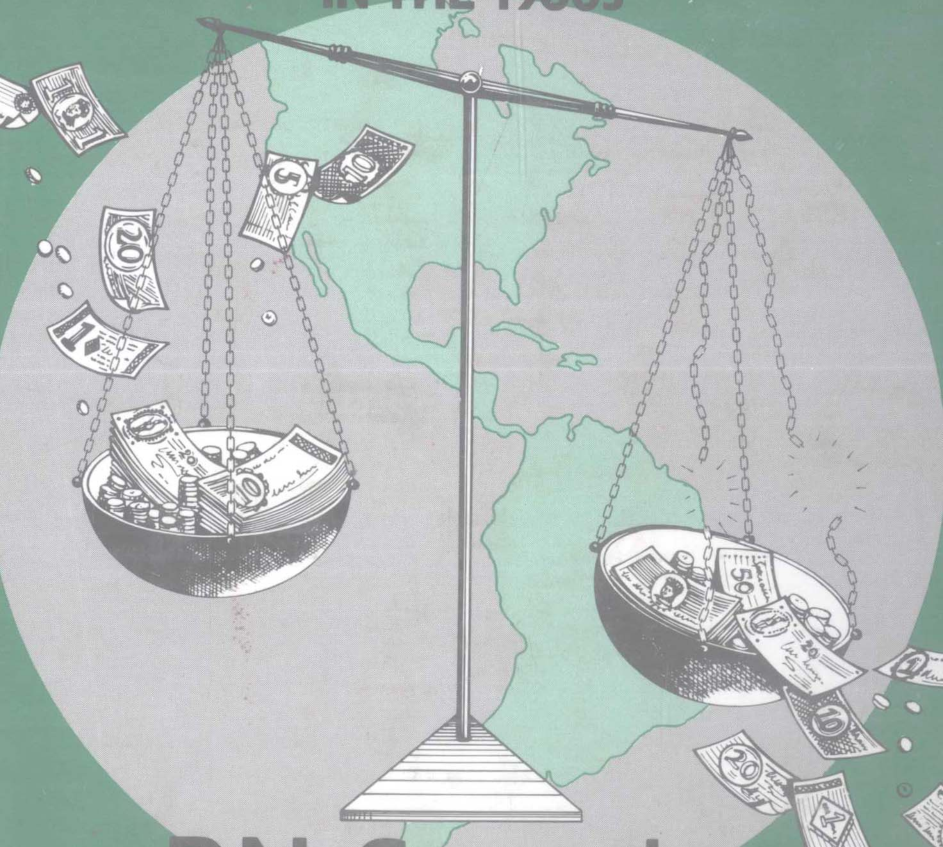
Emerging Risk in International Banking

ORIGINS OF FINANCIAL VULNERABILITY IN THE 1980s



P.N. Snowden

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ORIGINS OF FINANCIAL VULNERABILITY IN THE 1980s

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To the memory of my father
Frederick C. Snowden,
for showing me the firm ground,
and to that of Charles.

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Finally, although aware that it is usually regarded as a formality, I note that without the happiness and encouragement I have derived from my wife Anne, and my daughters Frances and (very recently) Alexandra, the effort involved in the project would have been difficult to sustain.

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Introduction
Risk and instability in international bank lending: aims of the study

On 20 August 1982, Mexico suspended payment for ninety days on its external debts of around $80 billion.[1] For a period thereafter, international financial markets were frozen to many less developed country borrowers (LDCs). Brazil, in particular, was precipitated into debt rescheduling on a similar scale to that which was hurriedly arranged for Mexico. The short term impact on these countries has been severe, with contractionary adjustment policies the *quid pro quo* of the rescheduling arrangements. In this way the early 1980s witnessed a culmination of the process which, as recycling, in the 1970s had supplied loans and permitted continued growth for certain LDCs, despite the oil price ramifications acting on the world economy.

Concern with the debt crisis has been on two levels. First, considerable attention has been paid, by international institutions as well as others, to the prospects facing major debtors (e.g. International Monetary Fund, 1984; Cline, 1984). What room do they have for resumed growth, for instance, given their repayment obligations? The second level has been concern over the safety of the international banking system given the possibility that one, or a few, major country borrowers could have approached the position of outright default. In this context the focus of concern has been the relative magnitude of some of these country loans, relative to the capital of the banks which have made them.

