Banks may participate in supplier's or buyer's credits by lending a firm the funds which allow it to provide suppliers or buyers credits through a credit facility. Banks can also purchase at a discount the paper held by firms which have provided suppliers credits. This practice is known as forfaiting.

Banks play a direct role in other types of trade lending through letters of credit, revolving credit facilities and other mechanisms. Under such arrangements, a bank pays the exporter at the time the goods are shipped and later collects payment from the purchaser, in addition to a fee for its services. Banks in the importing and/or exporting country can take a role in such a transaction.

#### THE ROLE OF GOVERNMENT TRADE PROMOTION AGENCIES

Most industrialized countries have government agencies that promote foreign trade by facilitating trade finance. The structure of these programs varies from country to country. Some agencies primarily insure privately arranged trade credits against losses arising from political turbulence and commercial risks, while others actually make trade loans. Most countries offer both insurance and actual trade finance. Table III provides a list of these agencies for South Africa's major trade partners.

Since capital goods exports require risky financing arrangements with years-long terms, the trade promotion agencies in most countries concentrate their resources on financing or insuring these kinds of sales. Agencies do assist in the export of consumer goods as well as imports that are crucial industrial in-puts.

The most important role trade promotion agencies play in regard to South Africa is promoting exports by domestic producers of capital goods. Except for the mining industry, state owned authorities and corporations in South Africa dominate the

Table III. Government Agencies providing Guarantees and/or Credits for Trade of the Major Trade Partners of South Africa.

	Service
United Kingdom:	
Export Credits Guarantee Department (ECGD)	Guarantees Only
Federal Republic of Germany:	
Hermes Kreditversicherungs Treuarbeit	Guarantees
Kreditanstalt fuer Wiederaufbau	Guarantees
AKA-Ausfuhrkredit (Private)	Credit
	Credit
Japan:	
Export-Import Bank	Credit (Guarantees)
Ministry of International Trade & Industry (MITI)	Guarantees
U.S.:	
Export-Import Bank - permitted to grant credit or guarantees for South Africa only under very special circumstances.	

basic industrial sectors which account for the much of the bulk of the country's imports of capital goods. Thus trade promotion agencies in the industrialized countries which facilitate trade finance with South Africa are almost always dealing directly with an agency of the South African government.

#### THE VOLUME OF OUTSTANDING TRADE CREDITS FOR SOUTH AFRICA

##### Estimated From Trade Data:

This calculation is of the basic finance needed to maintain trade at the 1985 level, assuming that trade credits were used for this finance rather than the general purpose borrowing which was common up through much of that year. Thus the estimate is made for the type of credits which are now in use since the time when the debt moratorium was called in September 1985. The general level will be similar to that required for 1986 and subsequent years.

For most countries the volume of new

trade finance will roughly equal the total of imports plus exports. However, gold sales make up roughly 45% of annual South African exports, and we assume that sales of gold do not require normal trade finance.

South African mining companies sell their gold to the South African Reserve Bank. The SARB probably pays the companies in rand at the time of delivery or very soon thereafter. The SARB sells about 80% of the metal to dealers on the London and Zurich gold markets and most of the remainder to wholesalers in Italy, who resell it to jewelry manufacturers.

Sales by the SARB to the huge financial institutions that control the London and Zurich markets probably take place as follows: Gold is flown to the European centers and immediately credited to the the SARB's gold bullion account. At the time of sale, the metal is debited from the gold account and the amount of the sale minus a commission is credited to the SARB's currency account. Since payment is immediate, no trade credits are needed. Since the Reserve Bank chooses to sell about 20% of its gold to Italy when it could easily sell all the metal in London and Zurich, it seems likely that the Bank has similar arrangements for immediate payment with Italian institutions as well.

With no foreign currency credit needed for gold sales, the total amount of trade finance used by South Africa in a year is assumed to be roughly equal to the sum of imports and non-gold exports. In 1985, South African imports totalled \$10.5 billion and non-gold exports were equal to \$9.3 billion (*Quarterly Bulletin*, South African Reserve Bank). Thus trade credits for 1985 should equal about \$19.8 billion.

The length of these trade credits determine the total credits outstanding at a given moment. Total outstandings, rather than total trade credits allocated in the course of a year are the crucial figures. The outstanding amount of credit, which is constantly coming due and being reissued, represents the amount of finance needed to keep the foreign trade sector of the South African economy running.

To estimate outstandings, South Africa's foreign trade in 1985 was broken down

by major commodity groups and assigned trade credits varying in length according to the guidelines in the *International Finance Handbook*, noted above, and after conferring with a banker involved with trade finance. Tables A1 and A2 in Appendix I give the complete breakdown.

Food products and most raw materials were given credit terms of 30-60 days. Light consumer goods such as clothing and stereos and intermediate goods such as steel and auto components were assigned terms of 90-180 days. Agricultural and industrial machinery were assigned terms of 180-360 days, and installations of heavy industrial plants given terms of 5 years. The justification for assigning terms of these lengths is included in Appendix I.

The sum of these categories of trade credits (30-60 days, 90-180 days, 180-360 days, and 5 years) are added together. This total is then divided by the number of times a credit of this length would roll over in a year. Thus a credit of 30 days would expire and be granted for another transaction 12 times in the course of a year, and a credit of 60 days 6 times. Hence, the \$7.78 billion of South African exports assigned 30-60 day credits is divided by 6-12 to give a range of \$648 million-\$1.30 billion for the amount of these credits outstanding.

In the case of credits greater than a year in length, the \$558 million in trade that falls under this category is multiplied by the factor needed to keep the amount of outstandings constant. That is a steady state condition with new loans replacing previous ones as they are paid up. For 5 year credits the factor is 3 and for 7 year credits 4. This gives total long-term outstandings of \$1.67-\$2.23 billion. The equation for the steady state factor is included in Appendix I.

This estimation method gives a range of outstanding credits needed to finance all of South Africa's trade of \$4.99-\$8.31 billion for 1985. South Africa primarily exports raw materials and basic industrial inputs which were assigned 30-60 day terms in the above scheme. Its imports, by contrast, include a variety of industrial goods which have trade credits with longer terms. Thus, while the volume of the

country's imports roughly equals that of non-gold exports in a year, the outstanding trade credits of \$3.41-\$5.65 billion needed to finance imports is about three times greater than the \$1.02-\$2.05 billion in outstandings needed to finance exports. All these results are scaled to trade figures for 1986 and 1987 and they are summarized in Table I of the **Summary of Findings** on page 3.

The exporting country provides trade finance in most cases of international sales. Where credit is provided as part of a sales transaction, the exporter or the exporter's bank usually receive delayed payment for goods after they have been shipped.

Since South African imports require about three times the outstanding trade finance as the country's exports, and since the exporting countries generally provide trade finance, it is logical to expect that foreign countries provide about three-quarters of the credit needed to finance South Africa's foreign trade while South Africa only provides about one quarter.

**Medium- and Long-Term Credits Estimated from Capital Investment Data:**

The total annual imports of capital goods, requiring medium- and long-term financing, will now be estimated from entirely different source data in order to provide a better evaluation of the possible error in the figure of \$558 million for 1985 estimated above from trade data. Here the starting point will be figures of total investment in machinery and equipment by the South African economy as a whole.

As can be seen from Table IV, these investment figures lie between \$5.1 and \$5.5 billion for 1985 and 1986. of which between 25% and 30% is investment by public corporations. What fraction of this investment is in foreign purchased machinery and equipment? An estimate of this fraction is only available to us for ESKOM, but it is fortunately the largest public corporation. First ESKOM's investment in machinery and equipment is estimated from that of all public corporations as proportional to their gross investment

Table IV. South African Capital Investment  
In billions of U.S. Dollars

Investment in	1985	1986
Machines & Equipment	-----	-----
All Sectors (1)	5.45	5.11
Public Corporations (1)	2.02	1.73
ESKOM - estimate (2)	1.59	1.21

(1) South African Reserve Bank, **Quarterly Bulletin**

(2) Calculated by scaling from the Public Corporations on the basis of Gross Investment in billions of dollars:

	1985	1986
Public Corporations (1)	2.72	2.32
ESKOM (3)	2.15	1.62

(3) ESKOM Prospekt, **Boersen Zeitung**, 23 December 1987.

and is found to be \$1.21 billion for 1986. Eskom's foreign borrowing in 1986 was \$164 million or 14% of this total investment in machinery and equipment. This borrowing was presumably all through trade credits since the moratorium had already been called and thus it represents the type of financing that is of concern us now. A figure for the total purchases of foreign machinery and equipment of \$693 million is obtained by assuming that this 14% applies to the economy as a whole.

