Chapter 5: CALCULATION OF KFC's SDI

5.1 Introduction

The purpose of this chapter is to illustrate the procedure followed in calculating the KFC's SDI. The calculation presented a number of challenges, which were handled in accordance with "the rules of applying the methodology". Failure to follow these guidelines would certainly have led to inaccuracies in calculating the SDI. This in turn would result in a distorted and thus meaningless SDI value. The four rules followed in these calculations are briefly reviewed in section 5.2 below.

5.2 SDI calculation guidelines

There are four rules considered in this study. The first one is that the SDI was designed for the measurement of development performance of financial intermediaries. The KFC is a holding company with non-financial intermediary activities, and subsidiaries. As such these non-intermediation activities were excluded from the data used for the calculation. This required making adjustments to the income statement and the balance sheet.

The second rule is that there should be consistency in treating accounting data during the calculation process from one year to another. This allows SDI calculation comparisons across a number of years within an RFI and among different RFIs to be meaningful. Consistency approaches to the estimation of the components of the SDI formula, e.g. the market rate (m); the weighted average concessionery rate (c) and depreciation, should be followed.

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Thirdly, there is need for adequate provision for loan losses. Failure to do so would have resulted in the profits of the KFC being overstated and thus resulting in a distorted SDI.

Fourthly, there were adjustments done for operational costs incurred in non-financial intermediary services carried out by the KFC. Costs incurred by the KFC's financial intermediation were estimated, and those derived from non-financial services were excluded from the total operational costs.

Balance sheets and income statements were then prepared for two SDI calculations in the financial years 1992/93 – 1993/4 and for the years 1993/94 – 1994/95.

5.3 Calculating the components of the SDI

A number of assumptions must be made in calculating the SDI of an RFI. The first assumption is that there are no seasonality effects in the lending business or borrowings of the KFC. The approach of handling seasonality is normally one of adjusting concessionery borrowings, equity, deposits and the loan portfolio on a weighted average basis instead of using annual average values. This is done in order to accommodate seasonal variations, such as those found in agricultural activities or one-time changes in equity. The annual average values used in the calculations in this section were deemed adequate for the purpose of this thesis.

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Table 5.1: KFC assets invested in separate business units

	Assets invested per employee as % of total SBU assets.	Assets invested per Business Unit as a % of total assets invested
Investments	3.15	37.73
Technical services	14.36	7.19
Commerce	3.69	5.68
Small Industries	3.2	2.97
Housing	4.34	29.79
Rural Development	4.18	2.99
Development administration	10.3	0.66
Finance	11.93	5.66
Beverage industries	37.2	4.95
Corporate services	7.65	2.38
Total	100	100

Source: KFC appraisal done by Sizo Financial Services (1994)

The second assumption was that none of the borrowings (financial liabilities) of KFC were earmarked for on lending. The third assumption was that 10% of the fixed assets were assumed to service rural financial intermediation. The 10% was calculated from what was perceived to be the total amount of assets used to conduct the rural finance intermediation business. Table 5.1 helps to illustrate the extent of KFC fixed assets invested per business unit. The assets used for rural financial intermediation are from commerce, small industries, housing, and rural development, development administration and finance units. The Development Finance Unit houses Ithala Bank. The fourth assumption was that 80% of deposits and cash were used to service financial intermediation and that 10% of the depreciation of fixed assets reflects depreciation related to financial inter-mediation. The 10% chosen for depreciation ties in the assets allocated to the rural financial intermediation business.

5.3.1 Calculating the market reference rate (m)

For the purpose of the SDI calculation, the market reference rate for the KFC was computed by summing the components shown in table 5.2 below:

Table 5.2: Calculating the market reference rate (m)

Average cost of funds for banking industry	10.41%
Capital coefficient	0.75%
Administration and risk margin	4.84%
Total	16.00%

(Source: Annual Review 1994, Banking Supervision Department, & South African Reserve Bank)

This calculation was initially done for the Land Bank. In that instance the administration and risk margin was pegged at 4%. The administration and risk margin will vary from one institution to the other, as it is a peculiar figure related to the unique risk that a specific borrower is calculated to have in the market. This risk for example is higher for KFC that it is for the Land Bank. The rating agencies for example grade the risk of the borrowers and attach standard ratings for borrowing institutions and governments. Extensive work in this area is available from the Strauss Commission report (1996).

5.3.2 The average on-lending rate (i)

This is a weighted average of the on-lending interest rate, which for KFC came up to 16.48% in 1993/94.