This volume is aimed at the second issue. The intention is to provide, as systematically as possible, an explanation of the processes by which the banks have accumulated such risks. Why have banks permitted country loans to become such a large fraction of their capital that bank insolvency appears as a serious possibility?

The answers generally provided to this question all appear potentially important, but have been presented in an *ad hoc* manner and do not provide a particularly satisfying overview of the process. Our motivation for attempting the exercise, other than clarification itself, has been to understand the sources of instability in bank intermediation in this context. In the view of the present writer the arguments suggest that present day temporary involvement in country lending by the International Monetary Fund (IMF) and the IBRD should increasingly become permanent.

The bulk of the explanation offered is contained in Chapters 4, 5 and 6, with the first three chapters providing contextual material. The emphasis in these early pages is on the relationship between 'real' international developments and the financial patterns which accompanied them. The basic enquiry is concerned with what fuelled the demand for international finance and how it was supplied. The answer to this is useful in showing the relative position of bank finance but also serves to emphasize that crises of finance are fundamentally interrelated with crises in real economic activity.

That economic crises and debt crises are usually related is well known historically both within national economies and in the field of international borrowing. As Kindleberger has argued from a review of historical experience:

> Maintaining debt service during world recession is generally impossible. Where countries have made serious efforts to do so – in Germany until the standstill agreement of July 1931 and in the Soviet Union with its relatively small debts through the 1930s – the results have been thoroughly unsatisfactory: the rise in totalitarianism out of mass unemployment on the one hand, and mass starvation through diversion of grain from cities to exports on the other. [Kindleberger, 1978, p. 9.]

Similarly, in more recent international economic relations there has been argued to be a correlation between the pattern of economic activity and the level of financial risk. Wallich (1978), for instance, suggested that (in the context of policy proposals for co-ordinated global economic reflation) there is a 'trade-off' between the minimization of financial risk and the maximization of returns to investment. The most recent example of his point has been the ability of the USA to borrow heavily on world capital markets. The financial risks to bankers and others (neglecting exchange risks) of lending to the US government are presumably small. It is a paradox, however, that a capital-rich country should be importing large volumes of financial capital from poorer nations where capital is fundamentally more scarce. Arguments for the efficiency of resource allocation would suggest a flow which is the opposite of those which appear to be the result of considerations of financial risk and return.

From an analytical viewpoint, however, the relationship between economic and financial (debt) crises has only incompletely been worked out. Perhaps the most suggestive analysis has been propounded by Minsky, basing a theory of national debt–deflation cycles on the earlier writings of Fisher. Although Minsky is thinking of national economic cycles, some elements of his analysis may be helpful in the present context.

His cycle begins with a 'general recognition' that a state of 'overindebtedness' exists from the point of view of debtors, or creditors, or both. The subsequent attempt to liquidate this debt leads to a diminution both of financial intermediation and of real activity. The depression factors lead to bankruptcies, a fall in nominal interest rates, and a rise in real ones. In explaining the emergence of an initial state of overindebtedness, Minsky argues that in the boom (upswing) *systematic shifts in the financial structure of business firms take place.* Rising optimism tempts firms to adopt a riskier financial structure by expanding debt in relation to owners' equity capital. The rising debt, and frequently shortening maturity, requires a steady, large cash flow for financing purposes. A diminution of the cash flow can therefore push many firms to the point of bankruptcy and such events trigger the debt–deflation cycle.

Although overindebtedness must be seen, fundamentally, as a relative concept, linked to the wealth or income flows accruing to the borrower, difficulties can arise even if the debt is not excessive *ex ante* on these criteria. Thus, Minsky argues, it is not only the magnitude of the debt but the time profile of repayment streams. Short term debt, for instance, presents more difficulty than long term debt since repayment streams involve interest and principal sums due. This outflow must be compared with the cash flow arising from the activities they have financed. Thus, in the situation where enterprises have incurred short term debt, in the process of financing long term investments, difficulties can rapidly multiply. For instance, a rise in interest rates both *increases* the short term cash outflow and *reduces* the present value of future income streams.

