INFLATION, PRODUCTION, EXCHANGE RATES,
WAGES, INTEREST RATES: 1987-88

I. Inflation

1. Measured by the Cost of Living index 1986/87 inflation is likely to be of the order of 35%.

2. Set against a probable increase in the cost of foreign currency of 412½% over March 1986/June 1987 (375% against the USA $, 50% of basket non $, dollar itself depreciating 20% against rest of basket) the parallel COL rise of 50% (including March-June 1986) is strikingly low.

3. a. Does this mean devaluation has and will continue to have minimal effects on COL?

   b. Have there been special features damping inflation in 1986/87?

   c. Can such special factors be repeated or new ones developed in 1987/88 - 88/89?

4. The first devaluation impact (March-June 150%) was heavily cushioned by the simple fact that most imported goods and close domestic substitutes sold at or near the parallel market not the official price at least at retail. (Fuel and producer goods were exceptions but do not directly affect the COL much).

5. Thus the July '86 - June '87 increase in Sh cost of forex is 50% on $ and perhaps 55% on basket while COL increase is likely to be 35%. Even allowing for lags this suggests that the initial 'slack' was substantially eaten up by the March-June 1986 rolling 'big sink'.

6. Further 1986-87 has been marked by two pieces of good luck (certainly Tanzania was due for some!):

   a. 1986 was a very good food harvest year following a good one and a

prior run of six fair to bad ones. Retail prices of food suddenly resumed their seasonal pattern with falls in the third quarter and parallel market prices were - in grain - below official more often than not until well into the first quarter of 1987;

b. the early 1986 petroleum price bust cushioned the transport cost impact of the 'big sink' (and to the extent a cautious base price was used also provided a windfall, deflationary boost to government revenue).

7. This suggests a decomposition of 1986/87 COL may be:

a.	40% (basically food)	+ 10%	=	4%
b.	20% (rents, local services, etc.)	+ 30%	=	6%
c.	40% (manufactures, etc.)	+ 62½%	=	25%
d.	Total 100%	+ 35%	=	35%

8. That is none too reassuring on implications of future devaluation as the 62½% is at or above July 1986 - June 1987 forex cost moves - albeit lagged 'big sink' impact makes it fatuous to argue these prices rose faster than devaluation because of the June-June forex price changes and will continue to do so.

9. The food price deflationary element cannot be counted on to continue. Over 1960-1978 food prices rose about as fast as/or slightly more than the COL even though food output per capita grew. (True real per capita personal consumption rose too but it is a goal to have it rise in the future too!) They rose erratically around that trend depending on weather.

10. In 1987-88 assuming good (but not bonanza) food crops there is little reason to expect a food price increase (including embodied commerce, transport, interest) much below the overall rate of inflation.

11. The oil price will - in $ terms - be higher over 1987-88 barring quite unexpected developments. Admittedly, if a $20 bbl landed price is used in basic 1987-88 calculations, that should - without bad luck - be sustainable over 1988-89 as well so that the only petroleum price

increases domestically will be devaluation offsets.

12. One chance for a breakthrough over 1987-88/1988/89 is manufactured goods prices. The conditions for a breakthrough are:

    a. sharp increase in supply wiping out scarcity premium; and

    b. squeezing distributor margins (and/or making distributors look for lower cost ways of doing things); plus

    c. reduction of unit costs of fixed and semi-fixed components in cost structure by spreading over a larger number of units.

    These are conditions met in food in 1986-87 (where a and perhaps b were key and c secondary).

13. A second chance is in transport. Not much can be done on fuel side (greater fuel efficiency is not attainable fast). But raising capacity and increasing volume a vehicle can handle a year (reducing down time) would hold down transport price increases. How:

    a. more spares to get vehicles (especially buses and lorries) back on the road and keep them there;

    b. getting railroad back toward 1970-72 levels of tonnage (especially on Mwanza - Dar and Arusha/Moshi - Tanga/Dar to reduce load on lorry fleet for long distance bulk haulage pushing lorries into secondary and rural haulage;

    c. putting right at least worst roads (Dar - Arusha, Great North Road) whose present condition very sharply increases wear and tear on lorries.