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5.4 KFC SDI Calculations 1and 2

The first and second SDI calculations for KFC are illustrated in Annexe 2. The SDI for 1993/94 was 18.7% and that for 1994/95 was 54.33%. This is an exceptional case of financial performance, which occurred during the two financial years. The major reason for a low SDI was the 23.6% average on-lending rate recorded for the KFC as the two-year average. This is a relatively high rate when compared to 16.48% for the years 1993/94 and 1994/95. Since the SDI is by definition the percentage by which the average onlending rate has to be increased by inorder to eliminate all subsidies the increase in the onlending rate in this instance significantly reduced the SDI.

5.5 Comparison of KFC's SDI to other RFIs

A number of factors are worth noting from the calculations of other RFIs illustrated in table 4 below.

Table 5.3: SDI Calculations for Various RFIs 1993/94: 1994/95

	Land Bank	ACB	KFC	CAB	ABT	Agribank	Agr
SDI %	7.44	308.05	54.33	807.57	307.03	63.16	369
Implied lending rate %	16.35	21.64	25.43	124.08	99.35	39.62	20.9
Market reference rate %	14.55	16	16	16	16	16	16
SDI if lending rate were adjusted upward by 1%	6.98	259.18	51.23	752.53	294.95	60.66	302
Return on equity (%)	12.05	3.06	4.31	1.98	-51.47	17.33	-1.7
Provisions/interest received (%)	1.15	53.8	-	-	176.01	-	-

(Source: Strauss Commission, 1996)

The comparison of KFC's SDI with that of a range of other South African DFIs confirms that the KFC is relatively more efficient, well organised, and fairly well structured operationally. The KFC's SDI at 54.33% was second lowest to that of

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the Land Bank at 7.44%. The highest SDI was that of Ciskei Agricultural Bank at 807.57%.

It is important to note that the value of the SDI can be compared on the basis that the lower the SDI the better the performance of an RFI. The implied rate of 25.43% in 1994/95 for KFC shows that in a financial market with a cost of capital of 16%, a tender charging an interest rate on average of 25.43% may still be feasible, whereas an RFI with an implied rate of 124.08% like the Ciskei Agriculture Board may outprice its services in the market.

The sensitivity of the SDI to changes in (i) is also illustrated in Table 5.3. Increasing the onlending rate (i) by 1 percentage point decreases the KFC's SDI by 3.1 percentage points from 54.33% to 51.23%, a decrease of 5.7%. An increase of 1 percentage point of the onlending rate of the ACB decreases the SDI by 48.87 percentage points from (308.05 to 259.18) a lowering of the SDI by 15.9%.

A comparison between the results of calculation no.1 and no.2 show that the KFC's SDI increased from 18.7% in 1992/93 – 1993/94 to 54.33% in 1993/94 – 1994/95. A key contributor to this is that the onlending rate (i), decreased from 23.6% in calculation no.1 to 16.48% in calculation no.2. The lending rate (i) decreased, due to the reduced interest income, R102 000, earned on a larger than average outstanding loan portfolio of R619 000 in 1994/95 relative to 1993/1994 interest income of R125 677 and average outstanding loan portfolio of R515 000. It should be noted at this point that the calculation of the average onlending rate is based on interest income earned from the loan portfolio divided by the size of the average annual loan disbursements. Thus a decrease in interest earned for the period while simultaneously increasing the outstanding loan portfolio (due to increased average annual loan disbursements) this will have the net effect of lowering the implied interest rate.

The SDI values calculated for the KFC and the other RFIs show that the methodology is built around (i) being assumed as the only variable which can be changed to lower the SDI to the desired target level. This makes sense because an RFI's balance sheet and income statement for the financial intermediary related activities is utilised for the SDI calculation and thus the performance of a financial intermediary would be sensitive to onlending interest rates. Other variables however, can also influence the SDI, for example higher productivity and profitability.

5.6 Comparison of KFC's Outreach to other RFIs

Table 5.4 portrays the outreach of these institutions as indicated by several indicators, such as the number and volume of deposits and loans. It is important to note that ACB and the Land Bank essentially serve commercial farmers. The remaining five institutions supply loan services to emergent farmers.

The branches of the KFC reflect a notable outreach effort. This has been achieved despite its geographical limits as a regionally focused institution compared to the Land Bank, which is a national institution. This serves to illustrate the different mandates which the KFC has to that of the Land Bank in terms of clientele target outreach. KFC however far outperforms similar mandated institutions in the former homelands. The unusually small number of branches for the agricultural banks in the former Ciskei and Transkei clearly limit their outreach, even allowing for their smaller territory. The lack of deposit facilities in the Transkei bank clearly limits its outreach in the supply of financial services. The low average deposit balance for the KFC suggests a niche market for deposits typically smaller than those held in commercial banks.

