In the last chapter we have seen that the upsurge of the debt crisis in the eighties posed a potential threat to the international commercial banks because of their large developing country exposures. Several debt management strategies were evolved in dealing with the debt servicing problem of the developing world. The main objective was to ensure an immediate aversion of default risks. These strategies, which owed their origin to the microtheoretic optimum borrowing models, discussed in the following chapter, tried to seek a safe route for the affected creditor commercial banks in the face of potential threat of debt repudiation. Objectives underlying these strategies were two fold:

a) Maintenance of a stable international financial system;
b) Bailing the creditor banks out of the current imbroglio.

Achievement of the twin objectives warranted the success of the international creditor community in preventing debt repudiation both in the short and long run by ensuring that debt payments were actually made by the indebted nations. As a result continuous outflows of financial resources from the indebted countries in the form of interest payments and principal repayments was effected on sustained basis. This created problem for these countries in maintaining growth levels and fostering economic development. This chapter offers an analytical basis for
this transfer problem which besieged the debtor developing world following the outbreak of the debt crisis in the early eighties.

Section 1 of this chapter tries to explain the importance of the concept of the transfer in the context of the debt problems of the indebted nations of the South. Section 2 attempts to spell out the debt dynamics through which net transfers of financial resources from an indebted country are taking place. Section 3 involves an analysis of domestic adjustment programme in effecting net transfers of financial resources from debtor developing countries while in the last section it has been argued why debt forgiving measures are necessary for the growth recovery of the debtor nations. Section 5 provides a summary of the chapter.

3.1 : The Transfer Problem:

"Finance for development has taken a wrong direction for most major developing debtor countries ever since the outbreak of the international debt crisis....The "net financial transfer" problem, where debtors pay more interest on external debt than they receive in new loans, has caused much alarm but little analysis."¹ Instead of facilitating return to voluntary credit flows to the developing countries these net financial transfer of resources from the debtor developing countries created bottlenecks for development therein in eighties. The situation

in nineties have become far more complex than ever before. Private capital flows have started occurring once again to some of the Latin American countries, notably Mexico, Argentina, Brazil and Chile, which experienced debt servicing problems in the preceding decade. This net capital flow is not due to a return of bank lending, but due to the region's reentry to capital markets (especially bonds, private placements and medium-term notes), portfolio investments, and foreign direct investment. It is to be seen whether these flows can propel economic growth in the region. Simultaneously, a large number of low income developing countries, mostly located in sub-Saharan Africa, are still languishing under severe debt servicing problems. They mostly rely on the official capital flows as they still cannot borrow in the private capital market.

To understand the role of international financial capital flows in the context of developmental efforts of the third world countries we define the net financial transfer (NFT) as net new credit flows minus interest payments. From the angle of an equitable world order, the flow of capital should occur from the surplus developed countries to the deficit developing countries. However, the debt crisis of eighties reversed this direction of the international capital flows in the preceding decade. The financial transfer of resources from developing countries did have its adverse impacts on their GDP growth rate². Concommitantly, real purchasing power of the debtor countries

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declined as these transfers from them were facilitated by compression of their real GDP. Substantially high ratio of net financial transfers of resources to GDP creates problem for the debtor countries' domestic adjustment efforts, as we will see in this chapter.

The concept of net financial transfers, defined above, indicates the interest payments that a debtor country has to incur. One may argue, and may be rightly, that interest is the price that debtor pays for the capital it borrows. But it is, also, important to see from the debtor countries' perspective whether these payments are causing substantial transfer of financial resources from them and impeding their developmental efforts.

The concept of net financial transfers is an effective tool in analysing the debt dynamics of the developing countries vis-a-vis their developmental efforts. As indicated above, continuous net transfers from the debtor countries may pose problems for them if they are geared through domestic GDP compression and squeezing of domestic economic activities. NFT, defined as new credit flows minus the interest payments, is the mirror image of real transfer of resources in the current account of the balance of payments. A negative NFT indicates a positive real resource transfer which is used to finance that part of the interest bill which is uncovered by new credits. Therefore, the NFT also indicates the link between the financial transfer and the real economy which is important to understand the debt
process of a developing country vis-a-vis its developmental efforts.

The concept owes its origin to the debate on the German reparations of the twenties (Keynes, 1929; Ohlin, 1929). The growth models developed in the immediate post-war period replaced this concept by one of foreign savings or net capital inflows. A re-emergence of the concept can be traced to the growth literature of eighties dealing with the sustainability of the debt process in the debtor economies.

3.2 : The Debt Dynamics:

An effort will be made in this section to model debt processes of the debtor developing nations using the concept of net financial resources.

Let us start with the basic national income accounting identity:

\[ Y = C + I + G + (X - M) \]  \hspace{1cm} (3.1)

(3.1) can be condensed as:

\[ Y = A + (X - M) \]  \hspace{1cm} (3.2)

where \( A = C + I + G \) is the total spending by the domestic residents.