14. Major progress on "a" should be achievable in both 1987/88 and 1988/89. On "b" the key bottlenecks (not all the factors presenting optimal efficiency!) need to be identified. If these are limited track relaying, better turnaround, a few more locos and wagons then something should be attainable especially on Mwanza (and by rail ferry Bukoba and Musoma) -

Dar. The link line to North may require more substantial and time consuming rehabilitation. On "c" if worst stretches of Dar-Arusha/Moshi and Dar-Tunduma can be identified promptly and 1987/88 - 1988/89 rehabilitation focused on them some considerable impact should be possible in at least 1988/89. While it is a secondary issue nationally, coastal (to Mafia-Lindi-Kilwa-Mtwara) and lake (especially Lake Nyassa-Nyanza-Malawi as other two lake fleets have been rehabilitated) shipping is important to some regions re transport access and cost. (It can also prevent dissipating road resources on pretty dubious ventures such as all weather/all season trans-Rufiji link.)

15. More details on Para 12 appear below in separate section. They suggest a goal COL pattern for 1987/88 - 88/89 of:

	1986/87	1987/88	1988/89
Food (40%)	10%	20% (8)	15% (6)
Rent/Services (20%)	30%	40% (8)	30% (6)
Other (Mfg. etc. - 40%)	62½%	30% (12)	25% (10)
COL	35%	28%	22%

That does assume wage and salary increases of the same order of magnitude as projected COL growth. As discussed in earlier papers that seems prudent on incentive, mobilisation, social fabric grounds. It also assumes 15% 1987/88 and 20% 1988/89 grower grain price increases as 1986/87 has been above 'free market' price. The assumptions do assume 1987 and 1988 are both at least average food harvests and that petroleum does not soar back to $25-30 bbl but the latter assumption is reasonable and at least 1987 food harvest prospects are good to quite good.

II. Exchange Rates

16. March 1986 - June 1987 forex prices in T Sh will have risen about 412% (on assumptions in Para 2). Assuming 50% domestic price increases over that period this is real increase of 275%. Inverted that is a 63.5% devaluation (real).

17. On the relative price basis (which IMF uses) that devaluaton takes real rate back to late 1970s levels when Fund, Bank, Uncle Tom Cobley and all did not think it was seriously or unmanageably overvalued.

18. The problem is that this is a very crude way of calculating sustainable exchange rates. As more sophisticated Bank work shows, if terms of trade have deteriorated and/or export levels fallen exogenously then exchange rate becomes unsustainable at old real price relativities. As 1976-1987 would if decent data were to hand show a 30 to 40% t of t decline plus partly exogenous export falls, the present rate is not an "equilibrium" rate (whatever that may be).

19. But the Para 18 case means Fund on its basic argument has no further case for rapid devaluation.

20. Bank does have a case but accepts (sometimes):

    a. the time lags and elasticities for exports influence how much devaluation when is appropriate;

    b. too rapid devaluation can rend social fabric, become self justifying (via inflation), create perverse expectations;

    c. it is crucial to reduce real (i.e. inflation adjusted) government bank borrowing and the rate of domestic inflation to make devaluation work.

21. Tanzania - ironically - has made the Para 20 case (even if intuitively and approximately) for at least five years and has reduced real government bank borrowing (indeed even nominal) and acted to contain domestic inflation. The 1984 experience of massive crop price boosts/large devaluation/poor weather/no additional resource transfers creating bloody all beyond a boost in inflation and a reduction (which hardly required the other elements) in real bank borrowing which demonstrates - per Para 20 - what isn't very functional.

22. This strongly suggests a sensible 1987-88 exchange rate policy would be:

a. sliding devaluation parallel to excess inflation (say 2% a month cumulating to 26% over year);

b. small real devaluations (say .75% a month cumulating to 10% over year);

c. i.e. a June 15 '87 - June 15 '88 devaluation totally by 'slow sink' of 35% odd. Actually as world inflation will not be 0%, "a" is on the high side or allows for up to 31 to 33% COL rise.

This would avoid any price shocks and might break expectation of sharp change in June (1983, 1984, 1986 is 3 of 4 past years so does create an expectation). Further, at 35% the import price boost would not be radically above overall inflation so would not be either an engine for raising it or a total brake on reducing it. Assuming the manufactured output increase identified as key is achieved, that plus devaluation impact on import duties and resale of balance of payments input aid should keep government bank borrowing requirement low (and indeed return recurrent budget to surplus on some definitions).