This figure of \$693 million is 25% higher than the figure of \$558 million calculated from the trade data. The \$693 million could be high because of ESKOM's relatively high capital intensity compared to other sectors of the economy. On the other hand, the ESKOM borrowing of \$164 million in 1986 may be low because of carry over from the large amount of borrowing in 1985. None the less the agreement is quite good considering the different bases of two estimates.

**Consistency of the Estimate of Short-Term Credits:**

The suggestion given above that the South African exports may be primarily financed by South Africa and that imports

requiring short-term financing are financed through foreign trade credits can be checked for consistency against the known assets and liabilities of South Africa.

In order to cover their exports, the South African private and banking sector would need short-term assets abroad greater than the required export trade finance of \$1-\$2 billion. Short-term claims of the South African bank sector on foreign banks were \$1.04 billion at the end of 1985 and rose to \$1.76 billion by mid-1987 (**International Financial Statistics, IMF**). Short-term claims abroad of the non-bank private sector of South Africa were \$1.2 billion at end of 1985 (**Quarterly Bulletin South African Reserve Bank**). The sum of the bank and private sectors is \$2.2 billion for the end of 1985. This amount which would just permit this export financing since part of the non-bank assets represent deposits of individuals abroad that are not available for trade finance.

Certainly there are not sufficient assets in the private bank and non-bank sectors to permit financing the short-term imports without using using general purpose medium- and long-term assets and borrowings.

Chapter II  
FOREIGN DEBT AND FINANCING  
SINCE THE MORATORIUM

**SUMMARY**

The discussion in this chapter will show that there has been a decrease in the shipment of goods to South Africa that were financed by credits extended by exporting nations. Between mid-1985 and mid-1987, the amount of goods financed by insured bank credits had decreased by at least 30% while the amount to goods financed by non-bank credits was the same at the end of 1986 as it was at the end of 1985, and then decreased in 1987. There has been a slight increase in lending to the South African public sector, especially to public corporations, during this period but it is masked by the large decrease in the debt of the private sector.

**TOTAL DEBT**

The sectors of the foreign creditors of South Africa's foreign debt are shown in Table V for the end of 1985 and 1986. The total debt decreased during 1986 for several reasons. During this period \$0.5 billion was repaid on the \$10 billion of the debt which was under a standstill agreement with the foreign banks. This standstill agreement was precipitated by a moratorium on payments declared by South Africa in September 1985 and it has been extended until mid-1990.

Payments were made on bonds and no new issues were floated because of the credit conditions caused by the moratorium. However, the figures in Table V seem to belie this, since the amount of outstanding bonds increased in dollar amounts in 1986 when no new bonds were issued. Indeed, bonds falling due during the year were paid off, so the debt should have decreased. This contradiction is explained by the fact that half of the bonds are denominated in deutsche marks and that appreciated by 27% against the U.S. dollar during the year. Thus if no bonds were redeemed during the year, the value of the outstanding bonds as expressed in dollars should have appreciated by 13% just because half of them are in deutsche marks.

The increase would be even greater because other bonds are in Swiss francs and other currencies which have also appreciated relative to the dollar.

Payments were also made on the portion of the debt guaranteed by foreign governments and on recent trade credits. However, Table V shows an increase in non-bank trade credits. Here again the Table reflects an appreciation of foreign currencies of the major trading partners of South Africa relative to the dollar. In reality there has been only a slight decrease of this lending.

The following analysis will take up each of these areas of credit in detail and we will want to know whether funds have flowed into or out of South Africa by sector of the creditors and by sector of the borrowers. The only way these flows can be calculated is if the currency distribution of the debt is known, for otherwise currency appreciations can not be distinguished from money flows. Table VI shows this currency distribution in the debt as a whole and by borrowing sector of the South African economy. The latter is deduced from South African government guarantees of debt by currency, which cover all debt of public authorities and public corporations, like the Electricity Supply Commission (ESKOM).

When looking at the bank and private sector, the interbank lending can be immediately separated out because it is almost all in U.S. dollars. This contention is supported by the following facts: First, almost all of the interbank debt is under the standstill agreement, so no new lending is likely to have occurred since September 1985. Then when this debt is expressed in dollars it has decreased roughly at the rate of the specified repayment schedule. If the interbank debt were denominated in other currencies, it would have increased greatly in dollar terms under the standstill because of the appreciation of these currencies relative to the dollar. The latter has not been the case, and thus the interbank debt is

TABLE V. Foreign Debt of South Africa in Billions of U.S. Dollars by Source.

	End 1985		End 1986	
	Total	OECD Country Guarantees(6)	Total	OECD Country Guarantees (6)
Foreign Banks (3)	17.459	1.996	16.126	1.802
BIS Reporting Countries (1)	17.003		15.618	
Remaining OECD Countries (2)	0.456		0.508	
Non-Bank Lenders including Official Credit Agencies (4)	2.69	1.076	2.881	1.357
Bonds (5)	2.91		3.118	
IMF	0.851		0.468	
<b>TOTAL</b>	<b>23.473(7)</b>	<b>3.172</b>	<b>22.593(7)</b>	<b>3.159</b>

- (1) **Maturity Distribution of International Bank Lending**, Bank for International Settlements (BIS), Consolidated accounts of banks in Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Finland, France, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom, United States, and major off-shore centers.
- (2) **Statistics on External Indebtedness: Bank and Trade-Related Non-Bank External Claims on Individual Borrowing Countries and Territories BIS/OECD**, Includes BIS reporting area plus claims guaranteed by the governments of Australia, Greece, New Zealand, and Portugal.
- (3) The sums of the BIS and OECD data are essentially identical to the IMF data that are reported by the individual debtor countries in **International Financial Statistics** as the sum of "Cross-Border Interbank Liabilities by Residence of Borrowing Bank" and "Cross-Border Bank Credit to Nonbanks by Resident of Borrower". The IMF sums are \$17.47 billion and \$16.12 billion for 1985 and 1986, respectively.
- (4) The total amount of non-bank claims is obtained by difference from the total debt reported by South Africa and all debt that can be allocated by categories. The total amount of non-bank debt given in this table is thus the upper bound for non-bank debt because it represents the remainder and thus the accumulation of errors. The guaranteed portion, from ref. (2), includes insured suppliers' credits and credits extended by official export financing institutions.
- (5) 1986: South African Reserve Bank quoted by **Financial Mail**, supplement, 9 October 1987. 1985: Scaled from 1986 using the list of bonds in J.E. Lind & D.V. Espaldon, **South Africa's Debt at the Time of Crisis**, Caniccor, 1986, Appendix B. Early DM bond issues were assumed to have been called to reduce the outstanding to the 1986 level. The increase in the dollar amount of the bonds between 1985 and 1986 is purely a reflection of the appreciation of the deutsche mark in which half the boards are denominated.
- (6) Amounts guaranteed by instrumentalities of the governments of the OECD member countries including credits given by official financing agencies. See notes (2) and (4).
- (7) South African Reserve Bank, **Quarterly Bulletin**.

in dollars.

At the end of 1986 the interbank debt of South African banks amounted to \$7.2 billion according to the Bank for International Settlements (BIS), (**The Maturity Distribution of International Bank Lending**). Thus the remaining \$8.0 billion, made up of the remaining \$3.0 billion of debt in dollars plus \$5.0 billion in various other currencies, is the debt of the South African private non-bank sector. The final principle in the following analysis is the fact that the governments of the various OECD member countries, prefer to provide guarantees and trade loans in their own currencies, and in a few cases only deal in their own currency. This fact will assist in separating guaranteed credits from those without guarantees.

Table VI. South African External Debt by Currency and Sector of the Debtor Economy.  
Billion of U.S. Dollars.  
End 1986

Currency	Total	Public Sector		Bank & Private Sectors
		Bonds	Authorities & Corporations	
US\$	13.5	0.53	2.73	10.2
DM	3.1	1.6	0.2	1.3
UK L	1.2	0.2	0.0	1.0
Swfr	1.7	0.74	0.1	0.8
Frfr	1.0	0.0	0.7	0.4
Japan Y	0.58	0.0	0.41	0.18
Other	1.5	0.2	0.0	1.3
Total	22.6	3.3	4.1	15.2

Sources:

Total debt by currency: South African Reserve Bank quoted in **ESKOM Prospekt**, in the **Boersen-Zeitung** (Frankfurt), 23 December 1987.

Bonds: Bonds are almost entirely public sector financing, for either public authorities or public corporations. See note (4) in Table V.