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Table 5.4: Outreach indicators for the main DFIs in South Africa

Indicators	ACB	Land Bank: Individ	Land Bank: Total	Agriwane	KFC	CAB	Transkei	Agribank
a. Branches	0	24	24	4	44	2	5	12
b. Non-financial services	No	No	No	Yes	Yes	Yes	Yes	No
c. No deposit accounts	0	1349	2917	0	214297	10882	0	225
d. Ave. deposit size	N/r	131950	249571	N/r	797	510	N/r	217034
e. No. Loans Outstanding	14000	33253	35143	853	30980	1775	4774	4431
f. Ave. Loan size	104428	125282	267137	16195	20805	3671	3122	16713
g. No. ag Loans Outstanding	14000	32502	34392	853	10702	1323	4774	4431
h. Ave. ag loan size	104428	126946	271807	16915	2773	6705	3122	16713

(Source: Strauss Commission, 1996)

Notes:

NA = not available; NR= not relevant;

Sources: Data derived by direct communication with chief accountant or relevant operating officers in each institution along with latest financial statements ending In December 1994 (For The Land Bank) or end March 1995 (for remaining institutions)

The set of outreach indicators referring to the number and average size of all loans and agricultural loans specifically show that the Land Bank, ACB and KFC record a substantially larger number of loans than the other institutions. The KFC as opposed to the Land Bank however serves a lower income clientele with substantially smaller average sized loans. The relatively small number of loans in the other institutions reflects small areas served and a limited branch network. Combined with the lack of a deposit base there is concern about how cosy effective these institutions can be, now and in the future (Strauss Commission, 1996)

5.7 Comparison of KFC's Productivity Indicators to other RFIs

Productivity is measured by the number of clients and the volume of loans managed by loan officers and their supporting staff. The Land Bank has a smaller caseload and a larger volume and a larger volume per officer and per staff member than the remaining institutions.

Generally the smaller the volume per officer, the larger the case load and the higher the arrears. This reflects the risk profile of lower income clientele evidenced by earlier indicators of outreach for all institutions other than the Land Bank. A larger case load of smaller average sized loans suggests a more difficult and problematic clientele. Thus it is not surprising to note the higher arrears for the Ciskei and Transkei banks compared to the Land Bank. An arrears rate of 12% places KFC between the two extremes in the table for arrears, case load, and average volume per staff. This reinforces a fairly consistent pattern among the three indicators.

Table 5.5: Productivity indicators for the main DFIs in South African

Indicators	ACB	Land Bank: Individual	Land Bank: Total	Agriwane	KFC	CAB	Transkei	Agribank
a. Arrears (% by volume)	65*	2	3	28	12	14	39	35
b. Loans / staff	na	27	26	19	69	-	106	47
c. Volume lent /staff	na	7210445	3199693	327927	1432300	465426	331215	787819
d. Loans / loan officer	Na	107	101	24	620**	254	238	148
e. Volume Lent / loan officer	Na	28621951	12701220	400799	12890700	930839	745236	2468500

(Source: Strauss Commission, 1996)

Notes:

*By number of loans. Remaining

Sources: Data derived by direct communication with chief accountant or relevant operating officers in each institution along with latest financial statements ending In December 1994 (For The Land Bank) or end March 1995 (for remaining institutions)

5.8 Comparison of KFC's Profitability Indicators to other RFIs

Table 5.6 is the most revealing on the relative performance of RFIs. The rate of return on assets for institutions receiving a large amount of direct subsidies or concessional funding, or benefiting temporarily from deposit accounts earning a high interest, may be misleading. The ACB illustrates this point. It records a relatively high rate of return on its assets, in large part because it benefits from direct transfers from the budget (i.e. it pays no interest). Much of its loan portfolio is non-performing (65%), yet it can record a positive rate of return on assets because about 30% of its interest earnings come from fixed deposits in other institutions.

The SDI in line d of Table 5.6 is the most comprehensive measure of the cost to society of a financial institution benefiting from direct budgetary transfers and concessional funding. The ACB records an index of 308%. The rest of the institutions record positive SDIs. Only the Land Bank registers a modest subsidy, i.e. 7%, which it could easily eliminate by a small rate adjustment. The KFC is the next with a 54% SDI. The other banks all record high SDIs and high absolute levels of subsidy per client, indicating a high cost to society for these institutions.