23. This analysis strongly argues against a significant June 1987 one off devaluation. 10% as a tactical necessity to satisfy Bank/Fund would do little harm (or direct good) - more would be dangerous. Barring high export supply elasticities in the short run it won't work. (The 35% devaluation means average 1987/88 export prices - abstracting from world price changes - will be on average 35% higher in shilling terms allowing grower price increases of 30 to 40% on export crops except coffee where world price has dropped and, perhaps, cotton where it did so in 1976 though it has recovered a bit.) The time to try a one off 20% or more is at a point when (presumably manufactured) export potential able to sell if prices were 20% or more higher (to them) is available on a large scale. That is not 1987!

III. Interest Rates

24. If present overdraft rates are - as seems to be the case - in the 20 - 25% range they should not be raised further. They are a singificant factor in costs and raising them is inflationary. True, negative real interest rates are not optimal but if 1987/88 - 1988/89 targets can be achieved then the rates will become neutral or positive in real terms in 1988/89.

25. Long term rates (Treasury and Investment Bank) are - presumably - now badly out of line (below) overdraft. This in one sense doesn't matter as far as Treasury goes because funds are 'allocated' and are from low (NPF, BOT, NBC current) interest cost funds. It is 'a bit' unfair to NPF, POSB, NIC beneficiaries! With investment banks it creates a nuisance - any company which can borrow supposedly for fixed investment and substitute that money for NBC overdraft will profit. While this is one way to stay within IMF bank credit targets, it is also a way to divert time to fiddling rules and to become confused as to what actually is happening.

26. This suggests a least bad interest rate policy for 1987-88 might be:

a. deposits 10% - 20%

b. overdraft 20% - 25%

c. Treasury 10% (T Bills/BOT Advances)
-20% (POSB, NIC, NPF long term stock)

d. Investment Banks 20% - 25%

e. but that long term loans/stocks carry a proviso that rate in any year would not be over 2% above average (or identified 'standard') overdraft rates in the case of investment bank nor above it at all in the case of Treasury.

27. "c-d-e" would reduce short run fiddle incentive and reduce penalising of POSB, NPF, NIC depositors/beneficiaries but also would prevent locking long term borrowers in to very high real interest rates if inflation fell to 10% which is - presumptively the medium term goal.

28. Up to a point this is a sideshow. But a switch to a realy orthodox IMF line of 35% deposits, 40% overdraft, 37½% - 42½% long term loans and stocks would be dangerously inflationary.

IV. Wages and Salaries

29. Assuming that the Para 12-15 targets (manufacturing, transport, COL) can be met then 25% average wage and salary increases should be possible consistent with - say - 5 to 6% real GDP growth.

30. Given that 1986 awards were described as interim advances; that the Nsekela Commission Report has arrived (or is about to do so); that 1986/87 COL seems likely to be 35% and that real wages have declined virtually continuously over 1975-1986 inclusive, there is an incentive (pay part time wages get part time work), a morale, a social fabric and a mobilisation/political case for being near the anticipated COL rise in 1987/88 and at or above it in 1988/89.

31. This might suggest:

	1987/88	1988/89
Minimum Wage	30%	30%
Higher Wages	20%	25%
Top Salaries	10%	15%
Average	20-22%	25%

That also assumes that income tax free band goes up with minimum wage and that the nominal values of tax bands are raised (in theory by 20 to 25% but to be safe perhaps 10% in 1987/88 and 15% in 1988/89 with any larger adjustments to be offset by lower nominal upper wage and salary raises).

32. This does halt minimum wage erosion and with a bit of luck provide some recovery. At higher wage levels it would limit decline in 1987/88 and perhaps cause a marginal real gain in 1988/89. At salary levels the best than can be said for it is that at least it is better than past ten years.

33. This is separate from the problem of excess, unusable government and marketing parastatal employees. Since one cannot count on rapid results and initial year severance costs probably equal savings whatever can be achieved in 1987/88 (especially by changing replacement hiring from automatic to only on a modified "case made out" basis) should not be factored in to wage increses nor into budget balancing.