Public Authorities and Public Corporations Total debt guaranteed by the South African government, **Government Gazette**, No. 10930. p. 13, 25 September 1987, for 31 March 1987, less bonds.

TOTAL DEBT TO FOREIGN BANKS

At the end of 1986, the total debt to foreign banks was \$16.1 billion of which \$7.2 billion was the debt of South African banks. It should be remembered that this interbank debt was the principal cause of the debt moratorium of 1985, because South African banks had been borrowing excessively in the short-term interbank market to finance long-term capital lending in South Africa. When this short-term debt began to be withdrawn, the resulting liquidity crisis forced the calling of the moratorium.

The distribution of the debt among the creditor banks of the various countries is given in figure 3. The notes to the figure explain how the figure is derived and a further analysis is given in an earlier report by Lind and Espaldon entitled **South Africa's Debt at the Time of Crisis**. Detailed estimates of the exposure of individual Japanese and French banks were not covered adequately in that report and have been recalculated in Appendix II at the end of this report.

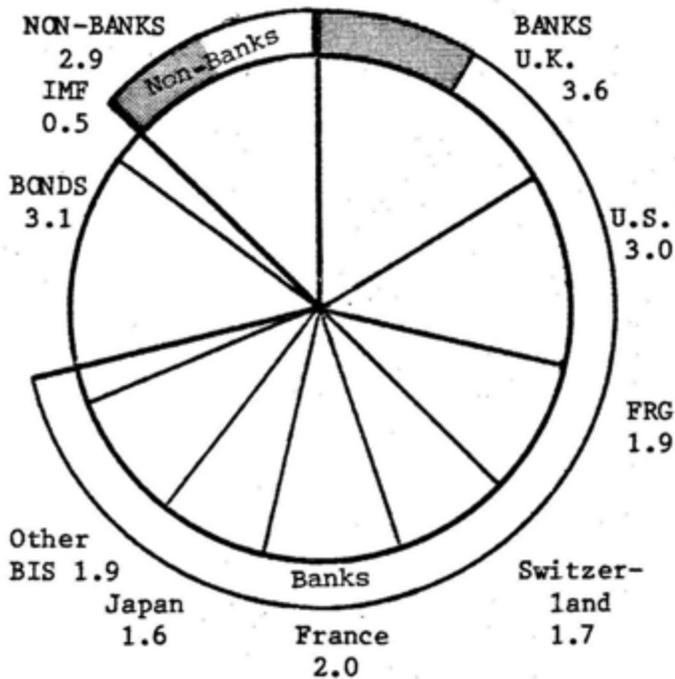
The portion of these debts that represent trade credits is impossible to ascertain. This is true because what in times of good credit ratings is a general purpose loan becomes in times of poor credit ratings trade finance linked to specific trade transaction. However, some information is available on bank trade credits which are insured by governments of the OECD member nations, and that is described below.

INSURED BANK CREDITS

Figure 4 shows the bank credits for trade that are insured by OECD member countries as a function of time. On the dollar basis given in the figure, the amount appears to have been constant since mid-1986. However, while interbank lending is primarily in dollars, trade credits tend to be denominated in the local currencies of the country exporting to South Africa. Only two countries provide public data on these guaranteed bank trade credits.

The U.S. does not now generally provide insurance, and has only \$0.358 million of

Figure 3. South African Debt as of the end of 1986 Distributed by the Category of Lender. U.S. Dollars amounts are in Billions.



Other OECD, 0.5, between Bonds and Other BIS

Notes:

This figure should not be used to determine changes in the debt over the year 1986 by comparison with a similar figure given by J. E. Lind & D. V. Espaldon in *South Africa's Deb at Time of Crisis*, Caniccor, 1986. The accompanying estimate is entirely new and tries to establish, with additional data not on hand for the previous report, a lower bound for the Japanese exposure. The previous data provides an upper bound to the Japanese exposure.

General Categories: Sources are given in the notes to Table V.

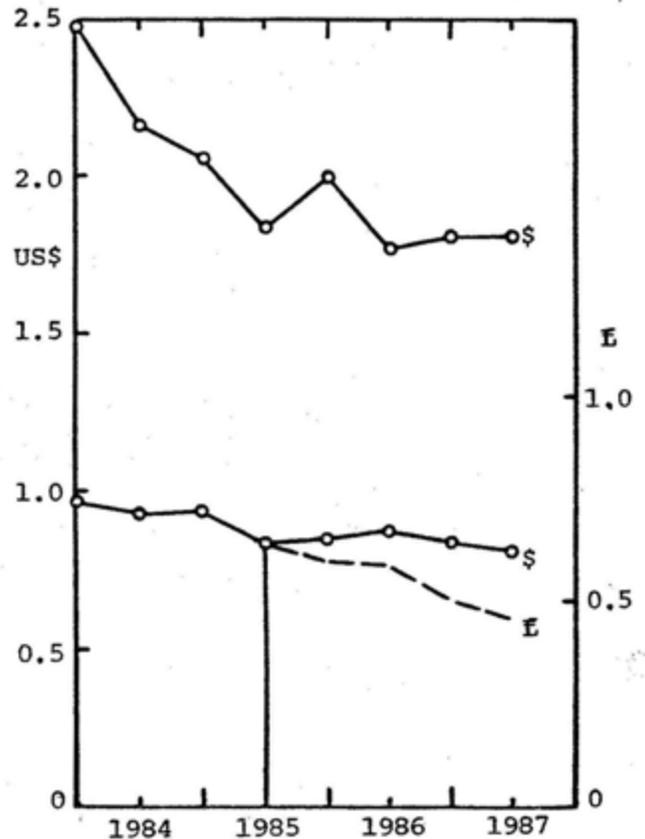
■ Portion insured by OECD member governments. See notes (2) and (3) to Table V.

BANK LENDING:

U.K.: Quarterly Bulletin of the Bank of England in Table 15 gives the exposure of U.K. registered institutions as \$4,245 million. These institutions include Registered banks and licensed deposit taking institutions of the U.K. as well as such institutions which are owned by foreign banks.

Continued on page 19.

Figure 4. Bank Credits Guaranteed by the Member Countries of the OECD in Billions.



Total guaranteed amounts expressed in U.S. dollars are from reference (2) in Table V.

U.K. guarantees expressed in U.S. dollars are from Quarterly Bulletin of the Bank of England, Table 15, assuming all "outward risk transfers" are to the U.K. This assumption is probably good to within a couple of percent. The dashed line represents these amounts expressed in pounds sterling. Over 90% of all the guaranteed bank credits are assumed to be in pounds sterling because the amount of exposure of banks in the U.K. to South Africa in pounds sterling from Table 14 of the Quarterly Bulletin coincides within 3% in mid-1985 with the "outward risk transfers". Its graph has roughly the same curvature as the total amount of guaranteed debt of U.K. registered banks, but decreases to 92% of the guarantees by mid-1987. It also equals the total of pound sterling debt in the total south African foreign debt as of the end of 1986.

a \$5.1 million Export-Import Bank guarantee to run off the books (**Contingent Foreign Liabilities of the U.S. Government**, U.S. Treasury Department, 30 June 1987).

The only other country which reports insured banks credits is the U.K. and its figures are plotted in Figure 4 in dollars. The U.K. insured bank trade credits made up about 45% of the total insured bank credits in mid-1987. The data indicate (see the note to the figure) that these guaranteed credits are essentially all in pounds sterling. Thus total U.K. guarantees since mid-1985 have also been plotted in pounds sterling on a scale so that the guarantees expressed in Pounds coincides with the same total expressed in dollars for mid-1985.

Mid-1985 is close to the imposition of the moratorium on the South Africa external debt in September 1985 and the graph therefore shows the trend in lending of pounds sterling since the moratorium's imposition. The plot in pounds shows the decrease in pound credits which is masked by the conversion to a depreciating dollar. The yen and the deutsche mark have appreciated with respect to the dollar even more than the pound. Thus it can be said with reasonable certainty that bank credit guarantees have continued to drop throughout the period of the graph when expressed in the currencies in which these credits are denominated. The total decrease in these currencies between mid-1985 and mid-1987 is at least as great as 30% that is given by the pound sterling figures for that period.

In the case of Japan, we can assume that insured banks credits are almost zero. First, most trade credits that are guaranteed by Japan are made in the form of official financing of the Export-Import Bank rather than as insured credits of the Ministry of International Trade and Industry (MITI) and the Export-Import Bank. Thus guaranteed bank trade credits are not common. Secondly, it is the lending in yen that is likely to be under Japanese guarantees and two-thirds of the it is to the South African public sector. Since Japan has a policy that banks should not make loans to the South African government (**The Japan Times**, 19 December 1986), this two-thirds should not be guaranteed bank credits. As a result of the weight of

these arguments, we assign a value of zero to the Japanese guaranteed bank credits.