A curious finding in Table 5.6 is that the annual interest earned on the average portfolio throughout the latest financial year amounts to 14% for the land Bank and 17% for the KFC. However the Agricultural Bank of Transkei and Agribank record a considerably higher ratio (24%) compared to their typical loan rate listed. This could be due to incomplete or unclear documentation. The general trend is that only the KFC and the Land Bank have detailed and clear financial statements.

Table 5.6: Profitability indicators for main DFIs in South Africa

Indicators	ACB	Land Bank: total	Land Bank: Individ	Agriwane	KFC	Ciskei	Transkei	Agribank
a) ROA	4%	2%	2%	-71%	4%	-4%	-74%	4%
b)Implicit Subsidy (Rm)	243,0	104,0	na	7,1	55,0	6,4	4,1	10,0
c)Implicit subsidy per borrower (R)	17,357	2,952	na	8,335	1,775	3,634	858	2,369
d) SDI	308	7	na	370	54	808	307	63
e)Subsidy-free %	22	16	na	21	25	124	99	40
f) Interest earned per Ave Portfolio	5	14	16	11	17	19	24	24
g)Interest paid per Ave. Portfolio	0	12	14	15	4	15	0	11
h) Gross Margin	5	2	2	-4	13	4	24	13
i)Non-int exp./Ave. Portfolio	2	1	2	104	12	136	122	21
J) Return on ave. loan book	3	1	0	-108	0	-132	-98	-8
k)Typical deposit %	n/r	13	13	n/r	4	6	n/r	13
l) Typical loan %	8	15	15	8	16	16	14	14

(Source: Strauss Commission, 1996)

Notes:

NA = not available; NR= not relevant;

Sources: Data derived by direct communication with chief accountant or relevant operating officers in each institution along with latest financial statements ending In December 1994 (For The Land Bank) or end March 1995 (for remaining institutions)

5.9 Conclusion

The subsidies received by the KFC increased from R23 million in 1994 to R55 million in 1995 (refer to calculations 1 & 2 in Annexe 2). The increase in the subsidy can be accounted for by the increase in state contributions towards equity at R418 million in 1995 from R132 million in 1994. In both periods (m) was calculated at 16% implying that in 1995, a higher equity position contributed to a higher SDI by increasing the total subsidy (S).

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In 1995 the SDI was high at 54.33% compared to 18.7% 1994. The three main reasons for this are firstly the increase in equity in 1995, which resulted in a higher (S) and consequently a higher SDI. Secondly, increased profitability in 1994, R21 million compared to R18 million in 1995, also contributed to a lower SDI in 1994 and finally a lower (i) in 1995 at 16.48% compared to (i) in 1994 at 22.9% also contributed to the lower SDI in 1994. Due to the SDI's greatest sensitivity being the onlending rate (i), the higher value of (i) in 1994 will more likely imply a lower SDI.

The higher 1995 SDI was also caused by equity that increased substantially between the two years used for the annual average calculation. An interesting observation is that there seems to have been no contribution from the increase in the equity position in 1995 to the size of the loan portfolio. This could be as a result of a lag effect of either the injected equity not being immediately translated into loans or the injected equity being swallowed by capital expenditure.

It may be desirable to calculate and monitor the SDI for a number of years in order to draw more meaningful information on performance. It is however clear that calculating the SDI for one year can be indicative of the general levels of the SDI. Only when SDI calculations are available for a number of years, can a detailed analysis be done on different factors influencing the level of the SDI. For example, the SDIs calculated by the Strauss Commission (1996) were merely snapshots and could not provide the rich information that a series of calculations provide.

The use of the SDI as a strategic planning tool guides us on where to pitch the subsidy dependence level in the future. The strategic options may be to gradually decrease the SDI level over a number of years as opposed to achieving a prescribed target level overnight. Both options have their pros and

cons. The outcome of the strategy selection process informs the tactical process which management use for managing the balance sheet and income statement variables that will deliver the periodic performance targets.

If a gradual SDI level reduction process is pursued; in the short to medium term (1-5 years) it may be easy to cut operational costs drastically and encourage high margin loans with lower risk probability of delinquency and / or default. In the medium to long-term (5-10 years) it may be advisable to encourage savings mobilisation as a funding mechanism and structure the loan portfolio such that a stable and sustainable profit level is achieved whilst maintaining and /or improving outreach.

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