> For any given cash receipts due to assets and income production and payment commitments due to the liability structure there is an outer limit to interest rates that will preserve adequate margins of safety for the normal functioning of borrowing and lending. [Minsky, 1982, p. 383.]

This critical interest rate declines as the ratio of debt to equity in the financial structure is increased. Increasingly fairly small changes in interest rates, or opposite movements in profits, can produce the crisis turning point. Finally, innovations in finance are at the centre of Minsky's modern reformulation of the Fisher process. In the domestic context, financial innovation, by widening funding alternatives, tends to increase the price of capital assets and to reduce interest rates. The margin of safety referred to above widens, so encouraging more speculative financial structures.

The relevance of all this to the recent evolution of sovereign lending may be judged from the following quotation. After noting that international borrowing in the 1970s had been associated with a higher level of investment spending, the IMF staff express anxiety that difficulties could emerge if these investment projects turn out to be insufficiently productive in view of debt service obligations:

> . . . an unexpected shift in underlying external conditions rendered previously viable investment less profitable. For instance, the low or negative real rates of interest that prevailed during 1974–78, together with the expectations that such rates would continue, probably encouraged a higher level of external borrowing than would have occurred if the significantly positive real rates of interest that emerged from 1979 onward had been expected. [IMF, 1984, p. 63.]

In seeking an understanding of the basis of the current fears over world banking risk, the Minsky analysis alerts us, in particular, to two features of an emerging financial crisis. First there is the pattern of accumulation of financial liabilities by borrowers, especially the growth of debt relative to other sources of finance. It is such patterns which lie behind the sensitivity of the borrower to changed external circumstances, in our particular context, to the change in global real interest rates towards substantial positive real values after a period of their being negative. This important development is tied up with the change towards financial restriction in the major economies together with the lag in adjustment of inflation expectations in those countries in recent years.

Secondly, and this is the major point of departure of the present analysis, the nature of innovation in financial markets is held, by Minsky, to be of substantial importance. While changing interest rate structures, and other strains acting on the balance of payments, may help to trigger financing difficulties for particular country borrowers, an analysis of the development of the intermediation process is required to explain rising risk within the banking system.

Given these clues, the plan of the volume is as follows. In the first chapter the context of global economic developments in the 1970s is reviewed with attention given to current account patterns and attendant financing implied. The focus of the review is the disparate experience of differing country groups following the oil price shocks. The second chapter asks how far the patterns of financial flows to major borrowers changed over the period, with particular attention paid to the relative position of the banks. This allows an assessment of the relevance, or otherwise, of the first part of the Minsky theory as sketched above: that financial crises are associated with changing patterns of finance carrying with them increasing risk.

As Minsky's and Fisher's analyses stress, the borrowing must be seen relative to potential inflows to the borrower and an important part of the second chapter is the assessment of an explanation recently provided for the pattern of current account imbalances, and hence of financing needs, in the 1970s. This thesis stresses 'investment shifts' with the emergence of certain LDCs as borrowers reflecting their enhanced attractiveness as locations for investment spending relative to the major economies. Such an argument would offer a sanguine view of growing indebtedness since earnings streams would also be expected to grow. The conclusion of the chapter is that some evidence for investment shifts does exist but that country experience has been too variable, particularly on the savings side. This is taken to imply that domestic policies must also have had an important role to play. Before this argument is confronted with the two case studies of Chapter 3 a further more general point is made in Chapter 2. This is that assessing the strains imposed by high and rising interest rates requires allowance for the national patterns of indebtedness as well as for the impact on the real value of debt of world inflation throughout the period of the study. Much of the conclusion of this part of the analysis is indeed fairly sanguine about the existence of true overindebtedness generally. Where the Minsky thesis might find support, however, is in the countries which, in the 1970s, were the chief beneficiaries of international financial innovation in banking. In contrast to some surprisingly successful adjustments in East and South East Asia, Chapter 2 traces the emergence of Latin America as the main focus of the debt crisis. This in turn gives added weight to the choice of Brazil and Chile as the case studies of Chapter 3. As is clear the impact of external events has been particularly severe for these debtors, but deficiencies of domestic policies as much as growing investment, in one of the cases, must be seen as partly responsible for the rapid build up of international indebtedness.