What do these various currency figures mean in terms of the amount of goods delivered on the docks in South Africa? Initially, some of the local currency prices are locked in through contracts. However, some exporters in countries, whose currencies have appreciated, will cut prices to stay competitive with dollar denominated goods in the hope that exchange rates are experiencing only a short fluctuation. These exporters can not maintain these price cuts over a longer time frame because the price cuts reduce exporters' profit margins significantly. Thus in the medium term the graphs of appreciated currencies will somewhat undervalue the amount of physical exports and the graphs of depreciated currencies will tend to overvalued physical exports, leaving the amounts of physical exports lying somewhere between the two. In the long term, the assumption that prices are fixed in the domestic currency of the exporter is probably more accurate.

#### NON-BANK CREDITS

Non-bank credits are the other major source of credits now available to South Africa. These include private suppliers' credits and both supplier and buyer credits from government credit agencies like the Japanese Export-Import Bank and the German trade finance agency, Kreditanstalt fuer Wiederaufbau. The \$2.881 billion in non-bank credits at the end of 1986 in Table V is estimated by subtracting from the total debt of \$22.593 billion the sum of the debt to the foreign banks, the bond holders and the IMF. Since all errors in the various data accumulate in this difference of \$2.881 billion, and thus it is not highly accurate.

This non-bank credit appears to rise in Table V from \$2.25 billion at the end of 1985 to \$2.88 billion at the end of 1986, with the OECD member country guaranteed portion rising from \$1.08 billion to \$1.36 billion. Thus there appears to be an increase of both the total and the insured portion between the end of 1985 and 1986. However, these increases are attributable to currency exchange rate changes as shown below.

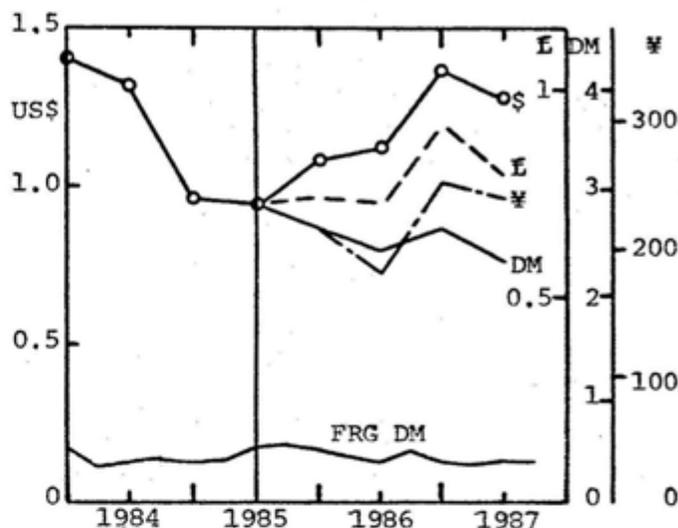
Figure 5 shows the insured portion rising rapidly after the debt standstill in late 1985. By converting this debt into various currencies and setting the vertical currency scales on the right hand side of the figure to coincide at the mid-1985 data point, figure 5 shows that if all the guaranteed debt were in deutsche marks, there would have been a general decline in the amount of this guaranteed deutsche mark debt. Assuming a fixed price for goods in each currency, this means a decrease in the physical amount of goods exported to South Africa with OECD guaranteed financing. If the exports were in pounds or yen, the amount oscillates and is only very slightly higher in mid-1987 than in mid-1985.

The amount of German exports financed by non-bank institutions is plotted in deutsche marks at the bottom of figure 5. They amount to about 20% of the total OECD member country guaranteed non-bank credits, assuming that the German data refer mostly to guaranteed credits. The German credits remain relatively constant throughout the time period when expressed in deutsche marks, but they would show a spurious increase since 1985 if they were expressed in dollars.

Estimates of the amount of non-bank credits and guarantees in all the various currencies must be made before we can see if the amount of goods delivered has increased or decreased over time. Table VII gives our estimates with an explanation in the notes to the table. The U.K. portion of the non-bank credits is roughly estimated as \$250 million at the end of 1986, while the largest contributor is Japan with \$580 million or 43% of the total as suppliers' credits.

By using the currency distribution at the end of 1986 and assuming that the distribution remains relatively constant over time, the value of the non-bank guarantees and credits at the end of 1986 can be calculated back to mid-1985 through the exchange rates. The result shows that there was no change in the amount of each currency and that the variation in the dollar amounts in figure 5 is all a result of the exchange rate variation between mid-1985 and the end of 1986. Some decrease then occurs in 1987. If the value of goods is constant in a given currency,

Figure 5. Non-Bank Credits Guaranteed by the Member Countries of the OECD, Suppliers' Credits and Credits of Official Export Financing Institutions in Billions.



Total non-bank insured credits, expressed in U.S. dollars, are taken from reference (2) in Table V. Scales on the vertical axes for other currencies are set so that they coincide for mid-1985 just before the moratorium. It is thus evident that much of the increase in the insured and guaranteed credits expressed in dollars results from the falling value of the dollar, since these credits expressed in other currencies remain more or less constant. Non-bank credits of the Federal Republic of Germany, insurance not specified, are expressed in deutsche marks from Table 11c of the *Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank, Series 3, Zahlungsbilanzstatistik*.

this result means that there was no change in the amounts of goods covered from mid-1985 until the end of 1986.

Looking at the total non-bank credits, both insured and uninsured over the year 1986, the total increased in dollar terms from \$2.25 billion to \$2.88 billion, a 28% increase. However, to determine the real change in the amount of goods delivered a currency distribution must be obtained for all non-bank credits. Such a distribution is estimated by scaling the machinery exports for OECD member countries from 1985 to 1986 by the ratio of the total ex-

Table VII. Insured Credits to South Africa by OECD Member Countries by Type of Creditor and Currency exclusive of Dollars Expressed in Billions of U.S. Dollars End 1986

Currency	Total (1) Insured Credits OECD 2		
	Without Bonds	Bank	Non-Bank
DM	3.1	1.5	0.21
UK L	1.2	1.0	0.75
Swfr	1.7	0.9	0.0
Frfr	1.0	1.0	0.16
Japan Y	0.58	0.58	0.00
Other	1.5	1.4	0.16
Total	9.1	6.5	1.80

Notes:

- (1) See Table V for Sources.  
 (2) See Table V, Footnote (2) for Source.  
 DM: Non-bank credits Table 11c, *Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank*, Series 3.  
 L: See notes to figure 1 for bank guarantees. Total guarantees are estimated for the end of 1985 from the ECGD-reported amount for all Africa. This amount is scaled by the percent of African trade with South Africa and yields about \$1.2 billion for guaranteed suppliers' credits to South Africa. Only \$1.0 billion is available in pounds sterling and \$0.75 billion is already allocated to bank credits, as explained in the note to figure 1. This leaves \$.25 billion for non-bank credits. These must be insured suppliers' credits since the U.K. does not directly provide buyers' credits through a government export bank.  
 Swfr: Switzerland has little trade with South Africa other than imports of South African gold on account. Therefore non-bank credits are minimal  
 Frfr: Non-bank credits in Frfr and "other" currencies are obtained by the difference between the total insured amount of \$1.36 billion and the estimated credits in DM, L, Swfr, and Y. The remainder is apportioned between francs and "others".  
 Y: When the outstandings of export credits of The Export-Import Bank of Japan for Africa, given in its annual report

Continued at bottom of next column.

ports in those two years and by scaling the \$2.88 billion of non-bank credits using these estimates of machinery exports in 1986. The results are listed in Table VIII. The distribution of currencies of the exporting countries in the remaining debt is sufficient to cover all these exports in domestic currencies except for the U.K. where \$0.15 of U.S. dollars would be required. Using this currency distribution, the \$2.88 billion at the end of 1986 would have represent only \$2.45 billion worth of currencies a year earlier. Since non-bank trade credit at that time was only \$2.25 billion, there was a real increase in non-bank trade credits during 1986 of 8%, assuming that prices remained constant in each currency.