---

Net real resource transfer to the domestic economy, \( N \), is defined as:

\[
N = M - X
\]  \hspace{1cm} (3.3)

Using (3.3) in (3.2) and rearranging we obtain:

\[
N = A - Y
\]  \hspace{1cm} (3.4)

(3.4) shows that the gap between spending by the domestic residents and the national income is defined by the trade balance or the net real resource transfer.

If \( B \) and \( R \) denote net capital inflow and net factor service payments then

\[
N = M - X = B - R
\]  \hspace{1cm} (3.5)

i.e.

\[
B = N + R
\]  \hspace{1cm} (3.6)

(3.6) states the balance of payments in the current account. Now new flow of debt\(^4\), \( B \), is actually equal to the rate of change of debt stock, \( D \), i.e.

\[
B = D
\]  \hspace{1cm} (3.7)

and,

\[
R = iD
\]  \hspace{1cm} (3.8)

where ‘\( i \)’ is rate of interest on external debt.

Debt-to-GDP ratio \((d)\) is defined as:

\[
d = D / Y
\]  \hspace{1cm} (3.9)

*Sustainable debt process* is defined as the one when \( d \) is either held constant or tending towards zero through time. This implies

\[
d \leq 0
\]  \hspace{1cm} (3.10)

\(^4\) \( B \) is the sum of new capital inflows to all residents.
From (3.10) we obtain
\[ d = d(r-g) \]  
(3.11)
where \( r = \frac{D}{D} \) is the rate of growth of debt stock and \( g = \frac{Y}{Y} \) is the growth rate of GDP. (3.11) can also be written as:
\[ d = n + d(i-g) \]  
(3.12)
where \( n = \frac{N}{Y} \) is the ratio of net transfers to GDP.
Comparing (3.11) and (3.12) we get:
\[ n = d(r-i) \]  
(3.13)
When \( d = 0 \), \( d \) is held constant. From (3.11) we get:
\[ r = g \]
Given the initial debt-to-GDP ratio, \( d > 0 \), and assuming that \( i > g \) from (3.12) we get:
(i) \( n > 0 \) when \( i < g \); and,
(ii) \( n < 0 \) when \( i > g \).
Case (i) characterises the borrowing third world nations in the seventies when these economies were experiencing high growth rates and net financial transfers of resources were occurring towards them. Case (ii) depicts the indebted developing nations which were experiencing debt servicing difficulties in the eighties. Net financial transfers to them were negative and growth rates were depressed substantially.

The solvency criterion, as spelt out in chapter 4 and chapter 6, requires that debts accumulated over time be cancelled through trade surpluses (non-interest current account

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5 See Appendix 3.A at the end of the chapter.
6 See Appendix 3.A at the end of the chapter.
7 See the inequality (4.4) in Chapter 4 and the inequality (6.3) in Chapter 6.
surpluses). If this is binding then net financial transfers to the debtor economy have to be negative over time as the latter is the mirror image of trade surpluses in the current account of the balance of payments. This has its adverse impact on the rate of economic growth in the debtor economy, as we will shortly see.

If the solvency criterion, indicated by (6.3), is binding, given the initial \( d > 0 \) (3.12) yields that \( i > g \) as \( n < 0 \). (3.12), in fact, reveals the mechanism of sustainable debt process in terms of net financial transfers of resources when the solvency criterion is binding. Net transfers must be negative in order to ensure that debt-to-GDP ratio either tends to zero or remains constant through time. For this to happen rate of interest must exceed the rate of growth of debtor’s GDP.

As noted above, maintenance of solvency of the debtor country warrants the generation of trade surpluses over time which is a very stringent condition for a debtor developing country. It ultimately puts a debt-ridden country on the trap of debt-driven deflation. To illustrate this point let us take recourse to the simple Harrod-Domar model of growth which derives growth rate, \( g \), as:

\[
g = a(I/Y) \tag{3.14}
\]

where \( a \) is the incremental capital-output ratio. From (3.14) we obtain:

\[
g = a(s+n) \tag{3.15}
\]

where \( s = S/Y \) is the savings ratio.

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8 See Appendix 3.C at the end of the chapter.
(3.15) shows that domestic growth rate depends upon foreign transfers if domestic savings are invariant. In fact, in developing countries domestic savings are constrained both by low levels of income and underdeveloped taxation system. Then if net transfers are negative the output growth rate will tend to be low, provided the incremental capital-output ratio 'a' and the domestic savings rate ‘s’ are unchanged. This results in a vicious circle of low capital inflow and low GDP growth rate. As growth rate ‘g’ falls (r-g) rises and creditors will lower the flow of new funds in order to avert an ‘unsustainable’ debt process. With such possibilities debtor nations will have to generate trade surpluses to be current on their debt services payments which they can only achieve in absence of improved export earnings, through reduced demand for imports. It is apparent from (3.15) that if domestic savings are invariant investment expenditure will contract. Thereby, output growth will be lowered. This, in turn, will again caution the creditors to cut back the flow of new funds to the debtor nation so as to contain the debt-to-GDP ratio at the desired level. A sustainable debt process, defined above, is thus achieved through overall GDP compression in the debtor economy. This, in turn, ensures a continuous financial transfers of resources abroad from the debtor economy, meeting the debt payment obligations of the debtor.