Given varying ingredients in explaining the growing debt of different countries, Chapter 4 begins the main part of the analysis by taking up the second theme of the Fisher–Minsky argument. Here the nature of the contemporaneous financial developments of the 1970s are analysed. The prodigious growth of international credit is explained together with the importance of the major disparity which emerged, and stimulated bank intermediation. The disparity in question is between the liquidity preference of many of the newly rich oil-producing states and the desire for debt *illiquidity* by the emerging borrowers.

Since maturity transformation is a traditional function of banking it

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is not surprising that banks stepped in to meet the requirements of lenders and borrowers. It is noted, however, that the mechanics of this maturity transformation differ from those of domestic retail banking and have enhanced, thereby, the importance of linkages *between banks*. The role of the inter-bank market and potential system-wide risks are considered at this point.

These, however, are second order risks since maturity transformation will only present a problem in the face of a crisis of confidence rendering some intermediaries' ability to refinance their loan portfolios open to doubt. Since the difficulties of individual institutions could have system-wide ramifications, not only through inter-bank dealings, the focus switches in Chapters 5 and 6 to the apparently enhanced risks of banks. Chapter 5 considers the forces which persuaded banks to exploit their comparative advantage in maturity transformation and make such large commitments to sovereign lending. The context here is an analysis of loan markets where lenders' assessments of default probabilities are a crucial part of the equilibrium achieved. What made banks so sanguine in this regard? Chapter 6, which is to be seen as complementary with Chapter 5, seeks, none the less, to take the analysis further. What forces were acting on *individual banks* and what did they do? How far did they adjust to rising perceived risk? In particular, what was the role of banking competition in the choices made by these banks? It is contended that a key ingredient in the reduced perception of risk in sovereign lending, so important in the narrative of Chapter 5, was in fact due to the sequential nature of the banking competition that took place in this apparently lucrative business. It is further argued that the role of banking regulation in the United States could have been significant in this context as well as helping to precipitate overseas lending in the first place.

The final chapter addresses itself, in a deliberately unambitious way, to the need to maintain the availability of bank funding to the borrowing requirements of LDCs. The criterion used is that the developments envisaged should be immediately feasible given the actual circumstances of the present decade.

NOTES

1 All references to dollars imply the US dollar unless otherwise specified.
2 At the extreme a country would repudiate its debt ceasing to acknowledge service obligations. More or less serious default arises when the original terms cannot be adhered to despite the borrower's continuing recognition of these obligations.

1 Changing current account patterns in the 1970s

From the point of view of efficiency of resource allocation a flow of capital from capital-rich to capital-poor nations could be expected as a normal state of affairs. Such inflows on capital account would provide finance for current account deficits, the latter reflecting a rate of investment spending in excess of domestic saving. Countries would be expected to borrow on the basis of this investment motive provided that rates of interest on world capital markets remained below the marginal returns to new investment projects within the countries concerned.

In attempting to interpret the pattern of current account balances between countries in the 1970s it is useful to note that such surpluses or deficits reflect financing decisions on the capital account. While the actual pattern of financial flows in the decade is the subject of the next chapter, a brief review of motives behind international borrowing will be presented here. Other than the investment motive for international borrowing at least two other motives can be identified. These have been called the 'consumption' and the 'adjustment' motives (Eaton and Gersovitz, 1980). Having defined them, the chapter will go on to employ the terms in a consideration of the special requirements thrown up by the oil price increases of 1973–4 and 1978–80.

It will be seen that the 'adjustment motive' in this new context shades into the motive for investment and further emphasis will be given to investment for this reason. Additionally it has recently been suggested in the literature that the pattern of adjustment by the world economy to higher oil prices in fact reflects the enhanced importance of the investment motive behind the flow of funds to LDCs. This new view, which may be of fundamental importance, will be outlined in this chapter and assessed critically in the next. It is an argument which goes beyond the immediate impact of the oil crisis.

How then may a country justify borrowing for purposes of consumption? In the first instance, a country anticipating rapid income growth in future years may wish to borrow and allow consumption to rise in the present period against the 'security' of the growing income stream. Perhaps more usually, a country facing relatively sharp swings of its year on year income around a stable trend may want to borrow to smooth its consumption patterns between years. Such may be the situation of a primary exporting country dependent on world market conditions facing a small number of commodities, and it is for such purposes that the compensatory financing facility evolved within the IMF.