SUMMARY OF FOREIGN CREDITS

The analysis given above provides a general picture of the South African exposure of foreign banks and non-banks which is outlined in Table VIII. If exposure to South African banks is omitted, foreign banks have provided credits of \$8.94 billion to the public and private sectors of South Africa at the end of 1986. Non-banks, that is other businesses and official financing agencies, have provided \$2.88 billion. Having now analyzed the

Table VII. Continued.

for 1985, are scaled by the percentage of African trade with South Africa, the cover for South African suppliers' credits is 30% of the total for Africa or \$0.52 billion. Unfortunately the 1986 annual report mixes suppliers' and buyers' credits, so that the suppliers' credits cannot be isolated. Within the accuracy of this estimate, the total yen exposure of \$0.58 billion is probably insured. Buyers' credits are probably not provided, at least for the \$0.40 billion of lending to public corporations shown in Table VI because of the prohibition by Japan on lending to the South African government. Thus we assume that all the Japanese non-bank credits are suppliers' credits.

Other: Non-bank amount apportion by difference from the total as in the case of Frfr.

Table VIII. Total Exposure of Foreign Banks and Non-Banks in South Africa at the end of 1986 in Billions of Dollars.

Country	Foreign Banks			Non-Banks	
	Total	Without/Interbk	Guar.	Total	Guar.
U.K.	3.62	2.32	0.83	0.4*	0.25
U.S.	2.96	1.06	0.0	0.4*(1)	0.0
Germany	1.87	1.45		0.9*	0.21
Switz.	1.68			0.1*	0.0
France	2.03			0.2*	0.16
Japan	1.56		0.0	0.6*	0.58
Other	2.41			0.4*	0.16
	16.13	8.94	1.80	2.88	1.36

Without Interbk: Total foreign bank exposure less interbank lending to South African banks.

Guar.: Amount of total which is guaranteed by governments of the OECD member countries.

\* Very rough estimates by scaling the total of \$2.8 billion by the machinery exports of each country for 1986. The 1986 values were obtained by scaling the 1985 OECD statistics for Machinery to 1986 by total exports for each year.

(1) U.S. data for non-bank credits are given as \$50 million in Table CM-IV-5 of the **Treasury Bulletin**, Department of the Treasury. However, claims on subsidiaries are not included and thus it is a lower bound.

non-bank creditors, further insight can now be gained on the banking sector.

Subtracting all the currencies in the bond and non-bank debt categories from the currency distribution of the total debt, leaves \$3.2 billion in various currencies other than dollars (DM 0.6, Swfr 0.6, Ffr 0.8 and other currencies 1.0, all expressed in billions of dollars). These amounts more than adequately cover the unallocated \$0.97 billion of guaranteed bank credits not yet accounted for, leaving another \$2.2 billion in bank credits which are not guaranteed.

Thus known trade credits are amount to \$2.88 billion of non-bank credits and

\$1.80 billion of guaranteed bank credits, totalling \$4.68 billion. Of the remaining \$7.14 billion of foreign bank credits to the South African non-bank sector, \$2.2 billion are not denominated in dollars and are thus more likely to be directly associated with trade. This analysis suggests that outstanding trade credits are about \$6.9 billion. This amount is just above the upper bound estimated in Chapter I for South African import credits in 1986.

#### KNOWN LENDING SINCE THE MORATORIUM

The one sector of the South African economy which is known to have received foreign funds since the moratorium has been the public sector, both public authorities and public corporations.

Hearsay evidence suggests that Swiss and/or German banks lent about \$400 million in early 1986 to the public authorities for oil purchases to restock their reserves at a time when the price of oil started dropping rapidly. Since oil is sold in U.S. dollars, these loans were presumably in dollars. When we look at the Bundesbank statistics, an assumption must be made about the currencies that the South African lending is in to permit the calculation of the money flows. Only the figure for the British banks is available, and it shows that 80% of British bank exposure is in U.S. dollars. Using this same percentage for the German banks, a flow from German banks to South Africa of about \$130 million can be seen in the first half of 1986 and this is primarily in the the first quarter. This in-flow to the South African public sector is against the background of a much larger out-flow from South African banks to the German banks. While this calculation is not very accurate, it suggests that the larger portion of these oil loans may be Swiss.

ESKOM, a public corporation, reported \$164 million (R371 ml.) in foreign loans in 1986, and projected a total of \$465 million (R929 ml.) for 1987. The Reserve Bank already reports a net inflow to public corporations in the first half of 1987 of \$340 million. Where is this money coming from and can these flows be seen from the side of the supplying banks and other institutions?

First, some of it is generated inter-

nally within South Africa. When a South African debtor pays off its foreign currency debt which is under the standstill agreement, the money is deposited with the Public Investment Commission (PIC). If these funds are not needed at that time for payments under the agreement, they will be lent out (reinvested) within South Africa in the public sector. Some of these funds are also being directly acquired by ESKOM. Thus the standstill agreement is providing a pool of foreign funds for the government.

Secondly, export credits are still available from all the major trading partners. Only the U.S. has cut off government guarantees and lending, but private sector trade credits are permitted. As Larry Harper, ESKOM's general manager of finance, stated "If we place orders overseas using credit lines with overseas institutions we can still fund a least 85% of our import requirements. . . There has been no indication that that sort of finance will be withdrawn." (*Financial Mail*, Supplement, 24 July 1987)

The exposure of U.K. banks in the South African public sector has been rising continuously in dollar amounts since the end of 1985, especially in the first half of 1986 and again in the first half of 1987. Using the fact that 80% of U.K. bank lending to South Africa is in dollars, the flow to the South African public sector in the first half of 1986 would be about \$160 million while that in the first half of 1987 would be about \$170 million. In the latter case the flow is almost completely compensated by a decrease in unused commitments which suggests that the flow was a result of a draw down on an already committed loan or loans. German bank data suggest a net flow into the South African non-bank sector, including the public sector, of about \$40 million in the second quarter of 1987. Remember these flows are net flows or flow into South Africa minus any repayments of existing loans. Thus the actual in-flows are larger and have probably risen even more in the second half or 1987.

Three credits for a total of DM 32.8 million are known to have been accorded to the South African Post and Telecommunications Administration in 1987 for financing telephone offices by the German recon-

struction bank, the Kreditanstalt fuer Wiederaufbau (KfW) (Letter 21 March 1988, FRG Embassy). The *Frankfurter Rundschau*, 23 January 1988, had reported that these credits were for ESKOM, but the German Embassy stated that this report was incorrect.

Perhaps the most unusual and largest new funding for ESKOM came at the end of 1987. This was the floating of DM 200 million (\$126 million) bond issue with Dresdner and Commerzbank as lead underwriters. It is unusual because it is not a "new" bond issue because it was registered 33 months earlier on 1 April 1985. The reasons for the delay in issuing the bonds are not known.

Thus trade credits are being provided at a moderate level with the specifics only occasionally coming to public light. Finally one delayed bond issue in 1987 is providing ESKOM with \$126 million of general funds for its building program.

Aufgrund des vorstehenden Prospektes sind die

DM 200 000 000,-

8 1/2 % Inhaber-Teilschuldverschreibungen von 1985/1993

30 000 Stück je je DM 1 000,- Nr. 00 001-30 000  
17 000 Stück je je DM 10 000,- Nr. 30 001-47 000

der

ESKOM

Sandton (Transvaal), Republik Südafrika

unter der unbedingten und unbedingten Garantie der

Republik Südafrika

zum Börsenhandel mit amtlicher Notierung an den Wertpapierbörsen zu Frankfurt am Main, Düsseldorf und Hamburg zugelassen worden.

Frankfurt am Main, Berlin, Bielefeld, Bochum, Bonn, Düsseldorf, Hamburg, Hannover, Köln, Mainz, München und Stuttgart, im Dezember 1987

Dresdner Bank  
AktiengesellschaftCommerzbank  
AktiengesellschaftBank für Handel und Industrie  
AktiengesellschaftBerliner Commerzbank  
AktiengesellschaftBayerische Hypotheken-  
und Wechsel-Bank  
AktiengesellschaftBayerische Vereinsbank  
AktiengesellschaftBerliner Handels-  
und Frankfurter BankDeutsche Bank  
AktiengesellschaftWestdeutsche Landesbank  
GirozentraleDeutsche Bank Berlin  
AktiengesellschaftBaden-Württembergische Bank  
Aktiengesellschaft

Bankhaus H. Aufhäuser

Joh. Barenberg, Gossler &amp; Co.

Bayerische Landesbank  
Girozentrale

Bankhaus Gebrüder Bethmann

Berliner Bank  
AktiengesellschaftCSFB-Effektenbank  
Niederlassung der  
Schweizerische Kreditanstalt (Deutschland) AGBremer Landesbank  
Kreditanstalt Oldenburg  
- Girozentrale -

Deutsche Genossenschaftsbank

Delbrück &amp; Co

DBL Bank  
Deutsche Siedlungs- und LandesbankDeutsche Girozentrale  
- Deutsche Kommunalbank -Georg Hauck & Sohn Bankiers  
Kommanditgesellschaft auf AktienHamburgische Landesbank  
- Girozentrale -Bankhaus Hermann Lampe  
KommanditgesellschaftHessische Landesbank  
- Girozentrale -

Merck, Finck &amp; Co.