As a contrast, prospect of economic growth in debtor economies may attract new capital flows from abroad. This is demonstrated by the experiences of the Latin American countries in nineties which have been able to attract foreign capital from the private market in recent time. But their net negative financial transfers are yet to become positive. This is a far more complex issue which warrants separate attention for two reasons. Firstly, this private flow of capital is not accruing therein due to lendings by the commercial banks, which was the case in seventies as we have seen in chapter 2, but owing to investments in bonds, equities and other types of securities, portfolio investments and, foreign direct investments. Whether these kinds of capital flows are helping these economies to accelerate economic growth is a matter of concern. Financial flows are not an end in itself. It is a means of lubricating and accelerating real economic growth in any economy. Secondly, the element of uncertainty associated with these kinds of capital flows is more than that with the bank credit flows. It is feared that much of these capital flows is fictitious in nature and may take no time to depart the host economy if external economic environment changes.

The crucial condition for 'sustainable' debt process when \( n < 0 \) thus appears to be:

\[
    r \leq g < i
\]

(3.16)

Note that both \( r \) and \( i \) are beyond the control of the debtor government. The only variable which it can control is
'g'. But again that has a component of foreign transfer as shown in (3.15). Even the minimum leverage that the debtor country can exercise upon its own domestic economy is severely restricted by the adjustment unleashed by the creditors community. (3.16) can be referred to as the debt-dynamics condition as it unfurls the inherent logic of the debt process during eighties when a large number of developing countries got besieged with severe debt servicing problem.

If \( g > i \), which may be the case sometime, then \( n > 0 \). This implies when GDP growth rate exceeds interest rate net transfer of resources occurs to the debtor country from abroad, and yet \( d \) is placed on a downward trend through time. Thus a sustainable debt process is achievable when economic growth in debtor economy peaks up.

Summing up the discussion of this section we can say that the 'sustainable' debt process along with negative net transfers of financial resources entails an anti-growth bias for the debtor countries. It can be shown in terms of the various policy instruments that the standard adjustment package, which the IMF/World Bank imposes upon the debt-ridden countries, offers to ensure the financial flows from the latter to the creditors. In the process, it ushers in contractions in the economic activities at the macro level in the domestic economy of the debtor nations. This entails a discussion of the various policy instruments of the standard adjustment package which is offered in the next section.
3.3 : Domestic Adjustment and the Net Financial Transfers:

This section involves an analysis of a typical adjustment programme and how it effects a negative transfer from abroad to an indebted nation through 'sustainable' debt process described in the previous section.

3.3.1 : Adjustment Policies:

Adjustment policies stand for those policies which are designed to reduce the basic imbalances in the economy, both on the internal and external accounts. There are two types of adjustment policy packages so far implemented in the vast number of developing economies, viz., the stabilisation and the structural adjustment policies.

Stabilisation Policies:

Stabilisation policies refer to those policies which aim at reduction of imbalances in the external accounts and in the domestic budget by slashing down expenditure and reducing credit creation. These policies are generally deflationary, at least in the short run, and tend to improve the balance of trade through a reduction in imports.
Structural Adjustment Policies:

These policies\textsuperscript{10} are designed to change the structure of the debtor economy so as to improve its balance of trade and efficiency over medium term by increasing the supply of tradeable, especially export goods in order to generate trade surpluses in the current account of the balance of payment over time.

3.3.2: Underlying Premises:

The underlying premises of the stabilisation and structural adjustment programme (henceforth, SAP) rest on the neoclassical theme of laissez faire. In neoclassical view, government intervention is justified only, if needed, to correct market failures resulting from externalities, dynamic rigidities, market power, and incomplete or missing markets. Thus the government may intervene only if the benefits of the intervention outweigh the costs of interfering with the market\textsuperscript{11}. The recent spate of enthusiasm in free market mechanism as opposed to state intervention negates the belief that where market fails the government should intervene: "From the correct observation that free markets often fail it is an easy but erroneous step to conclude that where the market fails the government ought to step in."

\textsuperscript{10} Although not exclusively but IMF policies are mainly stabilisation policies. But it, also, insists on exchange rate adjustments, tariff reductions and import liberalisation, and elimination of all kinds of non-price interventions etc. The World Bank Structural Adjustment Loans (SALs) as a contrast, are designed to secure adjustment over the medium run.

\textsuperscript{11} See Cullis, J. G. and Jones, P. R. (1987), Microeconomics and the Public Economy A Defence of Leviathan, Basil Blackwell Inc., New York, USA, for an overview of the market failure argument.

This revival of neoclassical hypothesis has its origin in the economic crisis of the last two decades which often has undermined confidence in the interventionist policies in the West which were prevailing in the immediate post-war era. As Banuri (1991) opined: "During this period, the example of centrally planned economies lost some of its appeal as they began to run into serious economic and social difficulties of their own. At the same time, Western countries witnessed an erosion of the Keynesian consensus and a growing criticism of stabilization policies, labour unions, social welfare institutions, and regulation of industrial and financial enterprises."\(^{13}\)

Literature dealing with governmental failure\(^{14}\) - a public sector analogue of private sector market failure - was developed during this period as an antidote to the belief that when market works less than perfectly governmental intervention automatically improves the situation. The fundamental argument runs in the cost-benefit framework which shows that the governments are likely to face similar problems if it intervenes.