In contrast to the cases of the investment motive and the first consumption motive, where indebtedness tends to rise rapidly in the early years, the consumption 'smoothing' motive would not be expected to change the country's overall indebtedness over the course of a full cycle. In reality, of course, the two consumption motives do share a complication of which the investment motive is theoretically free. Whereas a viable investment financed by foreign funds generates its own income from which service payments (interest and amortization) can be extracted, the repayments associated with consumption loans of either type must be met from the government's general budget. In principle the service payments would be a prior charge on government revenue and if international indebtedness is rising as a fraction of national income, as for instance in the early years of the first consumption motive mentioned, tax revenues will gradually have to rise as a fraction of income, or other public spending will have to be cut, in order to meet the service payments involved (Newlyn, 1977, p. 102).

A similar prior charge on government revenues is generated by the borrowing undertaken for the adjustment motive. The need for adjustment might arise due to a cumulative loss of international competitiveness leading to a balance of payments crisis. Immediate application of measures to deal with the situation would probably involve severe domestic deflation together with exchange rate depreciation. The use of international borrowing, in such instances typically from the IMF credit tranches, would enable the country to undertake the necessary adjustments over a somewhat longer period, thus avoiding the worse 'stagflationary' effects. It is to be hoped that relatively small adjustments to the country's resource allocation in favour of the foreign trade sector would suffice.

What then were the salient features of the adjustment motive for international borrowing in the aftermath of the oil price increase? Unlike the more traditional need for balance of payments support, often provided and supervised by the IMF during adjustment of domestic economic policies, the requirement was for adjustment to an *exogenous* change in countries' international trading positions. That is, there was an impairment of import capacity over the medium term reflecting a fall in real national income. Secondly, again in contrast to the earlier adjustment problem, the need, although varying with differing national circumstances, was imposed *simultaneously* on a large number of countries. Thirdly, both exogenously and simultaneously, the export prospects facing LDCs markedly deteriorated as world economic growth declined in the years subsequent to the formation of OPEC (the Organization of Petroleum Exporting Countries).

In the aftermath of the first oil price increases between 1973 and 1978 the oil-exporting countries used about half of their increased real resources in the purchase of goods and services primarily from developed countries (DCs). The other major development, quantitatively, however, was that the industrial countries reduced their rates of economic growth. On the average they were some 2.5 percentage points below the Organization for Economic Co-operation and Development (OECD) growth rates of the preceding decade (IMF, 1980, p. 74). By no means all of this reduction was the direct result of the rise in oil prices and, indeed, counter-inflation policies and issues relating to declining productivity growth in the developed countries were probably crucial. None the less, the oil price increases rendered difficult policy issues the more intractable. The outcome was that a collective deficit on the OECD countries' balance of payments of some $8 billion in 1973 had been converted into a surplus of some $30 billion by 1978. As the World Bank (IBRD) comments,

> . . . reduced deficits are not themselves evidence of successful adjustment; if they are achieved simply by slowing down activity, they underwrite the contractionary effect of higher oil prices. [IBRD, 1981, p. 9.][1]

For a number of reasons, some of which, like declining productivity trends, may be fundamentally long lasting, the developed world responded in a quite conventional way to the deterioration of its trade balances experienced during the 1970s. In discussing the appropriateness or otherwise of this response, given our focus, it is not intended to discuss directly the efficiency of the counter-inflation strategy that has come to dominate policy making in many of the major industrial nations. From the point of view of the global economy, however, one point should be emphasized. The rise in real income of the oil-producing nations was matched by a decline in the current real income of the oil-importing nations. It was therefore appropriate that the domestic absorption of goods and services by these latter countries should be curtailed, but this does not mean that a general deflationary policy was appropriate on these grounds. The key to this point lies in the fact that *world* real income had not been reduced but rather redistributed in favour of oil producers who were inclined to accumulate financial assets with a substantial fraction of their increased income. Deflation of the world economy was therefore not called for; instead global adjustment needed to be in the form of a shift from consumption spending towards investment spending to match the increased potential supply of loanable funds.