Landesbank Rheinland-Pfalz  
- Girozentrale -Norddeutsche Landesbank  
Girozentrale

E. Metzler senf. Sohn &amp; Co.

Reuschel &amp; Co.

Sal. Oppenheim jr. &amp; Cie.

Vereins- und Westbank  
Aktiengesellschaft

Trinkaus &amp; Burkhart KGaA

Westdeutsche Genossenschafts-  
Zentralbank e.G.M. M. Warburg-Brinckmann,  
Wirtz & Co.Württembergische  
Kommunale Landesbank  
GirozentraleWestfalenbank  
Aktiengesellschaft

Figure 3, Continued from page 13.

latter must be separated out, leaving the British owned banks. The exposures of the major U.K. banks are as follows: Standard Chartered L744 ml., Barclays L728 ml., National Westminster L400 ml., Midland L200ml., Lloyds L140 ml. The first two were reported in the 1986 annual reports and the remaining three were estimated. The sum of the above in US dollars is \$3262 and is assumed to be 90% of the British bank exposure because of the high concentration in U.K. banking. The U.K. bank exposure becomes \$3624 with the remainder of \$621 being the exposure of foreign owned banks in the U.K.

To estimate the distribution of this exposure to other countries, we proceed as follows: Tables 3.5 through 3.8 of the Bulletin give the overseas loans and advances of all banks in the U.K. monetary sector as of 18 September 1985, as U.S. (\$67.3 bl.), Japanese (\$116.2 bl.), other countries (\$93.7 bl.) and consortium (\$12.0 bl.). The September 1985 figures are used since this is just after the moratorium was declared, and the distribution should not have changed much so far as South Africa is concerned since then. While this distribution of loans and advances assets institutions which are not a part of the registered institutions, we assume that it holds for the subset of registered institutions. Using this distribution to allocate the \$4621 million of South African exposure yields \$250 million from Japanese banks. Most of the U.S., German, Swiss and French will presumably be caught by their exposures explained below, leaving the remainder to be allocated throughout the rest of the world as explained below.

U.S.: Country Exposure Lending Survey, Statistical Release E.16 (126), FFIEC, \$2,957 million.

Federal Republic of Germany: Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank, Series 3, Zahlungsbilanzstatistik. Sum of Table 7d, 8b and 9b which yields DM 3625 million for end 1986.

Switzerland: The end 1984 exposure of Swfr 4,554 ml is given by Das schweizer-

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ische Bankwesen im Jahre 1984, Report 69, BIS. This was scaled to the end of 1986 by using the ratio of the FRG exposure in DM at the two dates, and yielded Swfr 2,727 million.

France, Belgium, Canada, and Austria: The exposure of these countries were scaled from their 1985 values by a factor of 0.921, which is the ratio of the sum of the exposures for the U.S., U.K., Germany and Switzerland for those two dates. For the 1985 data for France, Belgium and Canada, see J.E. Lind & D. V. Espaldon, **South Africa's Debt at the Time of Crisis**, Caniccor, 1986. For Austria The exposure of US\$ 143 million was given for 28 June 1985 by the Austrian Finance Minister in Parliament on 13 December 1985. *Die Presse* (Vienna) gave a value of Sch 7 billion on 24-27 October 1985, but this seems high. Thus the value reported by the finance minister is used.

Japan: The \$250 million of exposure of U.K. subsidiaries is added to the amount scaled from the unallocated BIS exposure using the U.K. allocation as \$4,245 million to give a total of \$1,560 million. The scaling factors are the assets of international banks in each country as of the end of 1984. See below.

Other BIS Reporting Countries: The exposures of the countries given above including total Japanese exposure is subtracted from the BIS total and this remainder is allocated to the remaining countries by using a weighting factor equal to the total assets of the international banks in each country as of the end of 1984. The moratorium of 1985 freezes most of this bank debt so the lending occurred through mid-1985 and thus the assets of 1984 should be used, not of 1986. This yields in millions of US\$: Denmark 59, Finland 88, Ireland 30, Italy 543, Luxembourg 45, Netherlands 192, Norway 36, Spain 136, and Sweden 116.

Australia, Greece, New Zealand, and Portugal: Bank exposure insured by these governments is given in note (2) of Table V by the OECD.

### CHAPTER III THE EFFECT OF CUTTING OFF TRADE CREDITS

Dr. Gerhard de Kock, Governor of the South African Reserve Bank, in his "optimistic scenario" for 1988 foresaw the possibility of a 4% growth in the South African economy (Address of 18 September 1987, reprinted in the *Quarterly Bulletin* of the Reserve Bank, September 1987). This scenario required among other measures "An increased use by South African importers and exporters of foreign trade and suppliers' credits with a consequent improvement in the capital account of balance of payments." The question for this report to answer is just what effect would the cutting off of trade credits have on the South African economy?

Because many of the present trade credits are in the form of suppliers' credits, such a ban on trade credits would most easily be enforced by each of South Africa's trading partners requiring a proof of payment for each item as it is shipped into or out of their country.

#### THE ECONOMY

The average growth rate of South African economy during the 1980's has been very low. The best linear fit of the growth of the gross domestic product between 1980 and 1986, inclusive, is 0.88% per year according to Nedbank (*Guide to the Economy*, November 1987). In seeking answers to why the growth rate has been so low, Nedbank enumerates several constraints on the economy. Among these constraints are the "low ebb of entrepreneurial confidence" and "the completion of major infrastructural programmes of the parastatal corporations". The latter point highlights that this small of growth has been led by the capital spending of the parastatals like ESKOM. In fact de Kock in his above mentioned address states that an essential requirement for a take off of economy in 1988 is a "distinct revival in real fixed and inventory investment" and that a growth rate of 4% can only be achieved if there is a marked increase in the total spending in capital outlays on plant, equipment and construc-

tion.

As was explained in Chapter I of this report, the essential machinery involved in capital outlays must be purchased abroad and thus financing for these purchases is crucial to the implementation of this plan of economic growth. The lack of sufficient capital outlays is in part the result of the low ebb of entrepreneurial confidence arising from the political problems in South Africa and from the imposition of sanctions from abroad.

This lack of confidence is exemplified in the IMF figures for errors and omissions in the South African balance of payments figures. The errors and omissions are an indication of unreported capital flight under circumstances like the imposition of U.S. sanctions in the last quarter of 1986. Indeed in that quarter, the IMF's *International Financial Statistics* reports that errors and omissions were a little over \$1 billion, signifying massive capital flight. Note that the South African Reserve Bank tried to explain this \$1 billion outflow as a shift from external to domestic financing of foreign trade by their usual combining of reported short-term capital flows with errors and omissions. Thus if sanctions continue to be scaled upward and/or if the political scene continues to worsen, the entrepreneurial confidence will continue to ebb even with funds available from the present positive flow of funds in the balance on current account.

ESKOM's present expansion plans are a transparent use by the government of a parastatal to prime the economic pump through capital investment with hope that the ripple effect will raise the entrepreneurial confidence and create more investment. ESKOM's expansion, with five new power stations under construction, is based upon the premise of a 7% annual increase in the demand for electricity in a country whose central bank governor's most optimistic hope is for a 4% growth rate and whose average real growth has been under

1% for the past 7 years. The financing for capital equipment for these power stations is coming from prior commitments, the December 1987 bond issue in Germany, new suppliers' credits of foreign banks, some suppliers' credits from foreign government export agencies, and foreign funds locked in by the standstill agreement (1). The prohibition of trade credits by South Africa's major trading partners (U.S., Germany, U.K. and Japan) would exclude most of the sources and force South Africa to depend upon those funds locked in by the standstill agreement. However, these funds all become due in mid-1990, along with \$ 1.1 billion of bonds coming due that year, making the use of these locked-in funds very perilous. South Africa is obviously hoping that the economic and political situation will be sufficiently good that these debts can be rolled over at that time. Otherwise there will be a crisis like the one in September 1985.