This faith in market mechanism in recent time received tremendous boost from supply-side economics\(^{15}\) which constituted the theoretical underpinnings of the policies embraced in the

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\(^{14}\) See Cullis and Jones (1987); op. cit.

early eighties by the Reagan administration. Supply-side economists considered capitalism a natural and progressive form expressing the individualism inherent in human nature and offering balanced economic growth in terms of the harmonious equilibrating mechanisms of the free market. They invoked Say's Law to justify their exclusive focus on the incentives to supply. Neoclassical theories of the supply of and demand for labour were espoused. Government operations were held as largely harmful or useless. Inflation was thought to be ended by reinstatement of the principles of gold standard. More particularly, according to this view, taxes drive a 'wedge' between the price a buyer must pay and the price the seller receives. With regard to the labour market, income and social security taxes constitute such a wedge which reduces both the amount of labour supplied and demanded. The policy recommendations, which followed from it, were aimed at drastic cut in governmental activities. Tax rates were reduced sharply on the presumption that it would provide greater incentives to work, save and invest. Governmental programmes were cut and all kinds of regulations on business and industry were done away with.

During the immediate post war era in the capitalist west "the rise of Keynesianism, the increasing legitimacy of social welfare institutions and labour unions, and the acceptance of the need to regulate financial institutions provided justifications for interventionist policies and weakened the ideological support of the Western example for the free trade policies in the Third
As a contrast, the economic crisis of the last two decades, the downfall of the socialist bloc, the so-called success of liberalised economic regimes of the ‘Gang of Four’ countries in East Asia (Taiwan, Singapore, Hong Kong and South Korea), the emergence of supply-side economics and the public choice theoretic literature dealing with ‘governmental failure’ seem to have provided justification for the loss of confidence in government intervention and the revival of faith in invisible hands of free market mechanism in the West, and strengthened the ideological support for the free market liberalisation and globalisation of the domestic economies of the highly indebted nations of the South in the eighties.

The underlying premises of SAP are based upon neoclassical liberalism as envisaged by the interplay of free market mechanism. The three underlying premises, as can be identified, include the faith that:

(a) market mechanism would replace state intervention;
(b) private investment would substitute public investment;
(c) direct foreign investment would be a substitute for other forms of foreign capital inflows.

These premises are geared to harnessing solvency of a debtor economy.

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See Banuri (1991); op. cit.
3.3.3 : Policy Instruments:

The major policy instruments\textsuperscript{17} which feature in a standard package of SAP are as follows:

i) Monetary contraction;

ii) Devaluation;

iii) Abolition or reduction of government intervention on the price system;

iv) Internal financial reform and liberalisation;

v) External economic liberalisation.

Monetary Contraction:

The rationale behind monetary contraction stems from the quantity theory argument, and it has been held as the key anti-inflationary move by the propounders of SAP. In an economy which is at the full employment level cutting money supply or at least its growth reduces the price level given the quantity of transactions or output level.

In an open economy the balance sheet identity of the banking system requires that any rise (fall) in money supply (banks' main liability item) must be balanced by increases (decreases) in loans to the government or private firms, and/or

\textsuperscript{17} The discussion of the various policy instruments of the SAP in this paper is following Taylor, L. (1989), Stabilization and Growth in Developing Countries: A Structuralist Approach, Harwood academic Publishers, Chur, Switzerland, 1989.
by higher (lower) foreign exchange reserves (loans and foreign exchange holdings are banks' main asset items)\textsuperscript{18}, held by private or public agencies.

\[ FR + LG + [LFM + LPUB] = M_s \]

i.e. \[ FR = M_s - LG - [LFM + LPUB] \]

where FR, LG, LFM, LPUB and \( M_s \) denote respectively foreign reserves, bank credit to government, bank credit to firms, bank credit to public and money supply.

During balance of payments crisis, generation of higher foreign exchange reserves becomes the major concern of the monetary authority of a country. Under standard adjustment package it is generally accomplished through monetary contraction. As can be noted from (3.17), if money supply \( M_s \) is held fixed then higher foreign exchange reserves \( FR \) can be accumulated by restricting domestic credit supply to the public and/or private sector from the banking system.

Tight money drives up domestic interest rates on loans to firms for working capital and investment. This will lead to a cut back on activity and results in higher prices in an attempt by domestic producers to pass on increased costs to consumers. Aggregate demand falls under monetary contraction. Aggregate supply may fall by more leading to a rise in the excess demand in the economy which sets in inflationary pressure. Thus a

stagflationary situation crops up if interest cost-push is high enough. Output contraction, in turn, contracts import demand. The latter may help to improve balance of trade of the country.

Devaluation:

The proponents of SAP argued that devaluation of local currency against dollar will stimulate the production of exportable and their sales abroad through the rise in domestic value of the exports. On the other hand imports may fall owing to corresponding rise in the domestic value of importables. Hence trade balance may improve which may ease out net factor services payments abroad, namely interest payments.