34. Excess employees in other enterprises (both private and parastatal) probably can return to being full time if output recovery at 10% a year in those sectors can be sustained for two years. (Unfortunately the counterpart to that is that their total nominal employment probably won't rise by over 2½% a year.) On incentive grounds a case exists for reactivating Industrial (Wages) Tribunal in respect to incentive schemes and private sector wage bargains.

V. Production

35. Transport has been covered at Paras 13-14 above. Beyond that it needs field looking and seeing not desk studies (Dar desks are also desks). It is however factored into manufacturing here to the extent that vehicle and rolling stock maintenance is manufacturing and a key constraint is spares.

36. Manufacturing can (per Para 12) be used to reduce COL/increase welfare if an output spurt like 1985/86 - 1986/87 in food can be achieved over 1987/88 - 1988/89.

37. To do this probably requires a focus on a selected list of industries related both to mass market demand and to substantial unused capacity which can be restored to use by more operating inputs and spares plus (especially for 88/89) minor rehabilitation.

38. A possible list is:

a. Textiles (khanga, kitenge, blankets, socks, sweaters, i.e. integrated cotton mills, blanket factories, Pattex.)

b. Vegetable Oil (oilseeds prices? more cotton-seed? Plus cheap imported cottonseed and groundnuts to press, refine in Tanzania.)

c. Soap (what is bottleneck? Oils are now cheap, ditto tallow and there is massive, apparently useable, surplus capacity!)

d. Leather/Shoes (need higher hides prices to up tannery volume and feed into shoes - these, i.e. shoes are now shortest supply ever in Dar.)

e. Dry Cell Batteries

f. Transistor Radios (probably centred on National which has higher local content.)

g. Vehicle Repair and Maintenance (need imported spares plus inputs to raise tyre and vehicle battery output. Capacity appears to exist.)

h. Bicycles (may be more rehabilitation and local input production lead time needed? Pressure should be put on new partner.)

i. Cement (if there is a shortage beyond transport. Or is it need to get multiwall bag and sack plant output up?)

j. GCI Sheet — (this - like related pipe, aluminium sheet, aluminium cooking ware is pure imported raw material problem.)

k. Dishes/Utensils — (glasses should be OK - kioo doesn't need many imports. If ALAF has more ingot aluminium also OK. Plastic and enamelware demand and imported input needs ought to be looked at.)

l. Milk — (there is an urban market which even if rehabilitated Mara cannot meet. Trying to get former maize food aid shifted to milk powder and butter oil to reconstitute might pay off.)

m. Sugar — (assuming fertiliser, chemicals, fuel, irrigation and machinery spares can cause rapid 25% output boost. Needs study as some plants/estates need long term, major rehabilitation.)

n. Beer — (a clear, high profile, fairly broad based demand. Lo-import and hi-revenue content. Good case for machinery spares, malt, chemicals, raw materials for crown corks, i.e. caps.)

o. Agricultural Implements — (jembes, pangas, axes, hand and ox ploughs, etc. Basic need is imported steel and bolts.)

39. There are two more products on consumers' key lists (judging by what surveys exist, e.g. rural Tanga Region and by random - in non-statistical sense - observation):

p. Kerosine — (snag is that this is 100% import as refinery at attainable capacity cannot meet demand.)

q. Cigarettes (no donor will touch. Consumers do want them and are evidently aroused when absent. They are - or were - a rural incentive good. Suggests more "own" forex for paper - not necessarily for filters - and box materials might have incentive, consumer satisfaction, revenue boost effects.)

40. Concentrating on this list does mean leaving some things out. One apparent gap - school books and exercise books - is apparent not real. The paper factory can import substitute and must start earning own forex with exports. The list is not perfect, needs checking but not doubling!

41. Not every plant or sub-product should be priority. The best initial criteria may (within product categories) be:

a. probable market size;

b. degree of present shortfall;

c. lowness of imported inputs plus spares to ex-factory value ratio;

d. availability of speedily reactiveatable surplus capacity.

42. Present unit cost may not be a very helpful guide on run down plants for years and years held far below capacity by import constraints. As Bank mission to Ghana suggested, reactivating products which have demand, significant value added and are not inherent losers first and looking harder at market tests when market is (subsequently) less distorted probably makes sense.