If, for a moment, however, we visualize the world economy as two blocks, the global deflation that actually occurred can be seen in terms of the more traditional theoretical concern with the 'transfer problem'. This was initially concerned with the conditions under which attempts by one nation to transfer real resources to another, by making financial provision to do so, would in fact be successful after economic ramifications had been taken into account. After World War I German reparation payments to the victorious countries were a crucial early area of application of this theory.

In the present context the possibility of 'global' deflation, given sufficiently high incremental savings ratios out of transfer receipts in relation to the propensity to spend these receipts on imports, is established at least in a Keynesian framework (Johnson, 1958). As the oil-exporting countries had high marginal propensities to save out of their extra 'transfer' income and as their import spending, at least initially, was low, the deflationary results would be understandable. As Johnson's analysis indicates, the role of capital movements between the two groups becomes important in determining the final outcome.

On this interpretation of events it would have been quite feasible for world output growth to continue undiminished following the rise in oil prices. While the rise in energy costs may have reduced the increment to output for each unit of investment spending (as more expensive plant was ordered to economize on fuel), the rise in availability of investment funds should have at least compensated for this effect. Against this background, what in fact happened to the growth performance of the world economy?

The slowing of growth is most clearly marked in the main industrial countries. Whereas, during the 1960s, they had grown at around 5 per cent a year, the rate dropped to an average of 3.3 per cent during the 1970s.

Table 1.1 shows the analytical subgroupings used by the IMF in its global report. 'Net oil exporters' are countries whose oil exports (net of any imports of crude oil) did not amount to two-thirds of their total exports and did not amount to 100 million barrels a year (IMF, 1980, p. 24). This would include countries like Mexico, Egypt, Gabon and Bolivia. The low income countries are thirty-eight in number with 1977 per capita gross domestic product (GDP) below $300, India

Table 1.1 *Percentage changes in output 1973–81*

	1973	*1974*	*1975*	*1976*	*1977*	*1978*	*1979*	*1980*	*1981*	*Previous averages*[a]
Industrial (OECD) countries (GNP)	6.3	0.7	–0.6	5.2	3.9	4.0	3.7	1.2	1.5	4.8
Non-oil developing countries (GDP)										
(1) Net oil exporters	7.5	6.1	5.3	4.8	3.2	5.8	7.1	6.7	6.8	6.0
(2) Net oil importers	6.0	5.5	3.7	5.5	5.1	5.5	4.5	4.0	4.6	5.8
(2a) Major exporters of manufactures	9.5	6.6	3.3	6.1	5.1	5.2	6.5	4.7	4.6	8.1
(2b) Low income countries	2.9	3.2	5.7	3.4	4.7	6.0	0.2	3.1	4.9	3.4
(2c) Other net oil importers	4.1	6.0	2.6	6.4	5.4	5.6	4.1	3.4	4.1	5.5

Source: IMF (1981), Tables 1 and 2, pp. 111–2.
[a] Industrial countries = 1962–72; non oil-developing countries = 1967–72.

excluded. India is added to the 'major exporters of manufactures' group. This includes most of the middle income countries and newly industrialized countries (NICs). There are twelve such manufacturing exporters including India and interestingly they account for well over three-fifths of the combined GDP or total exports of all oil-importing LDCs. This compares with only 12 per cent and 6.7 per cent respectively for the thirty-eight low income countries. The remainder are fifty middle income countries (GDP per capita in excess of $300 in 1977) whose exports are mainly of primary commodities.

As may have been expected, the data suggests that the net oil exporters managed to maintain a rather strong growth performance. Compared with previous averages the net oil importers displayed a marked slackening following 1976 from around 6 per cent to 5 per cent. Of the subgroups it seems probable that the low income countries fared least well with some of the larger Asian states masking, in the averages shown, a rather severe deterioration in the smallest countries. If the 1960s are compared with the 1970s per capita income growth rates for this group declined from 1.8 per cent to 0.8 per cent.

The middle income countries comprising groups 2a and 2c in Table 1.1 performed well in comparison with both the industrial countries and the low income group. Thus gross national product (GNP) per person in the two groups averaged a 3.1 per cent growth in the 1970s in contrast with 3.6 per cent in the 1960s.

From a global point of view, then, a significant part of the adjustment to higher oil prices occurred in the form of reduced rates of growth, most notably in the OECD nations and, most painfully, in some of the lowest income countries. However, it is noteworthy that

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