Exchange rate generally enters into the import costs and the price level.

\[ P = (1 + \pi)(wb + EP^*) \]  

(3.18)

where \( P \) is the price of the manufactured output, \( \pi \) is the markup rate, \( w \) is the nominal wage rate, \( b \) is the labour-output coefficient, \( E \) is the exchange rate, \( P^* \) is the price of the imported intermediaries in foreign currency.

If the money wage \( (w) \) and the mark-up rate \( (\pi) \) stay fixed then devaluation will cause price level to rise. In that case real wage will fall and the income distribution shifts from the wage-earners to the profit recipients. It then will have a contractionary effect on aggregate demand within the domestic economy since export response to exchange rate change has been
found to be weak in the case of most of the primary commodity exporters amongst the developing countries. In fact trade balance improvement comes through reduced intermediate imports and devaluation generates stagflationary situation within the domestic economy. Devaluation may increase export revenue of the debtor country only if prices in local currency stay fixed.

It can be shown how exchange rate devaluation enhances the net financial transfers of resources from a debtor economy in the 'sustainable' debt process. To incorporate exchange rate in our mechanism described in the preceding section let us define debt-to-GDP ratio as:

\[ d = \left( \frac{D^*}{Y^*} \right) e \]  

(3.19)

where \( D^* \) and \( Y^* \) refer to debt stock and national income in foreign currency respectively, and \( e \) stands for the real exchange rate.

Then we obtain from (3.19):

\[ \dot{d} = n + (i-g)d + \dot{e}d \]  

(3.20)

In (3.20) the third term \( \dot{e}d \) measures the loss on a country's external debt in terms of export goods needed to service the debt when the exchange rate depreciates in real terms. The debt-to-GDP ratio measures the debt in home goods. A real depreciation causes their relative value to fall and hence debt-to-GDP ratio rises. The sustainable debt process warrants that debt-to-GDP ratio either to remain constant or to tend to zero through time.

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19 See Appendix 3.8 at the end of the chapter.

20 See Appendix 3.8 at the end of the chapter.
If $i > g$ then a negative net financial transfer from abroad is called for to keep the country solvent.

Abolition or reduction of government intervention in the price system:

Abolition or reduction of government intervention in the price system is aimed at doing away with any price distortion in the economy. In a developing country government generally intervenes in the pricing of agricultural goods and some basic industrial products and raw materials. Government generally intervenes in pricing the agricultural products or inputs mainly in the form of subsidies - e.g. food subsidy, fertiliser subsidy. There may exist some price control mechanism through which government may regulate the prices of some basic manufactured products like steel in India. Proponents of SAP advocate the abolition of the government intervention in the price system in order to restore the full play of market mechanism. What ultimately ensues from the exercise is that initially the price of the product of the sector, in which price control is done away with, rises. This, in turn, contracts the demand of the product in the other sector if the product of the former sector happens to be demand inelastic. Investment demand in the other sector may fall as a result of fall in demand in that sector which may lead to an overall economic contraction. Price rise in the former sector may have spill over effect on prices of the other sector resulting in general rise in price level. As a result real wage will fall
if money wage stays fixed causing a shift in income distribution from the low-saving (high consuming wage earners to the high-saving (low-consuming) profit recipients. There may be overall output contraction and a foreign balance improvement is derived through a compressed demand for imports.

**Internal financial reform and liberalisation:**

The basic aim of internal financial reform and liberalisation is to raise domestic rates of interest to induce savings rates\(^2\). An ex-ante increase in savings is more likely to lead to economic contraction. A rise in interest rates can result in working capital cost-push and hence, a decline in investment demand and the level of economic activity.

**External economic liberalisation:**

Through external economic liberalisation the SAP focuses its attention on the market in foreign exchanges and the role of the exchange rate in influencing portfolio choice. This consists of a package involving reduction of restrictions on both foreign trade and international capital flows. Trade policy reforms include export promotion policies, import liberalisation, tariff reforms and the maintenance of a flexible exchange rate. These policies aim at generating trade surpluses over time. However,

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\(^2\) Increase in domestic savings is assumed to stimulate investment automatically which is a feature of neoclassical growth theory. Moreover, domestic savings are sought to be enhanced in order to replace foreign saving basically.
a flexible exchange rate, tariff reforms, import liberalisation - all these tend to drive up intermediate import cost which in turn raises the price level and lowers the real wage rate. External liberalisation along with monetary contraction, devaluation and abolition of price control mechanism generates deflationary situation in the domestic economy and trade balance improvement comes through reduced import demand in the context of economic contraction.

Summing up the discussion of this section it can be said that these adjustment programmes are generally demand deflationary, at least, in the short run. This lowers output growth rates. The trade balance improvement is mainly derived through import demand compression following overall contraction of output in the economy. However, balance of trade improvement ensures net financial transfers of resources from the debtor economies.