#### **SANCTIONS AGAINST TRADE CREDITS**

How much liquidity does South Africa have if trade credits ceased being granted by foreign banks, corporations and government agencies in the major exporting countries to South Africa? Certainly the over borrowing of the South African banks up until the moratorium in 1985 was prompted by the very high domestic South African interest rates and relatively low international capital market interest rates. This fact suggests that as much trade finance as possible was sought abroad at that time. Foreign dollar and domestic rand interest rates did not begin to converge until late 1986 and early 1987. There have been no large outflows of recorded short-term capital since the beginning of 1986 which would suggest, as the Reserve Bank erroneously proposed for the fourth quarter of 1986, that there has been a major shift toward domestic finance of trade since the moratorium.

Thus even if South Africa was providing the \$1.8 billion to \$2.9 billion of its own export finance in 1987, imports required about \$2.7 to 5.3 billion of short-term outstandings. Annually new medium- and long-term funding of \$0.7 billion to \$0.9 billion was required and any cut off

of trade credits would require raising this amount plus an equal amount to pay off long-term debt from previous years that is coming due. (Long-term outstandings would climb to \$2.1 to 2.8 billion over five years.) Thus the total bill for imports in the first year after all trade credits were cut off, assuming no other sources of credit, would be \$4.1 billion to \$7.1 billion. In the succeeding years the amount of new money would be reduced to the amount of new medium- and long-term funds for capital imports and service on the previous debt. However, the economy would be saddled with large amounts of foreign exchange tied up in trade finance and not otherwise available.

The primary effect of the cutting off of trade credits is the sharp impact of raising \$4 billion to \$7 billion in foreign exchange in the year the sanctions are enforced with most of that capital being necessary in the first three to six months. This assumes that all major trading partners act at the same time and is reduced proportionally if they do not.

As of 30 September 1987, the South African Reserve Bank held foreign assets of \$3.70 billion of which \$2.61 billion was in gold reserves. For these gold reserves to be utilized, they would need to be swapped for foreign currencies. These reserves are building up partly to keep an over supply of gold off the market in order to maintain a stable price. The banking system held foreign assets of another \$0.96 billion. Finally foreign deposits by non-banks were \$1.75 billion. These assets represent the main sources of foreign exchange that can be quickly tapped. The Reserve Bank and banking system assets of \$4.66 billion are most accessible while the foreign deposits include individual accounts which have no relation to imports and are thus inaccessible for these purposes. Comparing these numbers with the \$4 billion to \$7 billion required to finance the trade indicates that South Africa would face a financial crisis if trade credits were cut off by its major trading partners, for south Africa could barely cover the needs at the lower estimate of the trade finance by liquidating almost all of its foreign reserves.

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(1) When a South African debtor pays off any of its debt which is under the standstill agreement, it is normally paid into the Public Investment Commission (PIC). This agency pays any portion of the principal that is due under the agreement. This amount is a little under 5% per year. The remaining amount is then reinvested with PIC paying an extra 1% interest to the original lender. This reinvestment is a relending of foreign funds, primarily to South African government agencies and parastatal corporations. Technically all remaining principal is due on 30 June 1990.

## APPENDIX I

### TRADE CREDIT ANALYSIS OF TRADE DATA

The most significant problem in estimating the volume of outstanding trade credits is not knowing the exact terms of trade finance agreements. The ranges given in published sources, such as the figures from the **International Finance Handbook** noted in the text, are very broad. For example, the 30-180 day terms given for raw materials, consumables and parts mean that credits on these items could roll over anywhere from two to 12 times a year.

Narrower estimates of the time span of trade credits were obtained by consulting with a banker involved in international trade finance. He gave us typical terms for representative products that are traded internationally. Products were selected that have an important place in South Africa's foreign trade. The banker's comments are summarized as follows:

- 1) Raw materials such as petroleum, coal, and metal ore are likely be sold to major corporations with short credit terms of 30-60 days. Food articles such as fresh vegetables would have the similar terms.
- 2) Steel typically has a 180-day term that allows the buyer the time to use the metal in the fabrication of final goods and sell them before the trade credit is paid back.
- 3) Consumer goods such as clothing and stereos generally have terms in the 90-180 day range to allow the buyer time to re-sell the products to retailers before the credit is paid back.
- 4) Auto components have terms of up to 180 days.
- 5) Most purchases of machinery-- several food-processing machines for example-- have 180 day terms. This falls at the bottom of the 180 day- 5 year range for this type of product. Only large orders such as an assembly line or an entire plant have credits of several years in length. Furthermore, exporting companies selling large orders of capital goods to an associated company in a foreign country typically extend short-term finance by

selling on open account. the purchasing company than arranges further financing locally.

Based on these statements we assigned the following terms for trade credits:

1. Raw materials, most intermediate goods and food-- 30-60 days.
2. Steel-- 180 days.
3. Consumer goods and auto components-- 90-180 days.
4. Most agricultural and industrial machinery-- 180-360 days.
5. Large orders of capital goods-- 5-7 years.

The following tables present South Africa's imports and non-gold exports broken down by commodity according to the SITC classification system. Trade credits terms assigned based on the principles just discussed appear to the right of the dollar amounts. Totals of trade covered by different lengths of terms are given after the tables.

Table A1. South African Imports from OECD Countries by SITC Classification with Estimates of Lengths of Trade Finance, 1985

	Imports US\$ mil.	Credit Terms Days
	-----	-----
Total World (1)	10,518	
Total OECD	7,201	
0- Food & live animals	208	30-60
1- Tobacco & beverages	84	30-60
2- Crude materials, inedible	262	30-60
3- Mineral fuels, lubricants	86	30-60
4- Animal & vegetable oils	49	30-60
5- Chemicals	1,015	30-60
6- Manufactured articles	935	
64- Paper	(170)	30- 60
65- Textiles, fabrics	(165)	90-180
66- Non-metallic min. goods	(102)	30- 60
67- Iron & steel	(166)	180
68- Non-ferrous metals	(57)	30- 60
Other 6-	(275)	30- 60
7- Mach. & transprt eq. (2)	3,894	

Table A2. South African Exports Excluding Gold to OECD Countries by SITC Classification with Estimates of Lengths of Trade Finance, 1985

	Exports US\$ mil	Terms Days
Total non-Gold Exports (1)	9,340	
Total OECD	8,843	
0- Food & live animals	859	30-60
1- Beverages & tobacco	27	30-60
2- Crude materials, inedible	2,080	30-60
3- Mineral fuels, lubricants	1,490	30-60
32- Coal	(1,318)	
4- Animal & vegetable oils	3	30-60
5- Chemicals	561	30-60
6- Manufactured goods	3,341	
65- Textiles, fabrics	(140)	90-180
66- Non-metallic min. goods	(673)	30-60
67- Iron & steel	(941)	180
68- Non-ferrous metals	(1,413)	30-60
Other 6-	(174)	30-60
7- Machinery & transport eq.	152	90-180
8- Misc. manufac'd articles	224	90-180
9- Other	104	180-360

Table A3. Totals of Estimated Trade Credits by Length of Term for South Africa's Foreign Trade, 1985 (mil of \$)

	Imports		
	Total Credits	divided/multiplied by	Total Outst.
30-60 days	5,344	/ 6-12	445- 891
90-180 days	2,886	/ 2-4	722-1,433
180 days	166	/ 2	83
180-360 days	1,552	/ 1-2	776-1,552
5-7 years	558(1)	x 3-4	1,674-2,232
Total	10,506		3,700-6,191

71- Power generating eq.	397	
711- Steam boilers	(28)	5-7 yrs
712- Other steam units	(78)	180-360
713- Intrnl combust. eng.	(149)	90-180
714- Non-elec. eng. & mtrs	(20)	90-180
716- Rotating elec. plant	(111)	
20%	(22)	5-7 yrs
30%	(33)	180-360
50%	(56)	90-180
718- Other power gen. eq.	(11)	90-180
72- Specialized mach.	(3) 568	
73- Metalworking mach.	(3) 106	
74- Gen'l indust'l mach.	(3) 587	
20%	(252)	5-7 yrs
80%	(1,007)	180-360
75- Offic mach. & ADP eq.	(4) 455	
10%	(46)	5-7 yrs
10%	(46)	180-360
80%	(364)	90-180
76- Telecomm. & sound eq.	(5) 315	
10%	(32)	5-7 yrs
10%	(32)	180-360
80%	(252)	90-180
77- Electric machinery	(6) 459	
30%	(138)	5-7 yrs
70%	(321)	90-180
78- Road vehicles	(7) 868	
20%	(174)	180-360
80%	(694)	90-180
79- Other transport eq.	(8) 126	
	(40)	5-7 yrs
	(86)	180-360
8- Misc. manufac'd goods	(9) 573	90-180
9- Other	(10) 96	180-360
From non-OECD countries	(11) 3,317	
Oil	(3,036)	30-60
Other	(281)	90-180
Combust.: combustion		
Elec.: electric		
Eng.: engines		
Eq.: equipment		
Gen.: generating		
Mach.: machinery		
Min.: mineral		
Telecommun.: telecommunications		

Source: OECD, Foreign Trade Statistics, Commodity by Country.