43. Built-in high import/output ratios (e.g. Morogoro Multifibre) or misuse of export plant for domestic market (e.g. Morogoro Shoe) do create strong presuppositions for not including those plants except on initial export revolving fund loans with later imports to be paid from exports (or the plants close).

44. To launch such a manufactured goods price holding through output boosting operation probably needs $200-250 million forex a year for these industries in 1987/88 and 1988/89. This is not all additional. Target 1986/87 was presumably $100-125 million.

	1987/88	1988/89
Operating Inputs	125	140
Spares	50	35
Rehabilitation	25	75
Total	200	250

This would allow 10-12½% output increase in 1988/89 over 1987/88 (after at least 15% in 1987/88 over 1986/87 and - with luck - 7½% 1986/87 over 1985/86). That could raise 1988/89 output to 70% of 1978 peak up from 50% in 1985/86. A long way from any probable true equilibrium but 40% from 85/86 to 88/89 which should damp down price increases.

45. Possible cash cost structure of a priority firm:

	1986/87	1987/88	1988/89
Finance/Other Fixed	12½	13	14
Wages	10	13	16½
Domestic Services	5	7½	11
Domestic Inputs	11	15	21
Imported Inputs	19	15	23
Maintenance/Spares	2½	7	9
Total Cash Cost	50	70½	94½
Output	50	60	72
Unit Cost	100	117½ (+17½%)	131 (11.7%)

(See Annex for Assumptions)

The cash cost per unit increases (17½% and 11.7% respectively) taking into account 25% average annual wage increases and general COL increase assumptions of Para 15 (including 35% odd forex cost rise in 1987/88 and 25-30% in 1988/89) are consistent with COL and real wage targets (and with restoring maintenance/spares to viable levels).

VI. Summary

46. COL increase at ca 35% has been below forex cost boost of 50%. (June 15 '86 - June 15 '87). (A fortiori 50% March '86 - June '87 COL below 41$2\frac{1}{2}$% forex cost boost.)

47. This relates primarily to:

a. largely once for all cutting of gap between actual market (especially retail) and official valuation of forex content;

b. breaking scarcity premium in food with second good harvest in a row;

c. fortuitous fall in $ petroleum prices (and in $).

48. The 40% of COL closely linked to forex price and not affected by "b" probably grew faster ($62\frac{1}{2}$% to 50%) than forex price over 1986/87.

49. Therefore achieving - say 28% and 22% target COL increases in 1987/88 and 1988/89 depends on:

a. getting key manufacturing and transport volume increases adequate to break shortage premium impact on prices;

b. careful management of exchange rate (avoiding both failure to adjust for excess inflation and also counter-productive 'dashes' for large, one off 'real' devaluations);

c. careful management interest rates primarily by pushing inflation down not interest rates up;

d. keeping real government bank borrowing low (under 3% of total government spending).

50. Re exchange rate this implies continued 'slow sink' say 35% increase in forex price in 1987/88 and 25-30% in 1988/89. As on comparative price basis Tanzania is back to late 1970s real exchange rate, there is no large export capacity to be 'liberated' rapidly by prices and these

'sinks' give 10% odd real devaluation (forex price increase) a year there is no case for large, one off moves.

51. The above are roughly consistent with 25% odd annual average wage/salary increases and 10% to 15% a year rises in nominal values of income tax bands. That halts real minimum wage decline in 1987/88 and (on model in text) allows minimum and probably other wages to rise a bit in 1988/89 in real terms. Salaries still sink but less rapidly.

52. Targetted transport and manufacturing programmes requiring not unattainable forex could achieve the output (in the case of transport capacity) increases to make model consistent. These are sketched in more detail in text.

RHG

23-II-87

Annex to Para 45

Assumptions:

A. marginal creep in fixed and finance costs of 5 to 7% a year;

B. 25% average wage/salary/bonus cost increase per person plus 2½% annual employment increase;

C. 1987-88 40% and 1988-89 30% increase in domestic service costs (especially Tanesco, water) with 7-12½% volume increase;

D. Domestic raw materials about 20% volume and price per year;

E. Imported inputs 35% (then 30%) price and 20% volume increase a year;

F. Spares and maintenance doubled real plus 40% price increase 1987/88 (maintenance personnel and firm capacity low) followed by 20% price increase and 8% volume increase in 1988/89;

G. Output increase 20% in 1987/88 and in 1988/89.