3.4: A Backgrounder to Debt Reduction Measures:

As has been shown in the preceding sections, sustainable debt process associated with the adjustment programmes results in contractionary situation in the domestic economy of the debtor nation causing a vicious circle of low growth and low capital inflow. Net financial transfers of resources play the most vital role in the process.
Recall from (3.13) that:
\[ n = d(r-i) \]

As it has been shown in the Section (3.2), rate of growth of debt stock \( r \) sets the floor to the GDP growth rate \( g \), in the context of 'sustainable' debt process. Hence,
\[ n = d(g_m-i) \]
where \( g_m \) is the critical minimum rate of growth of GDP given by \( r \) in order that debt process is sustainable.

Now the restoration of growth recovery in the debtor nation calls for that either \( D \) or \( i \) has to be lowered to effect positive net transfers to the debtor nations. This warrants debt relief measures which will either lower the interest payments by lowering the interest rates or will lower the stock of debt by bringing it down at least to the initial level, or the both.

If consideration is placed upon the complementary objectives of stabilisation and growth, debt relief measures with some internal adjustment are of utmost importance in the context of growth recovery in the debtor nations. As the discussion in section 2 indicated, economic growth in a debtor economy depends upon foreign transfers along with domestic savings. When net financial transfers to a debtor economy is negative domestic savings need to be enhanced to gear up economic growth rate \( g \). However, this undermines costs of attempting to replace foreign savings by domestic savings when there occurs negative net transfers to the debtor country.
This warrants an analysis of two major constraints that most of the debt-ridden countries face - namely, the foreign exchange constraint and the fiscal constraint.

To undertake a discussion on the foreign exchange constraint\textsuperscript{22} let us start with the current account identity in the balance of payments accounting:

\[ M - X = B - R \] \hspace{1cm} (3.22)

A part of imports is determined by the domestic investment demand, notably the capital goods imports. We can write:

\[ M = M_o + mI \] \hspace{1cm} (3.23)

where \( M_o \) is the autonomous component of import demand and \( m \) is the import-coefficient of investment demand \((0 < m < 1)\).

Using (3.5) and (3.23) we obtain:

\[ I = \left(\frac{1}{m}\right)[E_x + N] \] \hspace{1cm} (3.24)

where \( E_x = X - M_o \).

If \( E_x^* \) is the maximum level of exports net of autonomous imports given by the world demand then the foreign exchange constrained level of investment is:

\[ I_r = \left(\frac{1}{m}\right)[E_x^* + N] \] \hspace{1cm} (3.25)

From the basic national income accounting identity we obtain the savings constrained level of investment\textsuperscript{23} as:

\[ I_s = (Y^* - C) + N \]
\[ = S^* + N \] \hspace{1cm} (3.26)

where \( Y^* \), \( S^* \) refer to that level of income and domestic savings respectively when there exists no excess capacity in the domestic

\textsuperscript{22} See Appendix 3.E at the end of the chapter.

\textsuperscript{23} See Appendix 3.D at the end of the chapter.
From (3.25) and (3.26) the following observation can be made:

Note that $\delta I / \delta N = 1/m$ and $\delta I_e / \delta N = 1$. Since $(1/m) > 1$

$\delta I / \delta N > \delta I_e / \delta N$. This implies variations in net financial transfers have bigger impact on investment in (3.25) than in (3.26). In the event of negative net financial transfers the pressure falls on the exports net of autonomous imports to maintain the level of investment. However, exports depend mainly upon the world demand and so increase in net exports is derived through contraction in imports.

Trade policy measures, contained in the standard adjustment package, mainly stresses upon import liberalisation and export promotion and are aimed at trade balance improvement of the debtor country. Export growth is influenced by the global economic and political environment. For trade balance improvement export growth is essential. Given the world scenario, it is uncertain whether export growth will occur and whether it is sustainable, if it occurs. Balance of trade, therefore, improves through reduction in import demand which is ensured through overall GDP compression in the debtor economy. Clearly, in such an environment growth recovery in the debtor nations is not possible unless negative net financial transfers therein are reversed. The latter indicates the need for debt reduction measures to instill growth impetus in the debtor economies.
Now let us take up the case of fiscal constraint. Investment demand in the domestic economy of the debtor nation can be decomposed into two components - public investment \((I_q)\), and private investment \((I_p)\).

Government investment in a developing economy is financed through net financial transfers to the government \((N_q)\), primary budget surplus, \((T-G)\), and variation in base money or printing money, \(dH\):

\[
I_q = dH + (T-G) + (N_q) \quad (3.27)
\]

In a developing economy public investment in basic infrastructure is complementary to private investment. In that sense public investment crowds in private investment. We can assume:

\[
I_p = kI_q + N_p \quad (3.28)
\]

where \(k\) is the crowding-in coefficient of public investment \((k>0)\).