Table A3. Continued.

	<u>Exports</u>		
	Total Credits	divided/mul- tiplied by	Total Outst.
30-60 days	7,777	/ 6-12	648-1,296
90-180 days	516	/ 2-4	129- 258
180 days	914	/ 2	457
180-360 days	104	/ 1-2	52- 102
<b>Total</b>	<b>9,311</b>		<b>1,286-2,115</b>
<b>Imports + Exports</b>	<b>19,817</b>		<b>4,9868,306</b>

\* If the outstanding amount of loans with terms longer than 12 months stays constant over the course of the loans, then the amount of principle repaid during a given year must equal the amount of new loans granted. In a situation where the amount of outstandings remain in a steady state, the amount outstanding A is related to y, the amount of new loans granted, and n, the term of the loans in years by the expression:

$$A = y \left( n - \sum_{i=1}^{n-1} (i/n) \right)$$

n	A/y
1	1.0
2	1.5
3	2.0
4	2.5
5	3.0
7	4.0

Notes to Appendix 1:

1. Quarterly Bulletin, South African Reserve Bank.

2. As can be seen, power generating equipment ranges from heavy capital goods such as steam boilers that were probably purchased by ESKOM to auto engines and other products. It is assumed that all steam boilers in 711- were for ESKOM. The "steam and other vapor power units, not incorporating boilers; steam engines" in 712- are counted as medium-term capital goods. The internal combustion piston engines in 713- are given 90-180 terms

since they are auto components, while the small engines in 714- are considered as consumer goods with 90-180 day terms.

The rotating electric plants comes in 76- come in a range of sizes for different purposes in both AC and DC. Twenty percent was arbitrarily allocated to ESKOM as heavy capital goods for power plants, and another 30% was allocated as light capital goods for industry. This leaves 50% as electric motors for consumer uses.

3. All of the machinery in 72-, 73- and 74- was for agricultural and industrial uses. It is not evident how much of these goods were purchased individually and how much came as part of a plant installation. Thus 20% of the total of these three categories is arbitrarily allocated as part of a plant installation necessitating a long-term credit. The remaining 80% is assumed to have been purchased in small units and is assigned terms of 180-360 days.

4. The 75- classification includes office machines as well as automatic data processing equipment. It is impossible to tell how much of the total is made up of costly computer networks that would likely have medium or long-term credits and how much is personal computers which would probably have short-term credits. The 10% long, 10% medium, and 80% short-term credits are arbitrarily assigned.

5. A more in-depth analysis of imports from Japan in the 76- telecommunications and sound equipment was done. It found that transmitters and telegraph and telephone equipment made up about 20% of the total of the imports in this category. This 20% is used as an estimate of the percentage of the total that is capital goods. This amount is divided between medium and long-term credits. The remaining 80% is consumer goods such as stereos and is assigned a term of 90-180 days.

6. A thorough analysis of Japanese trade statistics in Japan Exports and Imports (Japan Tariff Association) for this category of goods found that heavy generation and transmission equipment made up about 30% of the Japanese total. Thus 30% of the OECD total is allocated as

capital goods for ESKOM and the remaining 70% is considered to be consumer goods such as household appliances.

7. Of the \$868 million total for road vehicles, passenger cars accounted for \$133 million, vehicles "for the transport of goods or materials and special purpose" vehicles accounted for \$123 million, and auto components were \$540 million. Motorcycles and trailers made up the remainder. The high amount of auto parts stems from large automobile industry in South Africa that assembles autos using imported components. We assume that the heavy transport vehicles and some of the components for assembling them would have medium term credits since these vehicles are capital goods. Thus 20% of the total is assigned medium terms of 180-360 days, and the remaining 80% is assigned 90-180 terms as suggested by the banker.

8. Transport equipment besides automobiles figures prominently in the *International Finance Handbook* as goods that carry long-term trade credits. Specifically mentioned as long-term goods are commercial jet aircraft and railroad locomotives. In the 79- classification, aircraft account for \$97 million of the \$126 million total. However \$77 million of this \$97 million is aircraft parts. Railroad equipment worth \$17 million and ships worth \$12 million make up the remainder.

Allocating \$40 million under 5-7 year credits as capital goods allows for most of the railroad equipment and ships and some of the \$20 million in aircraft. The remainder, mostly aircraft parts, are assigned credits of 180-360 days.

9. Professional and scientific instruments and photographic equipment are two prominent items in the miscellaneous manufactured articles category. It seems reasonable to assign these products 90-180 day terms.

10. The most notable item included under the 9- classification of items not elsewhere classified is arms. The \$96 million here are thus assumed to be weapons, for which a 180-360 day term seems reasonable.

11. Non-OECD imports were arrived at by

subtracting the OECD total for exports to South Africa from the South African Reserve Bank's import total. Oil imports, kept secret by the government, makes up the bulk of the total. Oil imports were estimated by multiplying South Africa's estimated oil imports of 88 million barrels a year by a price of \$34.50 per barrel in 1985. This price is \$6.50 per barrel higher than the OPEC price in that year to allow for the \$58 premium that South Africa must pay on oil imports to circumvent the embargo on oil shipments imposed against it (see Lind and Koistinen *Trade Finance and Projections of South Africa's Balance of Payments*). The remaining non-OECD imports were arbitrarily assigned 90-180 terms.

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## APPENDIX II

### INDIVIDUAL EXPOSURES OF JAPANESE AND FRENCH BANKS

#### JAPANESE BANKS

In the report by Lind and Espaldon on individual exposures of banks to South Africa, *South Africa's Debt at the Time of Crisis*, no attempt was made to estimate the exposures of the individual Japanese banks because of the uncertainty of the total for all Japanese banks. The estimate of total Japanese bank exposure in this report is on much firmer ground, and thus the exposure estimates of the major Japanese banks are hazarded in Table B1.

These estimates are based primarily on the relative participations of these banks in the 1983 \$5 billion new money loan to Mexico with some adjustments arising from Brazilian, Argentine and Chilean loans and reschedulings of the same period (*Euro-money International Loan Annual 1984*). This approach of looking at loans to less developed countries was taken because Japan's premier international bank, Bank of Tokyo, is not by any means the largest of the Japanese banks. Thus to scale proportional to total assets seemed unreasonable and Japanese banks do not give any breakdown of their lending by area of the world. These Latin American loans suggested that Bank of Tokyo provided at

least 10% to 15% of the funding and thus for South Africa exposure the Bank of Tokyo's exposure was set at 15% of the total.

Note that perhaps \$250 million of the exposure is from their London registered banks; however, all the major Japanese banks have U.K. registered banks as subsidiaries. Note also that because of the Japanese government's prohibition on lending to the South African government, much of this exposure is in the form of lines of credit and deposits in South African banks and is in US dollars rather than yen.

Table B1. Estimated Exposure of Japanese Banks in South Africa as of 31 December 1986 in Millions of U.S. dollars.

Bank	Exposure
Bank of Tokyo	\$230
Sumitomo Bank	180
Dai Ichi Kangyo	150
Sanwa	140
Mitsubishi Bank	130
Tokai	120
Fuji	120
Other Banks	490
<b>Total</b>	<b>\$1,560</b>

These seven banks represent about 70% of the total Japanese bank lending.

#### FRENCH BANKS

Of the French banks only Banque Nationale de Paris (BNP) gives risk by geographical area in three different categories: Overall risk, loan risk, and cross-border risk. The other major banks given their risk in one of the above categories. Thus the ratio between the categories for all banks was assumed to be the same as that of BNP. Scaling then could be accomplished for the major banks assuming that they represented about 75% of the total French bank exposure. A figure of 75% is used since U.S. money center banks account for about 75% of U.S. bank exposure in South Africa. The uncertainties of these estimates are fairly high because data for all Africa was used in the scaling and the

French banks have large exposures in Francophone Africa which can bias the estimates for individual banks.

Table B2. Estimated Exposure of the French Banks in South Africa in Millions of U.S. dollars at the end of 1986.

Bank	Exposure
Credit Lyonnaise	\$370
Banque Nationale de Paris	450
Societe Generale	250
Banque Paribas	300
Banque Indosuez	170
Other Banks	530
<b>Total</b>	<b>\$2,030</b>

1871  
1872  
1873  
1874  
1875  
1876  
1877  
1878  
1879  
1880