Using (3.28) in (3.27) we obtain the fiscal constrained level of investment:

\[
I_r = (1+k) [dH + (T-G) + (N_q)] + N_p \quad (3.29)
\]

Comparing (3.29) with (3.26) we can make the following observations. Note that \(\delta I_r/\delta N_q = (1+k)\) and \(\delta I_r/\delta N = 1\). Since \(k > 0\), \(\delta I_r/\delta N_q > \delta I_r/\delta N\). This implies that impact of variation in net financial transfers on the level of investment will be greater in the case of fiscal constraint than in the case of savings.

\[24\] See Appendix 3.F at the end of the chapter.
constraint. When negative net financial transfers from abroad take place then to maintain the level of investment base money (dH) and/or primary budget surplus (T - G) of the debtor government need to be raised. However, increase in the base money is not advisable as it implies inflationary financing. Moreover, the objectives of growth and stabilisation warrant contraction in the base money (dH). In the context of negative net transfers from abroad this implies that the burden falls upon the primary budget surplus (T-G) to maintain the level of investment.

Primary budget surplus can be enhanced either by raising the revenue by tapping the hitherto untaxed resources and/or increasing the tax rates, or by cutting the government expenditure or by a combination of both. In a developing country fiscal deficit is generally sought to be reduced through slashing down governmental expenditures as imposition of more taxes and/or raising the tax rates are politically unpalatable for the national governments. In the expenditure side, the axe mainly falls on public investment, transfer payments like subsidies, social security benefits, expenditure on social overheads e.g. health, education, poverty eradication. Clearly this kind of expenditure reduction does have adverse economic implications in a poverty stricken developing country which in turn give rise to political and social tension. But it helps to contain the overall domestic demand in the economy and, thereby, helps to restrict import demand which exerts a positive influence upon trade balance of the debtor economy.
Fiscal reform is concerned with the reduction of fiscal deficits in debtor countries. And, it precisely takes the form, as discussed in the preceding paragraph, as the experiences of the several debt-ridden developing countries suggest. The nature of the fiscal reform rather should be concentration of public investment in sectors which complement private investment and additional resource mobilisation by tapping idle resources without affecting the expenditures on social overheads, poverty eradication, employment generation and rural development etc. But it seems difficult for the debtor governments to accelerate public investments when net financial transfers to these economies are negative. It points out, as in the case of foreign exchange constraint, the need for debt reduction measures for growth recovery in debtor economies.

In the light of twin objectives of growth with stabilisation, as the foreign exchange and fiscal constraints facing the debtor developing countries suggest, it is difficult to replace foreign transfers by domestic forms of finance. This difficulty is not captured in the traditional savings gap. Private savings may be available. But the developing country governments may be unable to tap them except through inflationary means. The conclusion is that adjustment effort must be accompanied by the debt reduction measures in the indebted nations either in the form of lowering interest payments or underwriting the debt stock or the both. This will enable the debtor nations to regain their lost economic growth and to build up additional momentum for further growth on a
sustained basis.

3.5: Summary:

The major observations of this chapter are as following:

(i) The concept of net financial transfer (NFT) is an useful device in explaining the debt-driven developmental process in debtor developing countries.

(ii) To retire their debts developing countries have to export capital on a net basis. The sustainability of the process is given by the condition \( r < g < i \). This leads a debtor economy to a vicious circle of low economic growth and low capital inflows.

(iii) The standard adjustment programmes generate demand deflation in debtor economies. This, in turn, helps to improve the balance of trade position of the developing countries through reduced demand for imports. As a result, the net financial transfers of resources to the debtor economies become negative which ensured falling debt-to-GDP ratios in the debtor economies, as warranted by the sustainable debt process.

(iv) One of the basic objectives of adjustment programmes is to replace foreign capital flow to the developing countries by domestic savings. However, a debtor developing country may find it difficult substitute foreign capital flows by domestic savings because of the inherent structural bottlenecks, therein, indicated by the fiscal and foreign exchange constraints.
(v) Debt reduction measures accompanied by expansionary adjustment programmes are necessary to help the indebted countries restore high growth and foster economic development.
APPENDIX

NOTATIONS:

A : absorption
B : new capital inflow or current account balance
C : consumption expenditure
D : debt stock
E : nominal exchange rate of foreign currency in terms of local currency
G : government expenditure
H : base money
I : investment expenditure
M : imports of goods and non-factor services
N : net financial transfers of resources from abroad
P : domestic price level
R : net factor services abroad
S : savings
T : tax revenue
X : exports of goods and non-factor services
Y : gross domestic product or GDP
a : capital-output ratio
d : debt-to-GDP ratio
e : real exchange rate
g : growth rate of GDP \((Y/Y)\)
i : rate of interest
k : crowding-in coefficient of public investment
m : import intensity of investment
n : net transfers to GDP ratio \((N/Y)\)
r : rate of growth of the debt stock \((D/D)\)
s : savings to GDP ratio \((S/Y)\)
E_x : exports of goods and non-factor services net of other imports
I_f : foreign exchange constraint level of investment
I_g : government investment expenditure
I_p : private investment expenditure
I_s : savings constraint level of investment
I_f : fiscal constraint level of investment
M_o : other imports
M_k : capital goods imports
*: (asterisk) as superscript denotes a variable in foreign currency
*: maximum value of a variable
*: (dot) rate of change of a variable
*: (hat) proportionate change of a variable.
APPENDIX 3.A:

From the basic national income identity we have:

\[ Y = C + I + (X - M) \]  
(1)

or \[ Y = A + (X - M) \]  
(2)

where \( A = C + I \)  
(3)

Net real resource transfers are defined as:

\[ N = M - X \]  
(4)

Using (4) in (2) gives us:

\[ N = A - Y \]  
(5)

From the current account identity of balance of payments we obtain the financial counterpart of the net real resource transfers, \( N \):

\[ N = M - X = B - R \]  
(6)

or \[ B = N + R \]  
(7)

(7) states the balance of payments in the current account. Now,

\[ R = iD \]  
(8)

\[ B = D \]  
(9)

and \( d = (D/Y)' \)  
(10)

Then,

\[ d = (D/Y)' \]
\[ = \frac{[YD-DY]/Y^2}{Y} \]
\[ = (D/Y)[D/D-Y/Y] \]
\[ = d(r-g) \]  
(12)

where \( r = D/D \) and \( g = Y/Y \).

Using (7), (8) and (9) we can write (11):

\[ d = (D/Y)[(N+iD)/D-Y/Y] \]
\( = (N/Y) + (D/Y)(i-Y/Y) \)
\[ = n + d(i-g) \]  \hspace{1cm} (13)

where \( n = N/Y \).

Comparing (12) and (13) we get:
\[ d(r-g) = n + d(i-g) \]

i.e. \[ n = d(r-i) \] \hspace{1cm} (14)

For sustainability of the debt process \( d \leq 0 \).

Case I : \( d = 0 \). Then \( d \) is a constant.

From (12) we have \( r = g \). Given the initial \( d > 0 \) and if \( i > g \), we get from (13) \( n < 0 \).

Case II : \( d < 0 \). From (12) we have \( r < g \). Given the initial \( d > 0 \) and if \( i > g \) from (13) we get \( n < 0 \).

From (14) for the sustainability of the debt process we have \( n < 0 \) if \( r < i \).

**APPENDIX 3.B:**

**Incorporation of the exchange rate:**

\[ d = D^*E/Y \] \hspace{1cm} (15)

\[ e = (EP^*)/P \] \hspace{1cm} (16)

Using (16) in (15) we get:
\[ d = (D^*/Y^*)e \] \hspace{1cm} (17)

Now
\[ d = (N^*/Y^*)e + (D^*/Y^*)e(i-Y^*/Y^*) + e/e[(D^*/Y^*)e] \]
\[ = n + d (i-g) + \dot{e}d \] \hspace{1cm} (18)

where \( n = (N^*/Y^*)e; \)
\[ g = (Y^*/Y^*); \] and
\[ \dot{e} = e/e. \]

If \( i > g \) and \( \dot{e} > 0 \) owing to devaluation (18) gives us \( n < 0 \) for the sustainability of the debt process.
APPENDIX 3.C:

g depends upon n and hence when n<0  g will be low.

Proof: \[ Y = C + I + (X-M) \]
\[ N = M - X \]

Then, \[ I = S + N \] where \[ S = (Y-C) \].

In a simple Harrod-Domar model of growth
\[ g = a(I/Y) \]
\[ = a(S/Y+N/Y) \]
\[ = a(s+n) \]  (19)

Given \( a \) and \( s \), \( n<0 \) implies that \( g \) will be low.

APPENDIX 3.D:

Savings Constraint Level of Investment:

\[ Y = C + I + (X-M) \]
\[ i.e. \quad I = (Y-C) + (M-X) \]
\[ = S + N, \ \text{from (6)} \]

Then savings constraint level of investment is given by:
\[ I_s = S^* + N \]  (20)

where \( S^* \) refers to the level of savings when there exists no excess capacity.

APPENDIX 3.E:

Foreign Exchange Constraint Level of Investment:

Balance of payments identity gives us:
\[ M - X = B - R = N \]  \hspace{1cm} (21)

Let
\[ M = M_0 + mI \]  \hspace{1cm} (22)

where \( 0 < m < 1 \).

\[ E_x = X - M_0 \]  \hspace{1cm} (23)

Using (21) and (23) in (22), and rearranging we get:
\[ I = (1/m)(E_x + N) \]  \hspace{1cm} (24)

Foreign exchange constraint level of investment is given by:
\[ I_t = (1/m)(E_x^* + N) \]  \hspace{1cm} (25)

where \( E_x^* \) is the maximum value of \( E_x \).

**APPENDIX 3.F:**

_Fiscal Constraint Level of Investment:

Let \( I = I_q + I_p \)  \hspace{1cm} (26)

\[ I_p = kI_q \]  \hspace{1cm} (27)

where \( k > 0 \) is the crowding-in coefficient.

Using (26) and (27) we can write:
\[ I = (1+k)I_q \]  \hspace{1cm} (28)

Now \( I_q = dH + (T-G) + (N_q) \)  \hspace{1cm} (29)

where \( dH \), (T-G) and \( N_q \) refer to variation in base money, primary budget surplus and net foreign transfers to the government sector respectively.

Then fiscal constraint level of investment is given as:
\[ I_t = (1+k)[dH + (T-G) + (N_q)] + N_p \]  \hspace{1cm} (30)